Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Piney Run

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.52 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Mouth of unnamed lake on Piney Run

RIVER MILE: 3.52

LATITUDE: 39.29389 **LONGITUDE:** -77.73583

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 39.32139 **LONGITUDE:** -77.71389

Segment begins at the mouth of an unnamed lake on Piney Run downstream to its confluence with the Potomac River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (5 of 17 samples - 29.4%) were recorded at DEQ's ambient water quality monitoring station (1APIA001.80) at the Route 671 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: South Fork Catoctin Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A02R-03

ASSESSMENT CATEGORY: 4A/5D

SEGMENT SIZE: 17.31 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2002

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of South Fork Catoctin Creek

RIVER MILE: 17.31

LATITUDE: 39.16778 **LONGITUDE:** -77.79583

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Catoctin Creek

RIVER MILE: 0.00

LATITUDE: 39.20944 **LONGITUDE:** -77.62167

Segment begins at the headwaters of South Fork Catoctin Creek and continues downstream to the confluence with Catoctin Creek. The segment length was extended from the 1998 303(d) listing to account for upstream special study monitoring stations on the South Fork Catoctin Creek.

The biological impairment begins at the Purcellville town limits and continues downstream to the confluence of an unnamed tributary with South Fork Catoctin Creek, approximately 0.75 rivermiles upstream from Route 287 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform - 17.31 miles (2002), General Standard (Benthic) - 3.4 miles (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion were recorded at DEQ's water quality monitoring stations at the Route 698 bridge (1ASOC001.66; 8 of 17 samples - 47.1%), the Route 738 bridge (1ASOC007.06; 3 of 11 samples - 27.3%), and the Route 690 bridge (1ASOC012.38; 4 of 12 samples - 33.3%) to assess this segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

In addition, biological monitoring at stations 1ASOC011.98 and 1ASOC012.60 located 100 yards downstream of Rt. 611 and 20 yards upstream from Rt. 690, respectively, determined that the benthic community in part of this segment is moderately impaired. As a result, 3.4 stream miles were assessed as not supporting of the Aquatic Life Use goal for the 2004 water quality assessment. The aquatic life use impairment begins at the Purcellville town limits and continues downstream to the confluence of an unnamed tributary with South Fork Catoctin Creek, approximately 0.75 rivermiles upstream from the Rt. 287 bridge.

The aquatic life use impairment is not associated with the consent decree. The TMDL for this impairment may extend to 2016.

Sufficient exceedances of the total phosphorus screening value (200 ug/L) were recorded at station 1ASOC001.66 (2 of 17 samples - 11.8%) to assess part of this segment as fully supporting with observed effects of the Aquatic Life Use goal. The observed effects are noted in the 5.77-mile segment beginning at the confluence of an unnamed tributary to South Fork Catoctin Creek, approximately 0.55 rivermiles upstream of Route 9, downstream to its confluence to Catoctin Creek.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: NPS, NPS (unconfirmed)

A fecal coliform TMDL for the Catoctin Creek watershed was submitted to the U.S. EPA on April 29, 2002 and approved May 31, 2002. The sources of fecal coliform bacteria requiring reductions are livestock and wildlife waste delivered directly to the stream, and human contributions from straight pipes.

The aquatic life use impairment source is thought to be non-point source pollution from urban stormwater run-off.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Limestone Branch

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.75 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Limestone Branch

RIVER MILE: 4.75

LATITUDE: 39.17417 **LONGITUDE:** -77.57977

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 39.16389 **LONGITUDE:** -77.52028

Segment begins at the headwaters of Limestone Branch and continues downstream to its confluence with the Potomac River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (7 of 18 samples - 38.9%) were recorded at DEQ's ambient water quality monitoring station (1ALIM001.16) at the Route 15 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

A bacteria TMDL is scheduled to be submitted to EPA April 1, 2004.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fauquier

STREAM NAME: Goose Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.15 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Kettle Run with Goose Creek

RIVER MILE: 46.51

LATITUDE: 38.91359 **LONGITUDE:** -77.94972

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Bolling Branch

RIVER MILE: 42.35

LATITUDE: 38.91405 **LONGITUDE:** -77.89054

Segment begins at the confluence of Kettle Run with Goose Creek, at rivermile 46.51, downstream to its confluence with Bolling Branch, at rivermile 42.35.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (7 of 47 samples - 14.9%) were recorded at DEQ's ambient water quality monitoring station 1AGOO044.36 at the Route 17 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fauquier

STREAM NAME: Gap Run

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A04R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.02 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary to Gap Run

RIVER MILE: 3.02

LATITUDE: 38.95095 **LONGITUDE:** -77.90411

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Goose Creek

RIVER MILE: 0.00

LATITUDE: 38.93765 **LONGITUDE:** -77.87072

Segment begins at the confluence of an unnamed tributary to Gap Run, just downstream from Route 712, and continues downstream to the confluence of Gap Run with Goose Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 5 samples - 40.0%) were recorded at DEQ's ambient water quality monitoring station 1AGAR002.24 at the Route 623 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fauquier, Loudoun

STREAM NAME: Cromwells Run

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 4.41

LATITUDE: 38.93861 **LONGITUDE:** -77.80278

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Rocky Run

RIVER MILE: 0.80

LATITUDE: 38.97528 **LONGITUDE:** -77.79111

Segment begins at the confluence of an unnamed tributary to Cromwells Run, approximately 0.78 rivermiles downstream from the Route 715 bridge, and continues downstream to the confluence of Rocky Run with Cromwells Run, approximately 0.40 rivermiles downstream from the Route 50 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (9 of 26 samples - 34.6%) were recorded at DEQ's ambient water quality monitoring station (1ACRM001.20) at the Route 50 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Goose Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A05R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.2 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Wancopin Creek

RIVER MILE: 23.4

LATITUDE: 39.00615 **LONGITUDE:** -77.71277

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the North Fork

RIVER MILE: 16.2

LATITUDE: 39.03789 **LONGITUDE:** -77.64827

Segment begins at the confluence of Wancopin Creek to Goose Creek and continues downstream to the confluence of the North Fork Goose Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (6 of 47 samples - 12.8%) were recorded at DEQ's ambient water quality monitoring station (1AGOO022.44) at the Route 734 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: North Fork Goose Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.29 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 9.32

LATITUDE: 39.10417 **LONGITUDE:** -77.72528

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Crooked Run

RIVER MILE: 5.03

LATITUDE: 39.07639 **LONGITUDE:** -77.68694

Segment begins at the confluence of an unnamed tributary to North Fork Goose Creek, approximately 0.25 river miles upstream from the Route 725 bridge, and continues downstream to its confluence with Crooked Run, approximately 0.35 river miles upstream from Route 729 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (9 of 24 samples - 37.5%) were recorded at DEQ's ambient water quality monitoring station (1ANOG005.69) at the Route 722 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Additionally, sufficient exceedances of the total phosphorus screening value of 200 ug/L were recorded at station 1ANOG005.69 to assess the segment as fully supporting with observed effects of the Aquatic Life Use goal. Nine of 25 samples (36.0%) exceeded the phosphorus screening value.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.32 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Confluence of North Fork

RIVER MILE: 6.32

LATITUDE: 39.04500 **LONGITUDE:** -77.75139

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with North Fork Goose Creek

RIVER MILE: 0.00

LATITUDE: 39.04889 **LONGITUDE:** -77.67556

Segment begins at the confluence of North Fork to Beaverdam Creek, approximately 0.27 rivermiles upstream of Route 746, and continues downstream to its confluence to North Fork Goose Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (6 of 28 samples - 21.4%) were recorded at DEQ's ambient water quality monitoring station at the Route 734 bridge (1ABEC004.76) to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Goose Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.77 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Goose Creek impoundment

RIVER MILE: 4.77

LATITUDE: 39.05556 **LONGITUDE:** -77.52639

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 39.10083 **LONGITUDE:** -77.47778

Segment begins below the Goose Creek impoundment and continues downstream to its confluence with the Potomac River.

The 1998 303(d) report identified an 8.66-mile impaired segment of Goose Creek extending from the confluence with Beaverdam Creek (from Beaverdam Creek Reservoir) downstream to the confluence with the Potomac River. This segment size has been reduced in the 2002 303(d) report to account for the impoundment on Goose Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use, Aquatic Life Use

IMPAIRMENT CAUSE: Fecal Coliform (2002), General Standard (Benthic) - (1998)

Benthic macroinvertebrate biological monitoring rates this stream segment as slightly impaired. This segment was included in Part I of the 1998 303(d) report as partially supporting the aquatic life use due to a moderate benthic impairment noted at the DEQ biological monitoring station 1AGOO002.38 at Route 7. Based on biological survey results from the 2002 and 2004 305(b) assessment periods, this stream segment was determined to be slightly impaired. While the benthic community integrity showed an improvement from the 1998 303(d) list, this was not sufficient to warrant removing this segment from the impaired waters list. Therefore, the stream segment remains impaired for the benthic macroinvertebrate community.

Additionally, the segment was listed with a swimming use impairment in the 2002 303(d) impaired waters list due to fecal coliform bacteria exceedances. The fecal coliform exceedance rate was 11.8% in the 2002 assessment cycle. For this assessment, the swimming use was found to be fully supported based on a fecal coliform bacteria exceedance rate of 8.3% (4 of 48 samples).

IMPAIRMENT SOURCE: NPS, Unknown

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

A TMDL for the biological impairment is scheduled to be submitted to EPA in 2004.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Little River

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A08R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.13 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Hungry Run

RIVER MILE: 6.13

LATITUDE: 38.97194 **LONGITUDE:** -77.65583

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Goose Creek

RIVER MILE: 0.00

LATITUDE: 39.02083 **LONGITUDE:** -77.60222

Segment begins at the confluence of Hungry Run with Little River, approximately 1.5 river miles upstream from the Route 50 bridge, and continues downstream to its confluence with Goose Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998), General Standard (Benthic) - (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion were recorded at DEQ's water quality monitoring stations at the Route 50 bridge (1ALIV004.78; 11 of 29 samples - 37.9%), and the Route 15 bridge (1ALIV001.70; 2 of 11 samples - 18.2%) to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

This segment was included in Part I of the 1998 303(d) report as partially supporting the aquatic life use due to a moderate benthic impairment noted at the DEQ biological monitoring station 1ALIV004.78 at Route 50. Based on biological survey results from the 2002 and 2004 305(b) assessment periods, this stream segment was determined to be slightly impaired. While the benthic community integrity showed an improvement from the 1998 303(d) list, this was not sufficient to warrant removing this segment from the impaired waters list. Therefore, the stream segment remains impaired for the benthic macroinvertebrate community.

IMPAIRMENT SOURCE: NPS, Unknown

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

A TMDL for the biological impairment is scheduled to be submitted to EPA in 2004.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Sycolin Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A08R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.95 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Sycolin Creek

RIVER MILE: 9.95

LATITUDE: 39.08861 **LONGITUDE:** -77.65056

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Goose Creek

RIVER MILE: 0.00

LATITUDE: 39.06978 **LONGITUDE:** -77.51907

Segment begins at the headwaters of Sycolin Creek and continues downstream to its confluence with Goose Creek.

The segment size was expanded from the 2002 303(d) listing to include the downstream 2.85-mile segment from an unnamed tributary to Syolin Creek, approximately 0.23 rivermiles upstream from Route 643, downstream to its confluence with Goose Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion were recorded at DEQ's water quality monitoring stations at the Route 653 bridge (1ASYC002.03; 4 of 28 samples - 14.3%), Route 621 bridge (1ASYC004.93; 7 of 10 samples - 70.0%), and the Route 797 bridge (1ASYC007.43; 3 of 12 samples - 25%) to assess this segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: South Fork Sycolin Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A08R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.31 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of South Fork Sycolin Creek

RIVER MILE: 3.31

LATITUDE: 39.07667 **LONGITUDE:** -77.64750

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Sycolin Creek

RIVER MILE: 0.00

LATITUDE: 39.07028 **LONGITUDE:** -77.60500

Segment begins at the headwaters of South Fork Sycolin Creek and continues downstream to its confluence with Sycolin Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (5 of 11 samples - 45.5%) were recorded at DEQ's ambient water quality monitoring station at the Route 15 bridge (1ASFS000.28) to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Tuscarora Creek

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A08R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.55 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2003

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Town Branch

RIVER MILE: 3.55

LATITUDE: 39.10451 **LONGITUDE:** -77.56141

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Goose Creek

RIVER MILE: 0.00

LATITUDE: 39.08490 **LONGITUDE:** -77.51120

Segment begins at the confluence of Town Branch with Tuscarora Creek, approximately 0.55 rivermiles upstream of Route 643, and continues downstream to its confluence with Goose Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (7 of 28 samples - 25.0%) were recorded at DEQ's ambient water quality monitoring station at the Route 653 bridge (1ATUS000.37) to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

In addition, biological monitoring data from citizen monitoring station 1ATUS-2-LWC finds a medium probability of adverse conditions for biota.

IMPAIRMENT SOURCE: NPS

A fecal coliform TMDL for the Goose Creek watershed was approved by the U.S. EPA on May 31, 2003. The sources of fecal coliform bacteria requiring reductions are direct deposition from cattle, pasture run-off, and human contributions from failing septics systems and straight pipes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Loudoun

STREAM NAME: Broad Run

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.88 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Beaverdam Run

RIVER MILE: 2.88

LATITUDE: 39.04446 **LONGITUDE:** -77.44501

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 39.07134 **LONGITUDE:** -77.44421

Segment begins at the confluence of Beaverdam Run with Broad Run, approximately 0.8 rivermiles upstream of Route 7, and continues downstream to the confluence with the Potomac River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (5 of 36 samples - 13.9%) were recorded at DEQ's ambient water quality monitoring station at the Route 7 bridge (1ABRB002.15) to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Fish tissue data revealed an exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) and of the risk-based tissue screening value (TSI) of 10 ppb for heptachlor epoxide at station 1ABRB002.15. Both of these exceedances were found in American Eel during the August 2001 sampling event. As a result, the Fish Consumption Use goal was assessed as fully supporting with an observed effect.

Additionally, the manganese taste and odor water quality criteria was exceeded in one of one sample in September 1998 resulting in an assessment of fully supporting with an observed effect for the Public Water Supply Use goal.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax, Loudoun

STREAM NAME: Sugarland Run

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.75 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Folly Lick Branch

RIVER MILE: 5.75

LATITUDE: 38.99750 **LONGITUDE:** -77.37167

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 39.06167 **LONGITUDE:** -77.36806

Segment begins at the confluence of Folly Lick Branch to Sugarland Run and continues downstream to its confluence with the Potomac River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (5 of 19 samples - 26.3%) were recorded at DEQ's ambient water quality monitoring station at the Route 7 bridge (1ASUG004.42) to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

In addition, biological monitoring data from citizen monitoring stations 1ASUG-14-LWC and 1ASUG-SLR3-SOS find medium probability of adverse conditions for biota.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax

STREAM NAME: Difficult Run

HYDROLOGIC UNIT: 02070008

TMDL ID: VAN-A11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.93 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Captain Hickory Run

RIVER MILE: 2.93

LATITUDE: 38.97222 **LONGITUDE:** -77.27722

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 38.97611 **LONGITUDE:** -77.23528

Segment begins at the confluence of Captain Hickory Run with Difficult Run, approximately 0.6 river miles upstream from the Route 683 bridge, and continues downstream to its confluence with the Potomac River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) - (1994), Fecal Coliform, e Coli (2004)

Biological monitoring at station 1ADIF000.86 at the Route 193 bridge determined that the benthic community in the stream is moderately impaired. As a result, 2.93 stream miles were assessed as not supporting the Aquatic Life Use goal for the 2004 water quality assessment.

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (9 of 41 samples - 22.0%) and e coli bacteria criterion (2 of 2 samples) were recorded at DEQ's ambient water quality monitoring station at the Route 193 bridge (1ADIF000.86) to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment. The recreation use impairment was added to this segment in 2004.

Fish tissue data revealed an exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) and of the risk-based tissue screening value (TSI) of 10 ppb for heptachlor epoxide at station 1ADIF000.86. Both of these exceedances were found in American Eel during the August 2001 sampling event. As a result, the Fish Consumption Use goal was assessed as fully supporting with an observed effect.

Additionally, the manganese taste and odor water quality criteria was exceeded at the same monitoring station in one of one sample during the assessment period. As a result, the Public Water Supply Use goal was assessed as fully supporting with an observed effect.

This segment was first listed for an aquatic life use impairment in the 1994 303(d) report. A benthic TMDL is scheduled to be developed by 2010. A TMDL to address the recreation use impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Alexandria, Arlington

STREAM NAME: Four Mile Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A12E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.25 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of tidal waters

RIVER MILE: ~1.46

LATITUDE: 38.84389 **LONGITUDE:** -77.06972

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River at State Line.

RIVER MILE: 0.00

LATITUDE: 38.84111 **LONGITUDE:** -77.04667

Segment includes the tidal waters of Four Mile Run from rivermile 1.46 (approximately) downstream to the confluence with the Potomac River at the state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1996), e Coli (2004), Fish Tissue - PCBs (2002)

Sufficient exceedances of the instantaneous fecal coliform (15 of 39 samples - 38.5%) and e coli bacteria criteria (2 of 5 samples - 40.0%) were recorded at DEQ's ambient water quality monitoring station 1AFOU000.19 at the George Washington Parkway to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in three species of fish samples collected in 1997 at monitoring station 1AFOU000.45 (brown bullhead catfish, white perch, largemouth bass). As a result, the waters were assessed as not supporting of the Fish Consumption Use goal. The fish tissue sampling event preceeds the 5-year data window for the 2004 assessment. However, since the results of this sampling event were the basis of a fish consumption use impairment listed in the 2002 303(d) report and no additional data have been collected, this segment reflects the results of the previous assessment for the fish consumption use (see Rule 8 of the 2004 assessment guidance).

The ER-M sediment screening value for chlordane (6 ppb dry weight) was exceeded in a sediment sample collected in June 1999 at monitoring station 1AFOU000.19. As a result, this stream segment was assessed as fully supporting with observed effects of the Aquatic Life Use goal for the following reasons.

This segment was first listed for a swimming use impairment due to fecal coliform bacteria exceedances in the 1998 303(d) report. A bacteria TMDL is scheduled to be developed by 2010. The TMDL to address the fish consumption use impairment may extend to 2014.

IMPAIRMENT SOURCE: Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Arlington, Fairfax

STREAM NAME: Pimmit Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A12R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.38 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Pimmit Run

RIVER MILE: 7.38

LATITUDE: 38.90222 **LONGITUDE:** -77.20528

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 38.92861 **LONGITUDE:** -77.11639

Segment begins at the headwaters of Pimmit Run and continues downstream to its confluence with the Potomac River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion were recorded at DEQ's water quality monitoring stations at the Route 309 bridge (1APIM004.16; 5 of 16 samples - 31.3%) and the Route 120 bridge (1APIM000.15; 12 of 38 samples - 31.6%) to assess this segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

5.75 miles of this stream segment, from the headwaters to the confluence with Little Pimmit Run, are also assessed as fully supporting with observed effects of the Aquatic Life Use goal due to exceedances of the total phosphorus screening value (200 ug/L) recorded at station 1APIM004.16 (2 of 16 samples - 12.5%).

Citizen monitoring stations 1aPIM-PIM2-SOS and 1aPIM-PIM3-SOS both find high probability of adverse conditions for biota.

IMPAIRMENT SOURCE: Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Alexandria, Fairfax, Prince William, Stafford

STREAM NAME: VA Tidal Waters from Woodrow Wilson Bridge to

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A13E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 20.3 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Woodrow Wilson Bridge

RIVER MILE: ~107.7

LATITUDE: 38.79306 **LONGITUDE:** -77.03972

DOWNSTREAM LIMIT:

DESCRIPTION: Brent Point at Mouth of Aquia Creek

RIVER MILE: ~72.2

LATITUDE: 38.39694 **LONGITUDE:** -77.31167

The segment includes the Potomac River and Virginia tidal waters from the Woodrow Wilson Bridge downstream (~33 miles) to Brent Point at the mouth of Aquia Creek. Segment includes the tidal waters contained in waterbodies VAN-A13E, VAN-A14E, VAN-A15E, VAN-A25E, and VAN-A26E.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs (2002)

The Virginia Department of Health (VDH) has issued a 'Health Advisory' for fishing in this segment of the Potomac River and tidal tributaries based on fish tissue analysis. As a result, this segment was assessed as not supporting of the Fish Consumption Use goal for the 2004 water quality assessment. The segment does not support the fish consumption use for Channel Catfish larger than 18 inches. Fish tissue analysis reveals PCB levels high enough for issuance of an advisory. The VDH advises limiting the amount of fish consumed from the segment to one, 8 oz. portion per month. Information on the health advisory and fish tissue sampling program can be viewed at http://www.vdh.state.va.us/HHControl/fishing_advisories.htm and http://www.deq.state.va.us/water/.

IMPAIRMENT SOURCE: VDH Fish Consumption Advisory

The source of impairment is unknown. PCBs are a group of man-made chemicals that can contain up to 209 individual compounds. Data indicate that long-term consumption of fish contaminated with PCBs could pose a human health risk. Information on VDH fish consumption advisories, prohibitions, or bans can be viewed at http://www.vdh.state.va.us.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Alexandria, Fairfax

STREAM NAME: Hunting Creek/Cameron Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A13E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.71 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Approximately 0.22 rivermiles above Route 241 (Telegraph Rd.)

RIVER MILE: 2.58

LATITUDE: 38.80111 **LONGITUDE:** -77.08472

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 38.78444 **LONGITUDE:** -77.04444

Segment begins approximately 0.22 rivermiles above the Route 241 bridge (Telegraph Rd.) and continues downstream to the confluence with the Potomac River, to include the embayment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998), Fish Tissue - PCBs (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (11 of 39 samples - 28.2%) were recorded at DEQ's ambient water quality monitoring station 1AHUT000.01 at the George Washington Parkway to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

The segment is considered not supporting of the Fish Consumption Use goal due to a Health Advisory issued by the Virginia Department of Health (VDH) for PCB's in fish tissue. This segment is nested within the 20.3 square mile area (approximately) covered by the VDH fish consumption advisory. See the fact sheet for the Virginia tidal waters from the Woodrow Wilson Bridge to Brent Point at the mouth of Aquia Creek for discussion of the Health Advisory issued by VDH.

Within this segment, exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in four species of fish samples collected in 2000 (white perch, carp, channel catfish, american eel) and two species in 1996 (carp and white perch) at the DEQ fish tissue/sediment sampling station 1AHUT000.01. The 1996 sampling event preceeds the data window for the 2004 assessment, but is pertinent historical information.

For the 2004 water quality assessment, the Aquatic Life Use goal was assessed as fully supporting with observed effects due to the following:

1. One sample exceeded the acute tidal freshwater ammonia criterion in June 1998 resulting in an assessment of the aquatic life and wildlife uses as fully supporting with an observed effect due to a single sample toxic pollutant exceedance.

2. Exceedances of the ER-M sediment screening value for chlordane (6 ppb dry weight) were detected in sediment samples collected in 1996, 1999, and 2000. Again, the 1996 sampling event preceeds the data window for the 2004 assessment, but is pertinent historical information.

Fact Sheets for Category 5 Waters

This segment was listed for a swimming use impairment due to fecal coliform bacteria exceedances in the 1998 303(d) report. A fecal coliform TMDL is scheduled to be developed by 2010. A TMDL to address the fish consumption use impairment may extend to 2014.

IMPAIRMENT SOURCE: Unknown, VDH Fish Consumption Advisory

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Alexandria, Fairfax

STREAM NAME: Backlick Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.45 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Backlick Run

RIVER MILE: 6.45

LATITUDE: 38.82028 **LONGITUDE:** -77.20278

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Holmes Run

RIVER MILE: 0.00

LATITUDE: 38.80750 **LONGITUDE:** -77.11194

Segment begins at the headwaters of Backlick Run, approximately 0.74 rivermiles upstream of Route 620, downstream to its confluence with Holmes Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient fecal coliform bacteria exceedances (8 of 22 samples - 36.4%) were recorded at DEQ's ambient water quality monitoring station 1ABAL001.40 at Van Dorn Street to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Alexandria, Fairfax

STREAM NAME: Holmes Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.59 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Mouth of Lake Barcroft

RIVER MILE: 3.59

LATITUDE: 38.84324 **LONGITUDE:** -77.14470

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Baclick Run

RIVER MILE: 0.00

LATITUDE: 38.80750 **LONGITUDE:** -77.11194

Segment begins at the mouth of Lake Barcroft on Holmes Run downstream to its confluence with Backlick Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient fecal coliform bacteria exceedances were recorded at DEQ's water quality monitoring stations at Pickett Street off the Holmes Run Pkwy (1AH0R001.04; 2 of 6 samples - 33.3%) and Beauregard Street (1AHOR001.30; 3 of 16 samples - 18.8%) to assess this segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax

STREAM NAME: Holmes Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A13R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.8 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Holmes Run

RIVER MILE: 10.96

LATITUDE: 38.89696 **LONGITUDE:** -77.21888

DOWNSTREAM LIMIT:

DESCRIPTION: Start of Lake Barcroft

RIVER MILE: 5.16

LATITUDE: 38.84637 **LONGITUDE:** -77.16867

Segment begins at the headwaters of Holmes Run and continues downstream to the start of Lake Barcroft.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) - (2004)

Biological monitoring at station 1AHOR005.48 upstream from Route 613 determined that the benthic community in the stream is moderately impaired. As a result, 5.8 stream miles were assessed as not supporting the Aquatic Life Use goal for the 2004 water quality assessment.

Biological monitoring data from citizen monitoring stations 1AHOR-CAM1-SOS and 1AHOR-CAM2-SOS find a high probability of adverse conditions for biota.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax

STREAM NAME: Tripps Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A13R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.25 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Tripps Run

RIVER MILE: 3.16

LATITUDE: 38.87927 **LONGITUDE:** -77.17868

DOWNSTREAM LIMIT:

DESCRIPTION: Start of Lake Barcroft

RIVER MILE: 0.91

LATITUDE: 38.85478 **LONGITUDE:** -77.15841

Segment begins at the headwaters of Tripps Run and continues downstream to the start of Lake Barcroft.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) - (2004)

Biological monitoring at station 1ATRI001.88, upstream from Route 613 (Hollow Road), determined that the benthic community in the stream is moderately impaired. As a result, 2.25 stream miles were assessed as not supporting the Aquatic Life Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax

STREAM NAME: Little Hunting Creek

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A14E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.24 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of tidal waters

RIVER MILE: ~1.7

LATITUDE: 38.73111 **LONGITUDE:** -77.08139

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 38.71028 **LONGITUDE:** -77.07639

Segment includes all tidal waters of Little Hunting Creek, extending from approximately rivermile 1.7 downstream to the confluence with the Potomac River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs (2002), Fecal Coliform (2004)

Data from the DEQ ambient monitoring station and fish tissue/sediment monitoring station (1ALIF000.19) at the George Washington Parkway revealed the following during the 2004 water quality assessment period:

1) Not supporting of the Fish Consumption Use goal due to a Health Advisory issued by the Virginia Department of Health (VDH) for PCB's in fish tissue. This segment is nested within the 20.3 square mile area (approximately) covered by the VDH fish consumption advisory. See the fact sheet for the Virginia tidal waters from the Woodrow Wilson Bridge to Brent Point at the mouth of Aquia Creek for discussion of the Health Advisory issued by VDH.

Within this segment, fish tissue data revealed exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in one species in 1996 (shad) and five species in 2000 (largemouth bass, white perch, carp, channel catfish, american eel). The 1996 sampling was conducted at station 1ALIF000.01 and preceeds the data window for the 2004 assessment, but is pertinent historical information.

2) Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (6 of 39 samples - 15.4%) to assess this segment as not supporting of the Recreation Use goal.

3) The Aquatic Life Use goal was assessed as fully supporting with observed effects due to the following:

a. The ER-M sediment screening value for chlordane (6 ppb dry weight) was exceeded in sediment samples collected in 1996 and 2000. Again, The 1996 sampling event preceeds the data window for the 2004 assessment, but is pertinent historical information.

b. Three of 8 samples (37.5%) exceeded the chlorophyll a screening value of 50 ug/L.

Fact Sheets for Category 5 Waters

A TMDL to address the Fish Consumption Use impairment is to be completed by 2014. The TMDL for the bacteria impairment may extend to 2016.

IMPAIRMENT SOURCE: VDH Fish Consumption Advisory

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax

STREAM NAME: Pohick Bay

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A15E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.24 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of tidal waters in Pohick Creek

RIVER MILE: ~3.69

LATITUDE: 38.68833 **LONGITUDE:** -77.19333

DOWNSTREAM LIMIT:

DESCRIPTION: Rivermile 1.31

RIVER MILE: 1.31

LATITUDE: 38.67472 **LONGITUDE:** -77.15556

Segment includes the tidal waters of Pohick Creek and extends to rivermile 1.31 in Gunston Cove. Segment includes all of Pohick Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Ammonia (2002), Ammonia (2002), Fish Tissue - PCBs (2002)

Data from the DEQ ambient monitoring station 1APOH002.32 and fish tissue/sediment monitoring station 1APOH000.32 (actual rivermile is approximately 2.3) in Pohick Bay revealed the following during the 2004 water quality assessment:

1) Not supporting of the Aquatic Life Use and Wildlife Use goals due to three exceedances of the acute ammonia criteria within a three-year period. Exceedances of the acute freshwater ammonia criteria were recorded in June, September, and December 1999;

2) Not supporting of Fish Consumption Use goal due to a Health Advisory issued by the Virginia Department of Health (VDH) for PCB's in fish tissue. This segment is nested within the 20.3 square mile area (approximately) covered by the VDH fish consumption advisory. See the fact sheet for the Virginia tidal waters from the Woodrow Wilson Bridge to Brent Point at the mouth of Aquia Creek for discussion of the Health Advisory issued by VDH.

Within this segment, exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in three species in 2000 (largemouth bass, carp, channel catfish).

3) The Aquatic Life Use goal was assessed as fully supporting with observed effects due to the following:
a. The ER-M sediment screening value for chlordane (6 ppb dry weight) was exceeded in sediment samples collected in 2000 at station 1APOH000.32.

b. Seven of 14 samples (50.0%) exceeded the chlorophyll a screening value of 50 ug/L at station 1APOH002.32.

IMPAIRMENT SOURCE: Unknown, Unknown, VDH Fish Consumption Advisory

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax

STREAM NAME: Accotink Creek

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.62 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Calamo Branch

RIVER MILE: 9.83

LATITUDE: 38.77167 **LONGITUDE:** -77.20333

DOWNSTREAM LIMIT:

DESCRIPTION: To end of free-flowing waters

RIVER MILE: ~1.57

LATITUDE: 38.69778 **LONGITUDE:** -77.16139

Segment begins at the confluence of Calamo Branch and Accotink Creek and extends downstream to the start of the tidal waters of Accotink Creek/Bay. The segment size has been reduced from the 1998 303(d) listing to include only the free-flowing waters of Accotink Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) - (1996), Fecal Coliform (2004)

Biological monitoring at station 1AACO006.10 at the Route 790 bridge determined that the benthic community in the stream is moderately impaired. As a result, the segment was assessed as not supporting of the Aquatic Life Use goal for the 2004 water quality assessment. The benthic impairment for this segment was first identified in the 1996 303(d) list. The last DEQ biological survey in this stream segment was conducted in November 1996. While this preceeds the 2004 water quality assessment period, the impairment remains as no additional data to refute the findings are available. Citizen monitoring station 1AACO-ACC2B-SOS finds medium probability of adverse conditions for biota.

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (6 of 37 samples - 16.2%) were recorded at DEQ's ambient water quality monitoring station 1AACC006.10 at the Route 790 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Fish tissue data from the DEQ fish tissue/sediment monitoring station 1AACC004.86 near Route 611 revealed an exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) and of the risk-based tissue screening value (TSI) of 10 ppb for heptachlor epoxide. Both of these exceedances were found in American Eel during the June 2001 sampling event. As a result, the Fish Consumption Use goal was assessed as fully supporting with an observed effect.

The TMDL for the Aquatic Life Use impairment is scheduled to be completed by 2010 in accordance with the consent decree schedule. The TMDL for the bacteria impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown, Unknown

Fact Sheets for Category 5 Waters

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax

STREAM NAME: Pohick Creek

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A16R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.2 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of South Run

RIVER MILE: 6.89

LATITUDE: 38.71750 **LONGITUDE:** -77.21722

DOWNSTREAM LIMIT:

DESCRIPTION: End of the free-flowing portion of Pohick Creek

RIVER MILE: ~3.69

LATITUDE: 38.68833 **LONGITUDE:** -77.19333

Segment begins at the confluence of South Run to Pohick Creek, approximately 0.25 rivermiles upstream of I-95, downstream to the end of the free-flowing portion of Pohick Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, PAH (2002)

DEQ has monitored ambient water quality at stations 1APOH007.65 at Route 642 and 1APOH005.36 at the Route 1 bridge. Additionally, DEQ conducted fish tissue/sediment sampling at station 1APOH004.79 in 1996. This segment was listed in the 2002 303(d) report for not supporting the recreational use due to fecal coliform bacteria exceedances, and not supporting the fish consumption use due to PCB's and PAH's in fish tissue. For the 2004 assessment period, this segment was assessed as fully supporting of the Recreation Use goal with a fecal coliform bacteria exceedance rate of 7.1% (1 of 14 samples) at station 1APOH007.65 and 1 exceedance of 5 samples at station 1APOH005.36.

The fish consumption impairment is due to exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) and 15 ppb for benzo(k)fluoranthene in fish tissue. Exceedance of the TV for PCB's was recorded in two species (bullhead catfish, white perch) in 1996. Exceedance of the TV for benzo(k)fluoranthene was exceeded in three species (bullhead catfish, white perch, and sunfish). Additionally, chrysene exceeded the TV of 15 ppb in bullhead catfish, and benzo(b)fluoranthene exceeded the TV of 15 ppb in white perch in the 1996 fish tissue sampling. This impairment remains in effect even though the sampling event preceeds the 2004 water quality assessment window.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fauquier, Prince William

STREAM NAME: Cedar Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 28.23 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Mill Run to Cedar Run

RIVER MILE: 28.23

LATITUDE: 38.71056 **LONGITUDE:** -77.73500

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Occoquan River

RIVER MILE: 0.00

LATITUDE: 38.68778 **LONGITUDE:** -77.48972

Segment begins at the confluence of Mill Run to Cedar Run and continues downstream to the confluence with the Occoquan River. Segment extends from watershed A17R through A18R in Fauquier and Prince William Counties.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1996)

The listing of this stream segment is based on data from the following DEQ monitoring stations: 1ACER0025.25 at Route 602; 1ACER016.46 at Route 806, 1ACER009.52 at Route 611, and 1ACER006.00 at Route 646. In addition, data from the USGS station 01656120 at Route 646 was included in the assessment. The monitoring data from these stations revealed the following during the 2004 water quality assessment period:

1) The entire 28.23-mile segment does not support the Recreation Use goal due to exceedances of the fecal coliform bacteria instantaneous criterion. Data from each of the monitoring stations are summarized below:
- 1ACER0025.25 - 7 of 17 samples (41.2%);
- 1ACER016.46 - 4 of 22 samples (18.2%);
- 1ACER009.52 - 4 of 11 samples (36.4%);
- 1ACER006.00 - 11 of 37 samples (29.7%).

2) The Aquatic Life Use goal was found to be fully supporting with observed effects as specified below.

a. The 21.43-mile segment beginning at the confluence of Turkey Run with Cedar Run downstream to the confluence of the Occoquan River/Lake Jackson due to exceedances of the total phosphorus screening level of 200 ug/L at stations 1ACER016.46 (3 of 21 samples - 14.3%), 1ACER009.52 (2 of 11 samples - 18.2%), and USGS station 0156120 (4 of 28 samples - 14.3%).

b. The 5.65-mile segment beginning at the confluence of Turkey Run with Cedar Run downstream to the confluence of Walnut Branch with Cedar Run where DEQ biological monitoring at station 1ACER016.46 determined the benthic community in this segment to be slightly impaired.

IMPAIRMENT SOURCE: Unknown

Fact Sheets for Category 5 Waters

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fauquier

STREAM NAME: Licking Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.58 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Below mouth of Germantown Lake

RIVER MILE: 6.58

LATITUDE: 38.61667 **LONGITUDE:** -77.72139

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Cedar Run

RIVER MILE: 0.00

LATITUDE: 38.63222 **LONGITUDE:** -77.64111

Segment begins at Route 602, below the mouth of Germantown Lake, downstream to its confluence with Cedar Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (9 of 19 samples - 47.4%) were recorded at DEQ's ambient water quality monitoring station (1ALIL001.43) at the Route 616 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William, Manassas

STREAM NAME: Broad Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.26 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Rocky Branch

RIVER MILE: 11.91

LATITUDE: 38.75056 **LONGITUDE:** -77.57833

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Cannon Branch

RIVER MILE: 4.65

LATITUDE: 38.72000 **LONGITUDE:** -77.50639

Segment begins at the confluence of Rocky Branch to Broad Run and continues downstream to the confluence of Cannon Branch to Broad Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 19 samples - 21.1%) were recorded at DEQ's ambient water quality monitoring station (1ABRU007.58) at the Route 28 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fauquier, Prince William

STREAM NAME: Broad Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A19R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.51 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary to Broad Run

RIVER MILE: 21.43

LATITUDE: 38.78222 **LONGITUDE:** -77.68306

DOWNSTREAM LIMIT:

DESCRIPTION: Start of Lake Manassas

RIVER MILE: 19.92

LATITUDE: 38.77778 **LONGITUDE:** -77.66944

Segment begins at the confluence of an unnamed tributary to Broad Run, at rivermile 21.43, and continues downstream to the start of Lake Manassas.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (7 of 18 samples - 38.9%) were recorded at DEQ's ambient water quality monitoring station (1ABRU020.12) at the Route 29/211 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William

STREAM NAME: Kettle Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A19R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.59 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary to Kettle Run

RIVER MILE: 7.59

LATITUDE: 38.72389 **LONGITUDE:** -77.61028

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Broad Run

RIVER MILE: 0.00

LATITUDE: 38.69611 **LONGITUDE:** -77.51056

Segment begins at the confluence of an unnamed tributary to Kettle Run, approximately 0.08 rivermile upstream of Route 708, downstream to its confluence with Broad Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (8 of 20 samples - 40.0%) were recorded at DEQ's ambient water quality monitoring station (1AKET000.80) at the Route 619 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fauquier, Prince William

STREAM NAME: South Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A19R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.34 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Downstream of Lake Brittle

RIVER MILE: 2.34

LATITUDE: 38.74861 **LONGITUDE:** -77.69028

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Lake Manassas (Broad Run)

RIVER MILE: 0.00

LATITUDE: 38.77167 **LONGITUDE:** -77.66389

Segment begins on South Run downstream of Lake Brittle, and continues downstream to its confluence to Lake Manassas (Broad Run).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) - (1998), Fecal Coliform (2004)

This segment was included in Part I of the 1998 303(d) report for partially supporting the aquatic life use due to a moderate benthic impairment noted at the DEQ biological monitoring station 1ASOT001.44 at Route 215. Based on biological survey results from the 2002 and 2004 305(b) assessment periods, this stream segment was determined to be slightly impaired. While the benthic community integrity showed an improvement from the 1998 303(d) list, this was not sufficient to warrant removing this segment from the impaired waters list. Therefore, the stream segment remains impaired for the Aquatic Life Use goal.

The consensus based probable effects concentration (PEC) sediment screeing value for silver (2.6 ppm, dry weight, 99th percentile) was exceeded in a sediment sample collected in April, 1999, at the DEQ ambient water quality monitoring station (1ASOT001.44) at Route 215. As a result, the Aquatic Life Use goal is noted with an observed effect.

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (5 of 18 samples - 27.8%) were recorded at DEQ's ambient water quality monitoring station 1ASOT001.44 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Fish tissue data collected at station 1ASOT001.44 near Route 215 revealed an exceedance of the risk-based tissue screening value (TSI) of 0.072 parts per million (ppm) for arsenic. This exceedance was found in Redbreast Sunfish during the August 2001 sampling event. As a result, the Fish Consumption Use goal was assessed as fully supporting with an observed effect.

This segment was first listed for an Aquatic Life Use impairment in the 1998 303(d) report. A benthic TMDL is scheduled to be developed by 2010. The TMDL to address the Recreation Use impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown, Unknown

Fact Sheets for Category 5 Waters

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fauquier

STREAM NAME: Broad Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A19R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.06 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Mill Run

RIVER MILE: 27.34

LATITUDE: 38.83773 **LONGITUDE:** -77.72579

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Trapp Run

RIVER MILE: 26.28

LATITUDE: 38.82570 **LONGITUDE:** -77.71998

Segment begins at the confluence of Mill Run and continues downstream to the confluence of Trapp Run with Broad Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 5 samples - 40.0%) were recorded at DEQ's ambient water quality monitoring station (1ABRU024.74) at the Route 628 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment. Note that the correct rivermile for the Route 628 sampling location is 26.4.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William

STREAM NAME: Occoquan River

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.61 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Downstream of Lake Jackson

RIVER MILE: 24.84

LATITUDE: 38.70522 **LONGITUDE:** -77.44735

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Purcell Branch

RIVER MILE: 23.23

LATITUDE: 38.70364 **LONGITUDE:** -77.42277

Segment begins downstream from the Lake Jackson impoundment and extends downstream to the confluence of Purcell Branch to the Occoquan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 16 samples - 25.0%) were recorded at DEQ's ambient water quality monitoring station 1AOCC024.74 at the Route 234 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William

STREAM NAME: Little Bull Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.03 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Catharpin Creek

RIVER MILE:

LATITUDE: 31.81992 **LONGITUDE:** -77.58202

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Lick Branch

RIVER MILE:

LATITUDE: 38.84309 **LONGITUDE:** -77.55773

Segment begins at the confluence of Catharpin Creek to Little Bull Run, approximately 0.55 rivermiles upstream of Route 704, downstream to its confluence with Lick Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 17 samples - 11.8%) were recorded at DEQ's ambient water quality monitoring station 1ALII003.97 at the Route 705 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax, Prince William

STREAM NAME: Bull Run

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A23R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.75 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Cub Run to Bull Run

RIVER MILE: 11.51

LATITUDE: 38.79639 **LONGITUDE:** -77.46611

DOWNSTREAM LIMIT:

DESCRIPTION: Rivermile 5.8

RIVER MILE: 5.8

LATITUDE: 38.76204 **LONGITUDE:** -77.41336

Segment begins at the confluence of Cub Run to Bull Run, at the start of watershed A23R, and continues downstream to rivermile 5.8, approximately 0.95 rivermiles downstream from the confluence of Popes Head Creek with Bull Run.

The segment was extended from the 2002 303(d) list to include the 0.95-mile stretch downstream from the confluence of Popes Head Creek. Additionally, this segment was included within a larger segment for the 1998 and 2000 assessments, and was listed in the 1998 303(d) report as partially supporting the aquatic life use based on a benthic impairment. The former segment began at confluence of Holkums Branch in waterbody A21R and extended to the Occoquan River (15.64 miles). The segment was shortened based on hydrology, considering significant tributaries upstream and downstream from the monitoring station at Route 28.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) - 4.8 miles (1994), Fecal Coliform - 4.8 miles (2004), Fish Tissue - PCBs - 5.75 mile

The 4.8-mile segment beginning at the confluence of Cub Run with Bull Run downstream to its confluence with Popes Head Creek was assessed as not supporting the Aquatic Life Use goal and the Recreation Use goal for the 2004 water quality assessment. Biological monitoring at DEQ station 1ABUL010.28 located at Route 28 determined that the benthic community in the stream is moderately impaired. The exceedance rate of the instantaneous fecal coliform bacteria criterion was 11.8% (4 of 34 samples) at DEQ's ambient water quality monitoring station 1ABUL010.28.

The entire 5.75-mile segment is considered not supporting of the Fish Consumption Use goal for the 2004 water quality assessment. Fish tissue data from station 1ABUL010.28 revealed exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) and of the risk-based tissue screening value (TSI) of 10 ppb for heptachlor epoxide. Exceedances of the TV for PCBs were found in channel catfish and flathead catfish in the June 2001 sampling event. The exceedance of the heptachlor epoxide TSI was found in flathead catfish.

Fish tissue sampling at a downstream station on Bull Run, 1ABUL005.80, in October 1999 did not reveal the presence of PCB's in the fish species analyzed. However, PCB's exceeded the consensus based probability effects concentration (PEC) sediment screening value at station 1ABUL006.64 in 1997. While this sampling event preceeds the 2004 assessment window, it does indicate a possible source of PCB's and is the basis for extending the fish tissue impairment downstream below the confluence of Popes Head Creek with Bull Run.

Fact Sheets for Category 5 Waters

The Aquatic Life Use goal impairment was first listed in the 1994 303(d) report and is subject to the Consent Decree schedule. The Recreation Use and Fish Consumption Use impairments were first listed in the 2004 303(d) list. TMDL's to address these impairments may extend to 2016.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax

STREAM NAME: Popes Head Creek

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A23R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.92 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Piney Branch to Popes Head Creek

RIVER MILE: 4.92

LATITUDE: 38.79667 **LONGITUDE:** -77.35556

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Bull Run

RIVER MILE: 0.00

LATITUDE: 38.77306 **LONGITUDE:** -77.41444

Segment begins at the confluence of Piney Branch to Popes Head Creek, approximately 0.25 rivermiles downstream of Route 660, downstream to its confluence to Bull Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) - (1998), Fecal Coliform (2004)

Biological monitoring at station 1APOE002.00 located at Route 645 determined that the benthic community in the stream is moderately impaired. As a result, 4.92 stream miles were assessed as not supporting the Aquatic Life Use goal for the 2004 water quality assessment. In addition, citizen monitoring station 1aPOE-14-ANS, located in the Chapel Road Park, finds medium probability of adverse conditions for biota.

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (3 of 20 samples - 15.0%) were recorded at DEQ's ambient water quality monitoring station 1APOE002.00 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

This segment was first listed for the Aquatic Life Use impairment as identified by biological monitoring in the 1998 303(d) report. A TMDL to address this impairment is scheduled to be completed by 2010. A TMDL to address the Recreation Use impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax, Prince William

STREAM NAME: Occoquan Reservoir

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A24L-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 1700 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Start of inundated waters on Bull Run and Occoquan River

RIVER MILE: 20.14

LATITUDE: 38.69444 **LONGITUDE:** -77.27667

DOWNSTREAM LIMIT:

DESCRIPTION: Lower end of reservoir.

RIVER MILE: 7.14

LATITUDE: 38.71667 **LONGITUDE:** -77.40056

Segment includes all of the Occoquan Reservoir extending from rivermile 20.14 on the Occoquan River, and rivermile 5.18 on Bull Run, downstream to the dam located at rivermile 7.14 on the Occoquan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2002)

The assessment for the Occoquan Reservoir is based on monitoring data collected by the Occoquan Watershed Monitoring Laboratory (OWML). Data were available for four monitoring stations during the 2004 water quality assessment period. Station RE02 is located 0.3 miles above the Occoquan dam. Station RE15 is located 6.1 miles above the dam. Station RE30 is located on the Bull Run arm of the reservoir at the Bull Run Marina 10.5 miles above the dam. Station RE35 is located on the Occoquan River arm of the reservoir at the Ravenwood Bridge 11.2 miles above the dam.

The data reveals that the Occoquan Reservoir fully supports the public water supply use, and is not impaired as a drinking water source. Excursions from the water quality criteria and screening values discussed below pertain to the aquatic life use of the reservoir, and not the public water supply use.

The assessment results are summarized as follows:

1) The aquatic life use is impaired due to low dissolved oxygen in the bottom waters of the reservoir. All four stations report excursions of the minimum dissolved oxygen criterion for Class III nontidal waters of 4.0 mg/L. Greater than 10% of samples exceed the criterion in both the surface and bottom waters at RE02, and in the bottom waters only at RE15, RE30 and RE35. It is believed that the aeration process performed by the county water authority near station RE02 is the cause of the low dissolved oxygen values observed in the surface waters.

A Trophic State Index (TSI) value was calculated for total phosphorus and secchi depth at all stations using surface data (0.3 m depth) collected during the summer months (June through September). Chlorophyll a TSI values were not calculated at any stations because the reservoir was treated with algaecide. The calculated TSI values are summarized below:

Station	Secchi, avg (m)	Secchi, TSI	TP, avg (ug/L)	TP TSI
RE02	1.40	55.19	36.22	55.94

RE15	1.07	58.98	49.76	60.52
RE30	0.67	65.83	67.93	65.01
RE35	0.64	66.43	81.10	67.57

2) The aquatic life use has an observed effect due to exceedances of the total phosphorus threshold screening value of 50 ug/L for freshwater lakes. The screening value is exceeded in greater than 10% of samples in both the surface and bottom waters at all stations.

IMPAIRMENT SOURCE: Natural/Stratification

Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification. Excursions from the DO criterion in the surface layer at RE02, near the dam, are thought to occur as a result of mixing of the water column that occurs near the dam.

Total phosphorus excursions in the reservoir are believed due to ongoing agricultural and development activities in the watershed, as well as to historical nutrient inputs that occurred before the Occoquan Policy was implemented and that have led to accumulations of phosphorus in the sediments of the reservoir.

The Occoquan Reservoir was identified in Attachment B of the June 1999 Consent Decree (with no specific pollutant identified). The basis of the listing in the consent decree is believed to be due to the trophic assessment of the reservoir. Virginia water quality standards do not establish nutrient criteria. Dissolved oxygen is thought to represent the same processes that lead to the conclusion that the reservoir is highly eutrophic. Therefore, the demonstration that the dissolved oxygen is due to natural occurrences must be conducted in accordance with the schedule established in the consent decree, or by 2010.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax, Prince William

STREAM NAME: Occoquan Bay

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A25E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.69 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.97

LATITUDE: 38.64750 **LONGITUDE:** -77.22000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.97

LATITUDE: 38.63306 **LONGITUDE:** -77.22250

Segment is defined by a half-mile radius around DEQ monitoring station 1AOCC002.47 located in the center of the bay, northeast from Sandy Point.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002), Fish Tissue - PCBs (2002)

The DEQ maintains an ambient water quality and fish tissue/sediment monitoring station (1AOCC002.47) at the centerline of Occoquan/Belmont Bay, northeast of Sandy Point. The monitoring data from this station revealed the following during the 2004 water quality assessment period:

1) Not supporting of the Aquatic Life Use goal due to sufficient exceedances of the pH water quality criteria. Eight (8) of 27 samples (29.6%) exceeded the upper range (9.0 SU) of the pH water quality criteria for Class II waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards;

2) Not supporting of the Fish Consumption Use goal due to a Health Advisory issued by the Virginia Department of Health (VDH) for PCB's in fish tissue. This segment is nested within the 20.3 square mile area (approximately) covered by the VDH fish consumption advisory. See the fact sheet for the Virginia tidal waters from the Woodrow Wilson Bridge to Brent Point at the mouth of Aquia Creek for discussion of the Health Advisory issued by VDH.

Within this segment, fish tissue data revealed exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in two species in 1996 (white perch and sunfish) and 5 species in 2001 (striped bass, largemouth bass, carp, white perch and channel catfish). While the 1996 sampling event preceeds the assessment window, it is relevant historical information.

In addition, the Aquatic Life Use has an observed effect due to exceedances of the chlorophyll a screening level of 50 ug/L. Five (5) of 13 samples (38.5%) exceeded the chlorophyll a screening level.

The Aquatic Life Use impairment due to pH is subject to the Consent Decree schedule for TMDL development. The Fish Consumption Use impairment was first listed in the 2002 303(d) report. The TMDL to address this impairment may extend to 2014.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: Unknown, VDH Fish Consumption Advisory

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William

STREAM NAME: Neabsco Bay

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A25E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.57 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upper limit of Neabsco Bay

RIVER MILE: ~2.5

LATITUDE: 38.60833 **LONGITUDE:** -77.26667

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Occoquan Bay

RIVER MILE: 0.00

LATITUDE: 38.59833 **LONGITUDE:** -77.23722

Segment includes the tidal waters of Neabsco Bay downstream to the confluence with the Occoquan Bay. This segment was expanded from the 2002 cycle to include all of Neabsco Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002), Fish Tissue - PCBs (2002), Fecal Coliform (2004)

The listing of this stream segment is based on data from the following DEQ monitoring stations: DEQ ambient and fish tissue/sediment station 1ANEA000.57 in Neabsco Creek and fish tissue/sediment station 1ANEA000.51 (sampled in 1996). Monitoring data from these stations revealed the following during the 2004 water quality assessment period:

1) Not supporting of the Aquatic Life Use goal due to sufficient exceedances of the pH water quality criteria recorded at station 1ANEA000.57. Seven of 29 samples (24.1%) exceeded the upper range (9.0 SU) of the pH water quality criteria for Class II waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards;

2) Not supporting of Fish Consumption Use goal due to a Health Advisory issued by the Virginia Department of Health (VDH) for PCB's in fish tissue. This segment is nested within the 20.3 square mile area (approximately) covered by the VDH fish consumption advisory. See the fact sheet for the Virginia tidal waters from the Woodrow Wilson Bridge to Brent Point at the mouth of Aquia Creek for discussion of the Health Advisory issued by VDH.

Within this segment, fish tissue data revealed exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in two species in 1996 (largemouth bass, carp) and five species in 2000 (largemouth bass, carp, channel catfish, white catfish, american eel). While the 1996 sampling event preceeds the assessment window, it is relevant historical information.

3) Not supporting of the Recreation Use goal due to sufficient exceedances of the instantaneous fecal coliform bacteria criterion (8 of 38 samples - 21.1%) recorded at station 1ANEA000.57.

In addition, the Aquatic Life Use goal has an observed effect due to exceedances of the chlorophyll a screening level of 50 ug/L. Ten (10) of 15 samples (66.7%) exceeded the chlorophyll a screening level.

Fact Sheets for Category 5 Waters

The Aquatic Life Use impairment due to pH is subject to the Consent Decree schedule for TMDL development. The Fish Consumption Use impairment was first listed in the 2002 303(d) report. The TMDL to address this impairment may extend to 2014. The Recreation Use impairment is newly listed in 2004. The TMDL to address this impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown, VDH Fish Consumption Advisory, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax, Prince William

STREAM NAME: Occoquan River

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A25E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 7.21

LATITUDE: 38.68938 **LONGITUDE:** -77.26837

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 6.21

LATITUDE: 38.68264 **LONGITUDE:** -77.25660

Segment is defined by a half-mile radius around DEQ monitoring station 1AOCC006.71 located at the Route 123 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004), Fish Tissue - PCBs (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 19 samples - 21.1%) were recorded at DEQ's ambient water quality monitoring station 1AOCC006.71 at the Route 123 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

In addition, this segment is nested within the 20.3 square mile area (approximately) covered by a Virginia Department of Health (VDH) fish consumption advisory. The VDH fish consumption advisory for the Potomac River and VA tidal waters extends from Woodrow Wilson Bridge downstream (~33 miles) to Brent Point at mouth of Aquia Creek. Advise limited consumption of channel catfish due to PCB's. As a result, the Fish Consumption Use goal was assessed as not supporting for the 2004 water quality assessment.

A TMDL to address the Fish Consumption Use impairment is to be completed by 2014. A TMDL to address the Recreation Use impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown, VDH Fish Consumption Advisory

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William

STREAM NAME: Neabsco Creek

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A25R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.8 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 11.30

LATITUDE: 38.65444 **LONGITUDE:** -77.37111

DOWNSTREAM LIMIT:

DESCRIPTION: Start of the tidal waters of Neabsco Creek

RIVER MILE: ~2.5

LATITUDE: 38.61000 **LONGITUDE:** -77.28417

Segment begins at the confluence of an unnamed tributary to Neabsco Creek near Dale City (approximately 0.4 rivermiles downstream from Rt. 784) downstream to the start of the tidal waters of Neabsco Creek/Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (7 of 23 samples - 30.4%) were recorded at DEQ's ambient water quality monitoring station (1ANEA002.89) at the Route 1 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Citizen monitoring station 1ANEA-N1-SOS finds a high probability of adverse conditions for biota.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Fairfax, Prince William

STREAM NAME: Mills Branch

HYDROLOGIC UNIT: 02070010

TMDL ID: VAN-A25R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.81 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Mills Branch

RIVER MILE: 1.81

LATITUDE: 38.70139 **LONGITUDE:** -77.24944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Occoquan River

RIVER MILE: 0.00

LATITUDE: 38.67972 **LONGITUDE:** -77.25306

Segment includes all of Mills Branch from the headwaters downstream to the confluence with the Occoquan River. Mills Branch is an unnamed tributary on the Occoquan/Ft. Belvoir quads. It is channeled, flowing under the Fairfax County I-95 Landfill in Lorton, VA.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 17 samples - 23.5%) were recorded at DEQ's ambient water quality monitoring station 1AWLB000.06 in the Occoquan Regional Park to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

In addition, the Aquatic Life Use goal was assessed as fully supporting with observed effects due to exceedances of the total phosphorus screening value (200 ug/L). Four (4) of 17 samples (23.5%) exceeded the screening value at station 1AWLB000.06.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William, Stafford

STREAM NAME: Chopawamsic Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A26E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.76 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of the Embayment

RIVER MILE: ~2.05

LATITUDE: 38.51404 **LONGITUDE:** -77.33481

DOWNSTREAM LIMIT:

DESCRIPTION: State line at the confluence with the Potomac River

RIVER MILE: 0.00

LATITUDE: 38.49736 **LONGITUDE:** -77.30734

Segment includes all of the Chopawamsic Creek embayment downstream to the state line at the confluence with the Potomac River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs (2002)

This segment is nested within the 20.3 square mile area (approximately) covered by a Virginia Department of Health (VDH) fish consumption advisory. The VDH fish consumption advisory for the Potomac River and VA tidal waters extends from Woodrow Wilson Bridge downstream (~33 miles) to Brent Point at mouth of Aquia Creek. Advise limited consumption of channel catfish due to PCB's.

Within this segment, exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in four species of fish samples collected in 2001 at monitoring station 1ACHO000.90 (largemouth bass, yellow perch, channel catfish, and carp). As a result, the Fish Consumption Use goal was assessed as not supporting for the 2004 water quality assessment.

IMPAIRMENT SOURCE: VDH Fish Consumption Advisory

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William, Stafford

STREAM NAME: Chopawamsic Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A26E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of tidal waters

RIVER MILE: ~4.15

LATITUDE: 38.51914 **LONGITUDE:** -77.36770

DOWNSTREAM LIMIT:

DESCRIPTION: Rivermile 3.15

RIVER MILE: 3.15

LATITUDE: 38.51652 **LONGITUDE:** -77.35576

Segment extends from approximately a half rivermile upstream (to the upstream extent of the tidal waters) to a half rivermile downstream of monitoring station 1aCHO003.65.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002), Fish Tissue - PCBs (2002), Fecal Coliform (2004)

The listing of this stream segment is based on data from the DEQ's ambient water quality monitoring station (1ACHO003.65) at the Route 1 bridge. Monitoring data from this station revealed the following during the 2004 water quality assessment period:

1) Not supporting of the Aquatic Life Use goal due to sufficient exceedances of the pH water quality criteria. Seven (7)of 29 samples (24.1%) were below the lower range (6.0 SU) of the pH water quality criteria for Class II waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

2) Not supporting of the Fish Consumption Use goal due to a Health Advisory issued by the Virginia Department of Health (VDH) for PCB's in fish tissue. This segment is nested within the 20.3 square mile area (approximately) covered by the VDH fish consumption advisory. See the fact sheet for the Virginia tidal waters from the Woodrow Wilson Bridge to Brent Point at the mouth of Aquia Creek for discussion of the Health Advisory issued by VDH.

3) Not supporting of the Recreation Use goal due to exceedances of the instantaneous fecal coliform bacteria criterion (4 of 36 samples - 11.1%).

TMDL's to address the Aquatic Life Use and Fish Consumption Use are to be developed by 2014. The Recreation Use goal impairment was added in 2004. The TMDL to address this impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown, VDH Fish Consumption Advisory, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William, Stafford

STREAM NAME: Chopawamsic Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A26R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.76 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 4.91

LATITUDE: 38.52625 **LONGITUDE:** -77.37635

DOWNSTREAM LIMIT:

DESCRIPTION: Start of tidal waters of Chopawamsic Creek

RIVER MILE: ~4.15

LATITUDE: 38.51914 **LONGITUDE:** -77.36770

Segment begins at the confluence of an unnamed tributary to Chopawamsic Creek, approximately 0.3 rivermiles upstream from I-95, and continues to the end of the free flowing waters of Chopawamsic Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002)

Sufficient excursions from the pH water quality criteria were recorded at the USGS monitoring station (01660110) at Interstate 95 to assess this segment as not supporting of the Aquatic Life Use goal in the 2004 water quality assessment. Ten (10) of 51 samples (19.6%) were below the lower range of the pH water quality criteria (6.0 - 9.0 SU) for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

IMPAIRMENT SOURCE: Unknown

The source of impairments is unknown, but may be due to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William

STREAM NAME: Powells Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A26R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.02 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Approximately 0.2 rivermiles below Lake Montclair

RIVER MILE: 7.20

LATITUDE: 38.61056 **LONGITUDE:** -77.33972

DOWNSTREAM LIMIT:

DESCRIPTION: End of the free flowing waters

RIVER MILE: ~2.18

LATITUDE: 38.58972 **LONGITUDE:** -77.28389

Segment begins approximately 0.2 rivermiles below Lake Montclair and continues downstream to the end of the free flowing waters of Powells Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002), Fish Tissue - PCBs, PAH (2002)

The listing of this stream segment is based on data from the DEQ's ambient water quality monitoring and fish tissue/sediment monitoring station 1APOW003.11 at the Route 1 bridge. Note that fish tissue sampling was conducted in 1996. Monitoring data from this station revealed the following during the 2004 water quality assessment period:

1) Not supporting of the Recreation Use goal due to exceedances of the instantaneous fecal coliform bacteria criterion (2 of 15 samples - 13.3%);

2) Not supporting of the Fish Consumption Use goal due to exceedances of the water quality standard criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) and 15 ppb for benzo(k)fluoranthene in fish tissue. Exceedance of the TV for PCB's was recorded in three fish species in 1996 (largemouth bass, bullhead catfish and sunfish). Exceedance of the TV for benzo(k)fluoranthene was exceeded in two species (largemouth bass and sunfish). Although the fish tissue sampling occurred prior to the assessment window for the 2004 water quality assessment, the impairment remains because of the 1996 fish tissue data.

IMPAIRMENT SOURCE: Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William

STREAM NAME: Quantico Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A26R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.8 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of South Fork to Quantico Creek

RIVER MILE: 5.61

LATITUDE: 38.57194 **LONGITUDE:** -77.34750

DOWNSTREAM LIMIT:

DESCRIPTION: End of the free flowing waters

RIVER MILE: ~3.81

LATITUDE: 38.56500 **LONGITUDE:** -77.32000

Segment begins at the confluence of South Fork to Quantico Creek, approximately 0.75 rivermiles upstream of I-95, and continues downstream to end of the free-flowing waters of Quantico Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs (2002), Fecal Coliform (2004)

The listing of this stream segment is based on data from the DEQ's ambient water quality monitoring station 1AQUA004.46 at the Route 1 (Business) bridge. Note that fish tissue sampling was conducted in 1996 at this location. Monitoring data from this station revealed the following during the 2004 water quality assessment period:

1) Not supporting of the Fish Consumption Use goal due to exceedances of the water quality standard criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in two fish species in 1996 (Largemouth Bass and Bullhead Catfish). Although the fish tissue sampling occurred prior to the assessment window for the 2004 water quality assessment, the impairment remains because of the 1996 fish tissue data.

2) Not supporting of the Recreation Use goal due to exceedances of the instantaneous fecal coliform bacteria criterion (8 of 39 samples - 20.5%).

In addition, the Aquatic Life Use goal was assessed as fully supporting with an observed effect due to an exceedance of the consensus based probable effects concentration (PEC) sediment screeing value for copper (149 ppm, dry weight) in a sediment sample collected in May, 1999.

A TMDL to address the Fish Consumption Use impairment shall be developed by 2014. A TMDL to address the Recreation Use impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William, Stafford

STREAM NAME: North Branch Chopawamsic Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A26R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.9 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of North Branch Chopawamsic Creek

RIVER MILE: 15.8

LATITUDE: 38.57800 **LONGITUDE:** -77.49880

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Middle Branch with North Branch

RIVER MILE: 8.9

LATITUDE: 38.55810 **LONGITUDE:** -77.41797

Segment begins at the headwaters of North Branch Chopawamsic Creek downstream to the confluence of Middle Branch to North Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: e Coli (2004)

Sufficient exceedances of the instantaneous e coli bacteria criterion (2 of 8 samples) were recorded at the USGS station 01659000 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Prince William

STREAM NAME: South Fork Quantico Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A26R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.64 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of South Fork Quantico Creek

RIVER MILE: 10.15

LATITUDE: 38.61889 **LONGITUDE:** -77.46072

DOWNSTREAM LIMIT:

DESCRIPTION: Start of the impounded waters at what is labelled as Mawavi Camp No 2

RIVER MILE: 5.51

LATITUDE: 38.58162 **LONGITUDE:** -77.41238

Segment starts at the headwaters of South Fork Quantico Creek and continues downstream to the start of the impounded waters adjacent to what is labelled as Mawavi Camp No 2 on the USGS Joplin quadrangle map.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: e Coli (2004)

Sufficient exceedances of the instantaneous e coli bacteria criterion (5 of 47 samples - 10.6%) were recorded at the USGS station 01658500 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Stafford

STREAM NAME: Aquia Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A27R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.59 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Cannon Creek

RIVER MILE: 19.79

LATITUDE: 38.48718 **LONGITUDE:** -77.48505

DOWNSTREAM LIMIT:

DESCRIPTION: Smith Lake (Aquia Reservoir)

RIVER MILE: 13.20

LATITUDE: 38.49025 **LONGITUDE:** -77.41530

Segment begins at the confluence of Cannon Creek to Aquia Creek, approximately 0.1 rivermiles downstream of Route 610, downstream to Smith Lake (Aquia Reservoir).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 15 samples - 13.3%) were recorded at DEQ's ambient water quality monitoring station 1AAUA014.51 at the Route 641 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

In addition, iron and manganese samples collected March 29, 1999, exceeded the water quality taste and odor water quality criteria in one of one sample. As a result, the Public Water Supply use was assessed as fully supporting with observed effects.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Stafford

STREAM NAME: Aquia Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A28E-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 0.53 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Rivermile 4.28

RIVER MILE: 4.28

LATITUDE: 38.43138 **LONGITUDE:** -77.35731

DOWNSTREAM LIMIT:

DESCRIPTION: Rivermile 3.28

RIVER MILE: 3.28

LATITUDE: 38.41833 **LONGITUDE:** -77.34841

Segment extends from rivermile 4.28 to rivermile 3.28 in Aquia Creek encompassing a 0.5-mile radius around station 1AAUA003.71.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Chloride (2004), Chloride (2004)

The listing of this segment is based on data from the DEQ's ambient water quality and fish tissue/sediment monitoring station 1AAUA003.71 near the railroad bridge crossing. Monitoring data from this station revealed the following during the 2004 water quality assessment period:

1) More than two exceedances of the acute chloride criterion were recorded within a three-year period resulting in an assessment of not supporting the Aquatic Life Use and the Wildlife Use goals. This segment is considered transition zone tidal waters. The Water Quality Standards stipulate that the more stringent of either the freshwater or saltwater criteria apply. Therefore, these waters are listed as impaired. However, a TMDL is not necessary as the chloride levels are attributable to the natural estuarine conditions.

2) The Aquatic Life Use goal has observed effects for the following:

a. The NOAA Effects Range-Median concentration sediment screening value for mercury (0.71 ppm, dry weight) was exceeded in a sediment sample collected in August 2001;

b. Three of 12 samples (25.0%) exceeded the chlorophyll a screening level of 50.0 ug/L.

3) The Fish Consumption Use goal was assessed as fully supporting with an observed effect due to an exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in one species (carp) during the August 2001 sampling event.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions

The source of the chloride exceedances is natural conditions

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Stafford

STREAM NAME: Austin Run

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A28R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.81 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 0.81

LATITUDE: 38.44885 **LONGITUDE:** -77.39466

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Aquia Creek.

RIVER MILE: 0.00

LATITUDE: 38.44752 **LONGITUDE:** -77.38334

Segment begins at the confluence of an unnamed tributary to Austin Run (streamcode XGQ) and continues downstream to the confluence with Aquia Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 6 samples - 33.3%) were recorded at DEQ's ambient water quality monitoring station 1AAUS000.17 at the end of Aquia Drive to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George, Stafford

STREAM NAME: Potomac Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A29E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.1 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of the tidal waters

RIVER MILE: ~4.7

LATITUDE: 38.35235 **LONGITUDE:** -77.36665

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Potomac River at the state line

RIVER MILE: 0.00

LATITUDE: 38.34743 **LONGITUDE:** -77.28671

Segment includes all tidal waters of Potomac Creek, beginning at the upstream limit of the tidal waters and continuing downstream to the confluence with the Potomac River at the state line.

The fish consumption impairment for Potomac Creek was expanded from the 2002 assessment to include all tidal waters of Potomac Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, 3.1 sq. miles (2002), pH, Chloride - 0.59 sq. miles (2002 & 2004), Chloride - 0.59 sq. miles

The listing of this segment is based on data from the following DEQ monitoring stations: fish tissue/sediment station 1APOM001.04 sampled in 2000; ambient water quality monitoring station 1APOM002.41 off of Old Landing Point. The monitoring data from these stations revealed the following during the 2004 water quality assessment period:

1) The entire 3.1 square mile segment (approximately) does not support the Fish Consumption Use goal due to exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue. Exceedances of the TV were recorded in four species in samples collected May 22, 2000 (largemouth bass, carp, channel catfish and american eel). In addition, the risk-based tissue screening value (TSI) for arsenic (72 ppb) was exceeded in one species (american eel), and lead was detected in one species (channel catfish) in fish tissue samples collected May 2000.

2) In addition to the Fish Consumption Use impairment noted above, the 0.59 square mile segment extending to a half-mile radius around monitoring station 1APOM002.41 was assessed as follows:

a. Sufficient excursions from the pH water quality criteria were recorded at monitoring station 1APOM002.41 to assess this segment as not supporting of the Aquatic Life Use goal. Three of 26 samples (11.5%) exceeded the upper range (9.0 SU) of the pH water quality criteria for Class II waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

b. More than two exceedances of the acute chloride criterion were recorded at station 1APOM002.41 within a three-year period resulting in an assessment of not supporting the Aquatic Life Use and the Wildlife Use goals. These are considered transition zone tidal waters. The Water Quality Standards stipulate that the more stringent of either the freshwater or saltwater criteria apply. Therefore, these waters are listed as impaired. However, a TMDL is not necessary as the chloride levels are attributable to the natural estuarine conditions.

c. The Aquatic Life Use goal has observed effects due to exceedances of the chlorophyll a screening value (2 of 12 samples -16.7%).

IMPAIRMENT SOURCE: Unknown, Unknown, Natural Conditions, Natural Conditions

The source of the chloride exceedances is natural conditions. The source of the other impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Stafford

STREAM NAME: Curtis Lake

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A29L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 91 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Start of Curtis Lake

RIVER MILE: 8.55

LATITUDE: 38.43861 **LONGITUDE:** -77.57000

DOWNSTREAM LIMIT:

DESCRIPTION: End of Curtis Lake

RIVER MILE: 7.80

LATITUDE: 38.43361 **LONGITUDE:** -77.55917

Segment includes all of Curtis Lake on Long Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002)

Sufficient excursions from the pH water quality criteria were recorded at DEQ's ambient monitoring station (1ALOM007.93) on Curtis Lake to assess this segment as not supporting of the Aquatic Life Use goal in the 2002 305(b) report. Two of 10 samples (20%) were above the upper range (9.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. No additional data have been collected from this segment since the 2002 water quality assessment.

In addition, the chlorophyll a screening value of 50 ug/L was exceeded in 5 of 7 samples (71.4%) resulting in an observed effect for the Aquatic Life Use goal.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Stafford

STREAM NAME: Accokeek Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A29R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.2 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary to Accokeek Creek

RIVER MILE: 8.62

LATITUDE: 38.39639 **LONGITUDE:** -77.40611

DOWNSTREAM LIMIT:

DESCRIPTION: End of the free flowing waters

RIVER MILE: ~4.42

LATITUDE: 38.37417 **LONGITUDE:** -77.35472

Segment begins at the confluence of an unnamed tributary to Accokeek Creek, approximately 0.33 rivermiles downstream from Route 1 at rivermile 8.62, and continues downstream to the end of the free-flowing waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002), pH (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (3 of 18 samples - 16.7%) were recorded at DEQ's ambient water quality monitoring station (1AACC006.13) at Route 608 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

In addition, sufficient excursions from the pH water quality criteria were recorded at monitoring station 1AACC006.13 to assess this segment as not supporting of the Aquatic Life Use goal. Two (2) of 16 samples (12.5%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Stafford

STREAM NAME: Potomac Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A29R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.23 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Railroad crossing at the west end of swamp

RIVER MILE: 7.53

LATITUDE: 38.35667 **LONGITUDE:** -77.40611

DOWNSTREAM LIMIT:

DESCRIPTION: To the east end of swamp

RIVER MILE: 5.30

LATITUDE: 38.34861 **LONGITUDE:** -77.37111

Segment begins upstream from Route 608 at the railroad crossing at the west end of swamp and continues downstream to the east end of swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2002), pH (2004), Fecal Coliform (2004)

Sufficient excursions from the dissolved oxygen (DO) water quality criteria were recorded at DEQ's ambient monitoring station (1APOM006.72) at Route 608 to assess this segment as not supporting of the Aquatic Life Use goal in the 2004 water quality assessment. Three of 18 samples (16.7%) were below the minimum DO level (4.0 mg/L) for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

Sufficient excursions from the pH water quality criteria were also recorded at monitoring station 1APOM006.72 to assess this segment as not supporting of the Aquatic Life Use goal. Three (3) of 16 samples (18.8%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

Additionally, sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 18 samples - 11.1%) were recorded at station 1APOM006.72 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

The DO impairment was first recorded in the 2002 303(d) list. A TMDL to address this impairment is due by 2014. The pH and bacteria impairments are newly added in the 2004 integrated assessment. TMDL's to address theses impairments may extend to 2016.

IMPAIRMENT SOURCE: Natural Conditions (unconfirmed), Unknown

The source of impairments is unknown, but is believed to be attributable to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George

STREAM NAME: Gambo Creek/Upper Machodoc Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A30E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.19 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

The boundaries of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 36, Upper Machodoc Creek, Section A, effective November 1, 2002.

The segment size was reduced from 0.32 square miles in the 2002 303(d) listing to 0.19 square miles to reflect the change in condemnation from the year 2000 to 2002.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Based on the shellfish condemnation dated November 1, 2002, as reported by the Virginia Department of Health, Division of Shellfish Sanitation, 0.19 square miles of this waterbody were assessed as not supporting the Shellfishing Use goal in the 2004 water quality assessment.

IMPAIRMENT SOURCE: VDH Shellfish Condemnation

VDH Shellfish Condemnation

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George

STREAM NAME: Upper Machodoc Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A30E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

The boundaries of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 36, Upper Machodoc Creek, Section B, effective November 1, 2002.

Historical Note: For the 2002 303(d) list, this segment was included in the condemnation notice covering Upper Machodoc and Gambo Creek and the Potomac River as delineated in Section A of the Notice and Description of Shellfish Area Condemnation Number 36, Upper Machodoc Creek, effective May 8, 2000.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Based on the shellfish condemnation dated November 1, 2002, as reported by the Virginia Department of Health, Division of Shellfish Sanitation, 0.03 square miles of this waterbody were assessed as not supporting the Shellfishing Use goal in the 2004 water quality assessment.

IMPAIRMENT SOURCE: VDH Shellfish Condemnation

VDH Shellfish Condemnation

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George

STREAM NAME: Upper Machodoc Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A30E-03

ASSESSMENT CATEGORY: 5A/5B

SEGMENT SIZE: 0.82 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of tidal waters

RIVER MILE: ~8.9

LATITUDE: 38.30896 **LONGITUDE:** -77.08802

DOWNSTREAM LIMIT:

DESCRIPTION: The open embayment waters of Upper Machodoc Creek

RIVER MILE: 1.87

LATITUDE: 38.31633 **LONGITUDE:** -77.06184

The upstream boundary is described in the VDH Notice and Description of Shellfish Area Condemnation No. 36, Upper Machodoc Creek, Section D, effective November 1, 2002. Upstream boundary ends with tidal waters. The segment continues downstream to the open embayment waters of Upper Machodoc Creek at the point downstream from Wood Island.

Historical Note: The 2002 303(d) listing of this segment was based on the boundaries of the condemned area as described in VDH Notice and Description of Shellfish Area Condemnation Number 36, Upper Machodoc Creek, Section F, effective May 8, 2000. The segment size was expanded from 0.36 square miles.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting, Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: pH, 0.36 sq. miles (2002), Fish Tissue - PCBs, 0.82 sq. miles (2004), Bacteria, 0.36 sq. mi. (1998)

The entire 0.82 square mile segment was assessed as not supporting the Fish Consumption Use goal due to exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue. Exceedances of the TV were recorded in two species of fish samples collected in September 2001 (gizzard shad and channel catfish) at the DEQ fish tissue/sediment station 1AUMC004.43 near the Route 218 bridge.

The 0.36 square mile segment described in the VDH Notice and Description of Shellfish Area Condemnation No. 36, Upper Machodoc Creek, Section D, effective November 1, 2002, was found not to support the Shellfishing Use and Aquatic Life Use goal as described below:

1) Sufficient excursions from the pH water quality criteria were recorded at DEQ's ambient monitoring station 1AUMC004.43 at Route 218 to assess this 0.36 square mile segment as not supporting of the Aquatic Life Use goal. Two of 17 samples (11.8%) were below the lower range (6.0 - 9.0 SU) of the pH water quality criteria for Class II waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

Additionally, the NOAA Effects Range-Median concentration sediment screeing value for mercury (0.71 ppm, dry weight) was exceeded in a sediment sample collected in September 2001. This results in an observed effect for the assessment of the Aquatic Life Use goal.

2) Based on the shellfish condemnation dated November 1, 2002, as reported by the Virginia Department of Health, Division of Shellfish Sanitation, 0.36 square miles of this waterbody were assessed as not supporting the Shellfishing Use goal in the 2004 water quality

assessment.

A TMDL to address the Shellfishing impairment is due by 2010 in accordance with the consent decree schedule. A TMDL to address the Aquatic Life Use and Fish Consumption Use impairments may extend to 2014 and 2016, respectively.

IMPAIRMENT SOURCE: Unknown, Unknown, VDH Shellfish Condemnation

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George

STREAM NAME: Williams Creek/ Upper Machodoc Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A30E-04

ASSESSMENT CATEGORY: 5A/5B

SEGMENT SIZE: 0.23 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of tidal waters

RIVER MILE: ~1.9

LATITUDE: 38.34633 **LONGITUDE:** -77.06011

DOWNSTREAM LIMIT:

DESCRIPTION: Upper Machodoc Creek

RIVER MILE: 0.00

LATITUDE: 38.32071 **LONGITUDE:** -77.05175

The boundaries of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 36, Upper Machodoc Creek, Sections C and F, effective November 1, 2002.

Historical Note: The 2002 303(d) listing of this segment was based on the boundaries of the condemned area as described in VDH Notice and Description of Shellfish Area Condemnation Number 36, Upper Machodoc Creek, Sections C and D, effective May 12, 1998, and are shown on the accompanying map.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: DO, 0.23 sq. miles (2002), pH, 0.23 sq. miles (2004), Bacteria, 0.20 sq. mi. (1998)

The entire 0.23 square mile segment was assessed as not supporting the Aquatic Life Use goal in the 2004 water quality assessment due to the following:

1) Excursions from the dissolved oxygen (DO) water quality criteria recorded at DEQ's ambient monitoring station (1AWLL001.30) at Route 206. Two of 16 samples (12.5%) were below the minimum DO level (4.0 mg/L) for Class II waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

2) Excursions from the pH water quality criteria recorded at station 1AWLL001.30. Two of 14 samples (14.3%) were below the lower range (6.0 - 9.0 SU) of the pH water quality criteria for Class II waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

In addition, the Aquatic Life Use was found to have observed effects for exceedances of the total phosphorus screening value of 0.20 mg/L (2 of 16 samples - 12.5%), and an exceedance of the NOAA Effects Range-Median concentration sediment screeing value for mercury (0.71 ppm, dry weight) in a sediment sample collected in September 2001.

The 0.20 square mile segment as described the VDH Notice and Description of Shellfish Area Condemnation Number 36, Upper Machodoc Creek, Section C, effective November 1, 2002, was assessed as not supporting the Shellfishing Use goal in the 2004 water quality assessment.

A TMDL to address the Shellfishing impairment is due by 2010 in accordance with the consent decree. A TMDL to address the Aquatic Life

Fact Sheets for Category 5 Waters

Use impairments for DO and pH may extend to 2014 and 2016, respectively.

IMPAIRMENT SOURCE: Unknown, VDH Shellfish Condemnation

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George

STREAM NAME: Williams Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A30R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.93 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary to Williams Creek

RIVER MILE: 2.85

LATITUDE: 38.35250 **LONGITUDE:** -77.07222

DOWNSTREAM LIMIT:

DESCRIPTION: End of free-flowing waters

RIVER MILE: ~1.92

LATITUDE: 38.34633 **LONGITUDE:** -77.06011

Segment begins at confluence of an unnamed tributary to Williams Creek, approximately 0.1 rivermiles downstream of Route 624, and continues downstream to the end of the free-flowing portion of Williams Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2002), pH (2004)

Sufficient excursions from the dissolved oxygen (DO) water quality criteria were recorded at DEQ's ambient monitoring station 1AWLL002.21 at Route 301 to assess this segment as not supporting of the Aquatic Life Use goal for the 2004 water quality assessment. Three of 19 samples (15.8%) were below the minimum DO level (4.0 mg/L) for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

Three of 17 samples (17.6%) were below the lower range (6.0 - 9.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. This also results in an assessment of not supporting the Aquatic Life Use goal.

In addition, the Aquatic Life Use has an observed effect due to exceedances of the total phosphorus screening value of 0.20 mg/L (5 of 19 samples - 26.3%).

IMPAIRMENT SOURCE: Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George

STREAM NAME: Upper Machodoc Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAN-A30R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Pepper Mill Creek

RIVER MILE: 11.13

LATITUDE: 38.32165 **LONGITUDE:** -77.10756

DOWNSTREAM LIMIT:

DESCRIPTION: End of free-flowing waters

RIVER MILE: ~8.9

LATITUDE: 38.30896 **LONGITUDE:** -77.08802

Segment begins at the confluence of Pepper Mill Creek to Upper Machodoc Creek, approximately 0.75 rivermiles upstream of Route 301, downstream to the end of the free-flowing waters of Upper Machodoc Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH (2004), Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 15 samples - 13.3%) were recorded at DEQ's ambient water quality monitoring station 1AUMC009.61 at the Route 301 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Sufficient excursions from the pH water quality criteria were recorded at monitoring station 1AUMC009.61 to assess this segment as not supporting of the Aquatic Life Use goal. Two (2) of 12 samples (16.7%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George, Westmoreland

STREAM NAME: Rosier Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A31E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.28 - Sq. Mi.

INITIAL LISTING: 1999 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 4.44

LATITUDE: 38.25880 **LONGITUDE:** -77.05500

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 1.24

LATITUDE: 38.27140 **LONGITUDE:** -77.01390

Described in VDH Notice and Description of Shellfish Condemnation Number 088

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 088, 7/8/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Monroe Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A31E-04

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.37 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 38.23830 **LONGITUDE:** -76.98130

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.23440 **LONGITUDE:** -76.96610

Described in VDH Condemnation Notice 001A, D

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 001A, D

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Mattox Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A31E-06

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.4 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit (Route 205 bridge)

RIVER MILE: 4.10

LATITUDE: 38.19920 **LONGITUDE:** -77.00750

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 38.21080 **LONGITUDE:** -76.97170

Described in VDH Notice and Description of Shellfish Condemnation Number 001B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Shellfish Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, VDH Shellfish Restriction

The segment was initially listed in 1996 based on excessive fecal coliform standards at the Route 205 bridge (1AMAO004.08).

The segment was adjusted during the 2004 cycle to be coincident with VDH-DSS Shellfish Condemnation 001B, 7/5/2002

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform impairment in this segment is currently considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Potomac River: Popes Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A31E-07

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.41 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 3.19

LATITUDE: 38.16810 **LONGITUDE:** -76.93250

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Potomac River

RIVER MILE: 0.00

LATITUDE: 38.20150 **LONGITUDE:** -76.93360

From the extent of tide to the mouth of Popes Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Shellfish Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, VDH Shellfish Restriction

Fecal coliform standard violation rate of 3/17 at 1APOP000.38
TMDL due 2014

VDH-DSS Shellfish Condemnation 146, 4/27/1989
TMDL due 2010

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Monroe Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A31E-10

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.34 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Monroe Creek from its headwaters to its mouth

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: PCBs

Monroe Creek was assessed not supporting of the Fish Consumption Use based on exceedances of the tissue screening level for PCBs in white perch and gizzard shad at 1AMON002.49.

IMPAIRMENT SOURCE: Unknown

The source of the PCBs is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Bridges Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A31E-11

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.19 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

The tidal portion of Bridges Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Bridges Creek was assessed not supporting of the Recreation Use support goal based on a fecal coliform violation rate of 2/2 at 01660860, a USGS station.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George, Westmoreland

STREAM NAME: Pine Hill Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A31R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 8.5 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.50

LATITUDE: 38.25790 **LONGITUDE:** -77.15960

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Rosier Creek

RIVER MILE: 0.00

LATITUDE: 38.25870 **LONGITUDE:** -77.03690

Mainstem from headwaters to tidal limit at Rosier Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Pine Hill Creek was "identified to Virginia for listing consideration". pH was listed as the parameter of concern. During the 2002 cycle, the segment was assessed as impaired of the Aquatic Life use support goals based on DO violations and pH violations at the Route 208 bridge (1APIN000.57) and widespread pH violations upstream.

During the 2004 cycle the violation rates were 2/13 for both dissolved oxygen and pH. The pH TMDL is due in 2010; the DO TMDL is due in 2014.

In addition, in 2004 the segment was listed as having an "observed effect" due to a cadmium exceedance in sediment. This is not an impairing cause.

IMPAIRMENT SOURCE: Natural Conditions

Natural conditions suspected.

The source of the cadmium in sediment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: King George, Westmoreland

STREAM NAME: Mattox Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A31R-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 34.03 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 12.60

LATITUDE: 38.22940 **LONGITUDE:** -77.11010

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 4.10

LATITUDE: 38.19890 **LONGITUDE:** -77.01250

Mattox Creek watershed from its headwaters to the limit of tide.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

The segment was assessed during the 1998 cycle as threatened of the Aquatic Life use support goal based on pH violations at the Route 627 bridge (1AMAO007.46). During the year 2002 cycle, the segment was downgraded based on the results of a special study and the segment length was revised to end at the tidal limit. During the 2004 cycle, the violation rate was 14/18. The pH TMDL is due in 2014.

The segment was also assessed during the year 2002 cycle as not supporting of the Recreation use goal based on a fecal coliform violation rate of 1AMAO007.46. The violation rate for the 2004 cycle is 7/20. The fecal coliform TMDL is due in 2014.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The source of the pH impairment in this segment is currently considered unknown, but is suspected to be the result of forest leaf decay.

The source of the fecal coliform violations is considered unknown.

Targeted monitoring may be necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Cold Harbor Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.15

LATITUDE: 38.15690 **LONGITUDE:** -76.78060

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.00

LATITUDE: 38.15890 **LONGITUDE:** -76.77080

Described in VDH Notice and Description of Shellfish Condemnation 184A, 6/18/2002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 184A, 6/18/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Currioman Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.92

LATITUDE: 38.14310 **LONGITUDE:** -76.76940

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 184B, 6/18/2002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 184B, 6/18/2002

Impaired in 1998
In 2004, the condemnation boundary was altered slightly. The acreage was unaffected.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Nomini Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-04

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.53 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 9.94

LATITUDE: 38.06030 **LONGITUDE:** -76.70670

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 082A, 6/18/2002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

Portions of Nomini Creek (0.28 sq. mi.) and Pierce Creek (0.14 sq. mi.) were assessed as impaired in 1998. During the 2004 cycle, the condemnation was expanded and combined into VDH Shellfish Restriction 082A, 6/18/2002.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Buckner Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-05

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.23 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 2.46

LATITUDE: 38.12720 **LONGITUDE:** -76.68560

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 082B, 6/18/02.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 082B, 6/18/2002

Segment initially listed in 1998, expanded in 2004

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: North Prong

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-06

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.69

LATITUDE: 38.14250 **LONGITUDE:** -76.70190

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.31

LATITUDE: 37.14310 **LONGITUDE:** -76.70710

Described in VDH Notice and Description of Shellfish Condemnation Number 082C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 082C, 6/18/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Nomini Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.25 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: 1ANOM001.00

RIVER MILE: 1.00

LATITUDE: 38.14940 **LONGITUDE:** -76.72250

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Nomini Creek

RIVER MILE: 0.00

LATITUDE: 38.16220 **LONGITUDE:** -76.71800

Downstream of river mile 1.0.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Assessed not supporting of the Aquatic Life use support goal because of a dissolved oxygen violation rate of 2/5 at 1ANOM000.50. A depth profile consisting of 5 samples was taken 8/29/1996. The deepest two samples violated the standard.

IMPAIRMENT SOURCE: Stratification

Stratified water column indicated by data.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Lower Machodoc Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-08

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.53 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 6.33

LATITUDE: 38.09750 **LONGITUDE:** -76.68670

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 083A, 12/18/2002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction, Dissolved Oxygen

0.36 sq. miles of Lower Machodoc Creek was assessed in 1998 as impaired of the Shellfish Use due to a VDH shellfish condemnation. The segment was shortened in 2002 and then extended to 0.53 sq. miles in 2004.

In 2004, the segment was also considered not supporting of the Aquatic Life Use due to dissolved oxygen violations at 1ALOW004.73. The DO TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Branson Cove

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.50

LATITUDE: 38.14250 **LONGITUDE:** -76.63280

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.19

LATITUDE: 38.14170 **LONGITUDE:** -76.63830

Described in VDH Notice and Description of Shellfish Condemnation Number 083C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 083C, 12/18/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Weatherall Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A32E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 083B, 12/18/2002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 083B, 12/18/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Gardner Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.14 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.54

LATITUDE: 38.11580 **LONGITUDE:** -76.62310

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 143

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 143, 7/2/2002

Size extended during 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Potomac River: Jackson Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.14 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.38

LATITUDE: 38.09560 **LONGITUDE:** -76.61170

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 38.10440 **LONGITUDE:** -76.60080

Described in VDH Notice and Description of Shellfish Condemnation 144

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 144, 7/2/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Bonum Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-03

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.31 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.92

LATITUDE: 38.09690 **LONGITUDE:** -76.58890

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 1.27

LATITUDE: 38.08600 **LONGITUDE:** -76.59220

Described in VDH Notice and Description of Shellfish Condemnation 159

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 159, 7/2/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: White Point Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-05

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.11 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.35

LATITUDE: 38.04860 **LONGITUDE:** -76.57280

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 028A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 028A, 7/11/2002

The segment was listed as impaired in 1998 as 0.21 sq. mi., was shortened in 2002 to 0.03 sq. mi., and was readjusted in 2004 to 0.11 sq. mi.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland, Northumberland

STREAM NAME: Hampton Hall Branch

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-07

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.3 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 2.92

LATITUDE: 38.00330 **LONGITUDE:** -76.59750

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 028C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 028C, 7/11/2002

Size extended during 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Westmoreland

STREAM NAME: Kinsale Branch

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-08

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.23

LATITUDE: 38.03390 **LONGITUDE:** -76.58720

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.27

LATITUDE: 38.02890 **LONGITUDE:** -76.56690

Described in VDH Notice and Description of Shellfish Condemnation 028B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 028B, 7/11/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.99

LATITUDE: 37.99890 **LONGITUDE:** -76.54060

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 1.10

LATITUDE: 38.00500 **LONGITUDE:** -76.56000

Described in VDH Notice and Description of Shellfish Condemnation 028D

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 028D, 7/11/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Lodge Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.26 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 3.05

LATITUDE: 37.94720 **LONGITUDE:** -76.54060

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 028B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 028E, 7/11/2002

The segment was enlarged in 2004 and combines two previous Lodge Creek segments into one condemnation.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Dungan Cove

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.67

LATITUDE: 38.00060 **LONGITUDE:** -76.52750

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 028F

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 028F, 7/11/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A33R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 3.95 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: 37.94950 **LONGITUDE:** -76.60000

DOWNSTREAM LIMIT:

DESCRIPTION: Courtney Millpond

RIVER MILE:

LATITUDE: 37.99900 **LONGITUDE:** -76.57450

From its headwaters to Courtney Millpond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

Mill Creek was assessed not supporting of the Aquatic Life use support goal based on a pH standard violation rate of 3/20 at Route 202 (1AMIA004.12).

The segment was assessed not supporting of the Recreation use goal based on a fecal coliform violation rate of 6/20 at 1AMIA004.12.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The source of the pH violations is considered unknown, but natural conditions are suspected.

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: The Glebe

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.23 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 2.92

LATITUDE: 37.98670 **LONGITUDE:** -76.52250

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 145C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 145C, 11/27/2002

Size was increased in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Killneck Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.83

LATITUDE: 37.97970 **LONGITUDE:** -76.48000

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.23

LATITUDE: 37.98420 **LONGITUDE:** -76.47420

Described in VDH Notice and Description of Shellfish Condemnation 145D

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 145D, 11/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Stevens Point

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-03

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.50

LATITUDE: 37.97860 **LONGITUDE:** -76.47500

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.10

LATITUDE: 37.98170 **LONGITUDE:** -76.46890

Described in VDH Notice and Description of Shellfish Condemnation 145E, 11/27/2002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 145E, 11/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Coan River

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-04

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.96750 **LONGITUDE:** -76.48390

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 145F

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 145F, 11/27/2002

Size increased in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Coan River

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-05

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.5 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.93170 **LONGITUDE:** -76.49500

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 145H

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 145H, 11/27/2002

Segment expanded in 2004 cycle and now incorporates previous shellfish condemnations on Headly Cove and Mill Creek

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Cod Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-07

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.96690 **LONGITUDE:** -76.44830

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 141A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 141A, 11/13/01
Segment was shortened in 2004.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Cod Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-08

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.96470 **LONGITUDE:** -76.43360

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.97110 **LONGITUDE:** -76.43530

Described in VDH Notice and Description of Shellfish Condemnation Number 141B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 141B, 11/13/01

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Presley Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.29 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 2.23

LATITUDE: 37.94250 **LONGITUDE:** -76.41080

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.35

LATITUDE: 37.96330 **LONGITUDE:** -76.41690

Described in VDH Notice and Description of Shellfish Condemnation 140

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 140, 4/27/1989

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Bridgeman Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.73

LATITUDE: 37.95060 **LONGITUDE:** -76.39800

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.15

LATITUDE: 37.96250 **LONGITUDE:** -76.39030

Described in VDH Notice and Description of Shellfish Condemnation Number 142A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 142A, 9/30/02

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Hull Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.11 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 4.38

LATITUDE: 37.91560 **LONGITUDE:** -76.38470

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 142B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 142B, 9/30/02

Size reduced in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Rogers Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.84

LATITUDE: 37.93810 **LONGITUDE:** -76.37610

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.38

LATITUDE: 37.95110 **LONGITUDE:** -76.37940

Described in VDH Notice and Description of Shellfish Condemnation 142C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 142C, 9/30/02

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Potomac River: Cubitt Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-14

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.23 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.92750 **LONGITUDE:** -76.35920

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.94920 **LONGITUDE:** -76.35000

Described in VDH Notice and Description of Shellfish Condemnation Number 168

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction, Fecal Coliform

VDH-DSS Shellfish Condemnation 168, 4/27/1989
Shellfish TMDL due in 2010

The segment was also listed for the Recreation Use in 2004 due to a fecal coliform violation rate of 3/20 at 1ACUT000.58. The TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Little Wicomico River: Cod Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.88000 **LONGITUDE:** -76.30420

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 105B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 105B, 6/21/2002

Segment was shortened by 0.3 sq. mi. in 2004

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Little Wicomico River

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.47 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 6.62

LATITUDE: 37.90800 **LONGITUDE:** -76.33110

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 105A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 105A, 6/21/2002

Size increased by 0.01 sq. mi. in 2004

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Wrights Cove

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-22

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 145B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 145B, 11/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: The Glebe

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-23

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 145A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 145A, 11/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Spring Cove

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-24

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Hull Creek

RIVER MILE:

LATITUDE: **LONGITUDE:**

Spring Cove, tributary to Hull Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as not supporting the Recreation use due to a fecal coliform violation rate of 4/20 at 1ASPN000.08

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Boathouse Creek

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34E-25

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 145G

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 145G, 11/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Northumberland

STREAM NAME: Coan Mill Stream

HYDROLOGIC UNIT: 02070011

TMDL ID: VAP-A34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.53 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: UT Confluence

RIVER MILE: 1.53

LATITUDE: 37.92370 **LONGITUDE:** -76.49750

DOWNSTREAM LIMIT:

DESCRIPTION: Coan River Confluence

RIVER MILE: 0.00

LATITUDE: 37.93830 **LONGITUDE:** -76.48680

From the confluence with the unnamed tributary at river mile 1.52 downstream to the Coan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Coan Mill Stream is assessed not supporting of the Aquatic Life use goal based on a fecal coliform violation rate of 6/20 at Route 360 (1ACON000.96).

The same segment is considered fully supporting with observed effects of the Aquatic Life use goal because of a phosphorus screening value exceedance rate of 3/20 at 1ACON000.96. This is not an impairing cause.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Highland

STREAM NAME: Straight Fork

HYDROLOGIC UNIT: 02070001

TMDL ID: VAV-B01R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 7.57 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.57

LATITUDE: 38.48147 **LONGITUDE:** -79.62602

DOWNSTREAM LIMIT:

DESCRIPTION: VA/WVA State Line

RIVER MILE: 0.00

LATITUDE: 38.57022 **LONGITUDE:** 79.57085

Segment begins at the headwaters and continues downstream to the VA/WVA State Line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform, Temperature

Monitoring station 1ASTT006.12 had 2 pH standards exceedances out of 14 samples. Monitoring station 1ASTT006.12 had 3 temperature standard exceedances out of 15 samples.

Monitoring station 1ASTT006.12 had 3 fecal coliform standard exceedances out of 15 samples.

IMPAIRMENT SOURCE: Atmospheric Deposition, Unknown, Natural Conditions

The source of the pH exceedances is believed to be acid deposition. The source of the temperature standard exceedances is natural.

The source of the fecal coliform exceedances is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Highland

STREAM NAME: West Strait Creek

HYDROLOGIC UNIT: 02070001

TMDL ID: VAV-B02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.35 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Discharge from Monterey STP

RIVER MILE: 3.85

LATITUDE: 38.41500 **LONGITUDE:** -79.57306

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream to Burners Run

RIVER MILE: 3.50

LATITUDE: 38.41889 **LONGITUDE:** -79.57028

Segment begins at the Monterey STP discharge and continues downstream to the confluence with Burners Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Monitoring station 1AWSC003.67 continues to receive severely impaired benthic ratings. Sampling was done in the spring & fall of 1999 and 2000. The cause of the impairment below the discharge is believed to be ammonia toxicity and/or solids deposition.

IMPAIRMENT SOURCE: PS - STP - Town of Monterey

The STP is the source of the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Highland

STREAM NAME: Strait Creek

HYDROLOGIC UNIT: 02070001

TMDL ID: VAV-B02R-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 3.26 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the West Strait Creek confluence.

RIVER MILE: 3.26

LATITUDE: 38.44806 **LONGITUDE:** -79.53500

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with the South Branch Potomac River.

RIVER MILE: 0.00

LATITUDE: 38.48222 **LONGITUDE:** -79.50861

Segment begins at the confluence with West Strait Creek and ends at the confluence with the South Branch Potomac River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Temperature

1ASTC000.72 - Moderately Impaired Benthic Rating during the 2004 assessment period. The exact cause of the moderately impaired rating is not known. 1ASTC000.02 - 2 temperature standard exceedances out of 13 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Channelization, Natural Conditions

The moderately impaired benthic rating is believed to be due to channelization and riparian modifications. The source of the temperature standard exceedances is natural.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Highland

STREAM NAME: West Strait Creek

HYDROLOGIC UNIT: 02070001

TMDL ID: VAV-B02R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.92 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters

RIVER MILE: 4.77

LATITUDE: 38.41553 **LONGITUDE:** -79.58643

DOWNSTREAM LIMIT:

DESCRIPTION: Discharge from Monterey STP

RIVER MILE: 3.85

LATITUDE: 38.41500 **LONGITUDE:** -79.57306

Segment begins at the headwaters and continues downstream to the Monterey STP discharge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Monitoring station 1AWSC003.79 was assessed as moderately impaired for the 2004 assessment.

IMPAIRMENT SOURCE: NPS - Agriculture

The source of the impairment is believed to be non-point source agriculture.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Highland

STREAM NAME: South Branch Potomac River

HYDROLOGIC UNIT: 02070001

TMDL ID: VAV-B02R-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 10.84 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.84

LATITUDE: 38.43944 **LONGITUDE:** -79.61444

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the WVA/VA State line.

RIVER MILE: 0.00

LATITUDE: 38.50083 **LONGITUDE:** -79.49500

Segment begins at the headwaters and ends at the WVA/VA State Line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

1ASOA001.00 - 4 temperature violations out of 17 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Natural

The source is natural conditions

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Highland

STREAM NAME: South Fork South Br Pot River

HYDROLOGIC UNIT: 02070001

TMDL ID: VAV-B03R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 2.49 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters

RIVER MILE: 2.49

LATITUDE: 38.39917 **LONGITUDE:** -79.39000

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the State Line

RIVER MILE: 0.00

LATITUDE: 38.42667 **LONGITUDE:** -79.36889

Segment begins at the headwaters and ends at the WVA/VA State Line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004), Temperature

1ASFP002.56 - There were 3 fecal coliform standard exceedances out of 22 samples during the 2002 assessment period. 1ASFP002.56 - 3 temperature violations out of 15 samples during the 2002 assessment period.

IMPAIRMENT SOURCE: NPS, Natural Conditions

The source of the fecal coliform standard exceedances is believed to be NPS runoff. The temperature violations are due to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Frederick

STREAM NAME: Back Creek

HYDROLOGIC UNIT: 02070004

TMDL ID: VAV-B05R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 18.69 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 25.32

LATITUDE: 39.17250 **LONGITUDE:** -78.40694

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Hogue Crk

RIVER MILE: 6.63

LATITUDE: 39.30333 **LONGITUDE:** -78.22222

Segment begins at the headwaters and ends at the confluence with Hogue Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

1ABAR047.26 - 3 temperature violations out of 16 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Natural Conditions

The temperature violations are due to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Frederick

STREAM NAME: Hogue Creek

HYDROLOGIC UNIT: 02070004

TMDL ID: VAV-B06R-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 16.76 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 16.76

LATITUDE: 39.18694 **LONGITUDE:** -78.37028

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Back Creek

RIVER MILE: 0.00

LATITUDE: 39.30333 **LONGITUDE:** -78.22222

Segment begins at the headwaters and ends at the confluence with Back Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic 2002), Fecal Coliform (2002), Temperature

1BHOC006.23 had a Moderately Impaired benthic rating during the 2002 assessment period and a Slightly Impaired rating for the 2004 assessment cycle. The exact cause of the impairment is not known. 1BHOC006.23 - 9 exceedances of the temperature standard out of 40 samples for the 2004 assessment period.

1BHOC006.23 - Six fecal coliform values exceeded the standard out of 27 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Unknown, NPS, Natural Conditions

The source of the benthic impairment is unknown. The source is natural conditions.

The source of the fecal coliform standard exceedances in believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Frederick

STREAM NAME: Babbs Run

HYDROLOGIC UNIT: 02070004

TMDL ID: VAV-B07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.48 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters

RIVER MILE: 14.48

LATITUDE: 39.21438 **LONGITUDE:** -78.24089

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Back Creek

RIVER MILE: 0.00

LATITUDE: 39.35041 **LONGITUDE:** -78.18764

Segment begins at Babbs Run headwaters and continues downstream to the confluence with Back Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1ABAB004.54 - 3 Fecal Coliform standard exceedances out of 13 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source of the Fecal Coliform is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Clarke, Frederick

STREAM NAME: Lick Run

HYDROLOGIC UNIT: 02070004

TMDL ID: VAV-B09R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.87 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: The segment begins at the headwaters.

RIVER MILE: 8.87

LATITUDE: 39.23017 **LONGITUDE:** -78.10574

DOWNSTREAM LIMIT:

DESCRIPTION: The segment ends at the confluence with Opequon Creek.

RIVER MILE: 0.00

LATITUDE: 39.21516 **LONGITUDE:** -78.08385

Segment begins at the headwaters and ends at the confluence with Opequon Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1ALIR000.95 - 3 Fecal Coliform standard exceedances out of 18 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Clarke, Frederick, Winchester

STREAM NAME: Redbud Run

HYDROLOGIC UNIT: 02070004

TMDL ID: VAV-B09R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.07 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: The segment begins at the headwaters.

RIVER MILE: 8.07

LATITUDE: 39.23053 **LONGITUDE:** -78.16821

DOWNSTREAM LIMIT:

DESCRIPTION: The segment ends at the confluence with Opequon Creek.

RIVER MILE: 0.00

LATITUDE: 39.18753 **LONGITUDE:** -78.07582

Segment begins at the headwaters and ends at the confluence with Opequon Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

1ARED000.46 - 3 Fecal Coliform standard exceedances out of 19 samples during the 2004 assessment period.

1ARED000.46 had a Moderately Impaired bethic assessment for the 2004 assessed cycle.

IMPAIRMENT SOURCE: NPS, Unknown

The source is of the fecal coliform is believed to be NPS runoff.

The source of the benthic impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Middle River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B10R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 15.71 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 69.0

LATITUDE: 38.04806 **LONGITUDE:** -79.26194

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Eidson Creek

RIVER MILE: 53.29

LATITUDE: 38.22056 **LONGITUDE:** -79.13194

Segment begins at the headwaters and continues downstream to the confluence with the Eidson Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic) 1998

1BMDL060.48 - 14 Fecal Coliform violations out of 25 samples and 1BMDL061.07 - Four Fecal Coliform violations out of five samples during the 2004 assessment cycle.

A single benthic monitoring survey in 2002 indicated Moderately Impaired conditions in 2 stations bracketing Cockran Spring (1BMDL066.05 & 1BMDL066.47). The exact cause of the impairment is not known.

TMDLs for both parameters are currently under development.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife, NPS - Agriculture

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

The source of the benthic impairment is believed to be from NPS agricultural runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Back Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B10R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.39 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.39

LATITUDE: 38.06667 **LONGITUDE:** -79.21044

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Middle River

RIVER MILE: 0.00

LATITUDE: 38.15057 **LONGITUDE:** -79.18286

Segment begins at the headwaters and continues downstream to the confluence with the Middle River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BBAK001.74 - 5 Fecal Coliform violations out of 10 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Eidson Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B10R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.66 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.66

LATITUDE: 38.08073 **LONGITUDE:** -79.19668

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Middle River

RIVER MILE: 0.00

LATITUDE: 38.17938 **LONGITUDE:** -79.16009

Segment begins at the headwaters and continues downstream to the confluence with the Middle River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BEDN003.67 - 6 Fecal Coliform violations out of 9 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Staunton

STREAM NAME: Lewis Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B12R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.55 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Begins just South of Staunton

RIVER MILE: 9.55

LATITUDE: 38.12861 **LONGITUDE:** -79.10056

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Middle River.

RIVER MILE: 0.00

LATITUDE: 38.18889 **LONGITUDE:** -78.96972

Segment begins just South of Staunton and continues downstream to the confluence with Middle River near Verona.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Fish Consumption - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Ecoli, PCBs in Fish Tissue

1BLEW006.95 had a rating of severely impaired during the 2004 assessment period. The exact cause of the impairment is not known.

1BLEW002.91- 24 Ecoli standard violations out of 33 samples during the 2004 assessment period.

1BLEW005.24 - PCBs exceeded the standard in two different fish species during the 2004 assessment period resulting in a Not Supporting assessment.

A TMDL is being developed for the fecal coliform parameter.

IMPAIRMENT SOURCE: NPS - Agriculture/Urban, NPS - Agriculture/Urban, Unknown

The primary source of the Ecoli and the problems with the benthic community are due to NPS urban and agricultural runoff.

The source of the PCB is not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Middle River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B12R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 27.77 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the confluence with Jennings Branch.

RIVER MILE: 45.81

LATITUDE: 38.22045 **LONGITUDE:** -79.13136

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Christians Creek.

RIVER MILE: 18.04

LATITUDE: 38.19398 **LONGITUDE:** -78.93470

Begins at the confluence with Jennings Branch and continues downstream to the confluence with Christians Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

1BMDL036.10 - Fully supported the Aquatic Life Use the 1998 and 2004 assessment cycles. However, EPA improperly allowed this station to be added to Appendix B of the 1998 Consent Decree and now refuses to De-List it.

IMPAIRMENT SOURCE: None

There is no actual impairment so there is no source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Moffett Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.95 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Tunnel Branch

RIVER MILE: 8.95

LATITUDE: 38.30278 **LONGITUDE:** -79.17778

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Middle River

RIVER MILE: 0.00

LATITUDE: 38.24389 **LONGITUDE:** -79.08500

Segment begins with Moffett Creek's confluence with Tunnel Branch and continues downstream to its confluence with the Middle River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

1BMFT006.20 and 1BMFS005.11 had a benthic ratings of moderately impaired during the 2004 assessment period. The exact cause of the impairment is not known.

1BMFT006.20 - 5 fecal coliform violations out of 18 samples during the 2004 assessment period.

1BMFT001.43 - 2 fecal coliform violations out of 8 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture, NPS - Agriculture/Wildlife

The primary source of the Fecal Coliform is NPS agricultural and wildlife runoff.

The exact source of the benthic impairment is not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Elk Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.98 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters

RIVER MILE: 3.98

LATITUDE: 38.27214 **LONGITUDE:** -79.16685

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Moffett Creek

RIVER MILE: 0.00

LATITUDE: 38.26031 **LONGITUDE:** -79.10256

Segment begins at Elk Run's headwaters and continues downstream to its confluence with the Moffett Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BEKR000.25 - 2 fecal coliform violations out of 9 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source is NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Christians Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B14R-01

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 31.45 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2002

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 31.45

LATITUDE: 38.02861 **LONGITUDE:** -79.18722

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Middle River

RIVER MILE: 0.00

LATITUDE: 38.19389 **LONGITUDE:** -78.93472

Segment begins at Christians Creek's headwaters and continues downstream to its confluence with the Middle River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, 1

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic) 1998

1BCST012.32 - 14 fecal coliform violations out of 40 samples and 1BCST021.76 - 36 fecal coliform violations out of 52 samples during the 2004 assessment period.

1BCST007.42 had a slightly impaired benthic rating for the 2004 assessment period but EPA guidance requires that it be assessed as Moderately Impaired because one of the last surveys was Moderately Impaired.

IMPAIRMENT SOURCE: Agriculture\Wildlife\Human, NPS - Agriculture

The primary source of the fecal coliform is NPS agricultural and wildlife runoff. A TMDL has been approved by EPA for this parameter.

The biological monitoring station was fully supporting the Aquatic Life Use during the 2002 & 2004 assessment cycles. A TMDL is being prepared for this parameter.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Folly Mills Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B14R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.14 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 13.14

LATITUDE: 38.08029 **LONGITUDE:** -79.17158

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Christians Creek.

RIVER MILE: 0.00

LATITUDE: 38.08381 **LONGITUDE:** -79.04105

Segment begins at Folly Mills Creek's headwaters and continues downstream to its confluence with Christians Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, 1

IMPAIRMENT CAUSE: Fecal Coliform

1BFMC001.61 - 4 fecal coliform violations out of 9 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Agriculture\Wildlife\Human

The primary source of the fecal coliform is NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Nelson, Rockingham

STREAM NAME: Middle River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 17.57 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Christians Creek

RIVER MILE: 17.57

LATITUDE: 38.19000 **LONGITUDE:** -78.93000

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with North River

RIVER MILE: 0.00

LATITUDE: 38.28000 **LONGITUDE:** -78.85000

Segment begins at Middle River's confluence with Christians Creek and continues downstream to its confluence with North River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BMDL001.83 - 15 fecal coliform violations out of 49 samples during the 2004 assessment.

IMPAIRMENT SOURCE: NPS - Agriculture

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Polecat Draft

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B15R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.47 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters

RIVER MILE: 7.47

LATITUDE: 38.22944 **LONGITUDE:** -78.88528

DOWNSTREAM LIMIT:

DESCRIPTION: confluence with Middle River

RIVER MILE: 0.00

LATITUDE: 38.15528 **LONGITUDE:** -78.89139

Segment begins at Polecat Draft's headwaters and continues downstream to its confluence with the Middle River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BPCD001.03 - 7 E. Coli violations out of 8 samples during the 2004 assessment cyle.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source is NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: North River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B16R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 23.12 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 55.03

LATITUDE: 38.44583 **LONGITUDE:** -79.26000

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Freemason Run

RIVER MILE: 31.91

LATITUDE: 38.35139 **LONGITUDE:** -79.09556

Segment begins at the headwaters and ends at the confluence with Freemason Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting (10.03 Miles)

IMPAIRMENT CAUSE: pH, General Standard (Benthic) (10.03 Miles)

1BNTH036.96 - 11 pH values out of 23 samples were below the minimum standard during the 2004 assessment period.

1BNTH046.75 - Has never had a Moderately Impaired rating, however, EPA allowed to be placed on Attachment B of the Consent Decree in 1998. The segment is shorter than the pH segment beginning at the headwaters and continuing to the head of Elkhorn Lake (10.03 Miles).

IMPAIRMENT SOURCE: Atmospheric Deposition, None - (10.03 Miles)

The source of the low pHs is believed to be atmospheric deposition.

There is no benthic impairment but EPA requires that it be listed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockingham

STREAM NAME: North River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 24.96 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Beaver Creek

RIVER MILE: 24.96

LATITUDE: 38.39000 **LONGITUDE:** -79.02000

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with South River

RIVER MILE: 0.00

LATITUDE: 38.29583 **LONGITUDE:** -78.80833

Segment begins at North River's confluence with Beaver Creek and continues downstream to its confluence with the South River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BNTH021.00 - 15 fecal coliform violations out of 51 samples, 1BNTH022.25 - 3 fecal coliform violations out of 9 samples and 1BNTH014.08 had 10 E. Coli standard violations out of 27 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform and E. Coli bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockingham

STREAM NAME: Thorny Branch

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.1 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.1

LATITUDE: 38.42708 **LONGITUDE:** -79.11336

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with North River including a tributary

RIVER MILE: 0.00

LATITUDE: 38.38970 **LONGITUDE:** -79.06591

Segment begins at Thorny Branch's headwaters and continues downstream to its confluence with the North River including a tributary.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BTRN000.38 - 4 fecal coliform violations out of 8 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockingham

STREAM NAME: Wolf Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.11 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 3.11

LATITUDE: 38.44194 **LONGITUDE:** -79.16848

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Briery Branch

RIVER MILE: 0.00

LATITUDE: 38.43806 **LONGITUDE:** -79.12472

The segment begins at Wolf Run's headwaters and continues downstream to the confluence with Briery Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS monitoring station 2019 & 2042 - Had moderately impaired benthic ratings during the 2004 assessment cycle. The exact cause of the impairment is not known.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source of the impairment is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockingham

STREAM NAME: Briery Branch

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B18R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 12.98 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 12.98

LATITUDE: 38.46889 **LONGITUDE:** -79.21944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Beaver Creek.

RIVER MILE: 0.00

LATITUDE: 38.39472 **LONGITUDE:** -79.02167

Segment begins at the headwaters and ends at confluence with Beaver Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

1BBRY006.94 - 2 pH values out of 14 samples were below the minimum standard during the 2004 assessment period.

IMPAIRMENT SOURCE: Unknown

The source is not known, however the water quality standards need to be modified to reflect the correct geology of the area.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Beaver Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B18R-04

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 5.57 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.57

LATITUDE: 38.46222 **LONGITUDE:** -79.08833

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Briery Branch.

RIVER MILE: 0.00

LATITUDE: 38.39472 **LONGITUDE:** -79.02167

Segment begins at the headwaters and ends at the confluence with Briery Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting 2.8 miles, Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) 2.4 miles, Fecal Colform, Temperature

1BBVR002.75 - Had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the impairment is not known (2.8 miles). 1BBVR003.60 - 6 temperature violations out of 21 samples during the 2004 assessment period.

1BBVR003.60 - 9 fecal coliform violations out of 22 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture 2.8 miles, NPS - Agriculture/Wildlife, Natural Conditions

The source of the benthic impairment is not known. The source of the temperature violations is natural.

The source of the fecal coliform bacteria is believed to be NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Briery Branch

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B18R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.5 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Beaver Creek.

RIVER MILE: 1.5

LATITUDE: 38.39472 **LONGITUDE:** -79.02167

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with North River

RIVER MILE: 0.00

LATITUDE: 38.39473 **LONGITUDE:** -79.02157

Segment begins at the confluence with Beaver Creek and continues downstream to the confluence with North River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BBRY001.22 - 3 fecal coliform violations out of 12 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source of the Fecal Coliform bacteria is primarily from NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockingham

STREAM NAME: Mossy Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.65 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.65

LATITUDE: 38.30363 **LONGITUDE:** -79.10496

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with North River

RIVER MILE: 0.00

LATITUDE: 38.38996 **LONGITUDE:** -79.01108

Segment begins at Mossy Creek's headwaters in Mount Solon and continues downstream to its confluence with North River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, 1

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

1BMSS001.35 - 26 fecal coliform violations out of 56 samples during the 2002 assessment period.

1BMSS003.01 - Biological monitoring indicated Slight Impairment during the 2004 assessment cycle as it had in 1998, 2000 & 2002. EPA requires that it be listed as impaired because they improperly allowed it to be placed on the Plantiffs list in 1998.

IMPAIRMENT SOURCE: NPS - Agriculture\Wildlife, None

The source of the E. Coli is believed to be NPS agricultural and wildlife runoff.

Because there is no acutal benthic impairment there is no source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Dry River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 20.46

LATITUDE: 38.60583 **LONGITUDE:** -79.12889

DOWNSTREAM LIMIT:

DESCRIPTION: Ends near Lilly.

RIVER MILE: 7.46

LATITUDE: 38.47778 **LONGITUDE:** -79.02361

Segment begins at the headwaters and ends near Lilly.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

1BDUR016.66 - 5 pH values out of 9 samples were below the minimum standard during the 2004 assessment.

1BDUR007.66 - 3 pH minimum standard violations out of 20 samples during the 2004 assessment.

IMPAIRMENT SOURCE: None

The source is not known, however atmospheric deposition is a possibilty.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Dry River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.46 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Rt 613 Bridge at Lilly

RIVER MILE: 7.46

LATITUDE: 38.47000 **LONGITUDE:** -79.01000

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with North River

RIVER MILE: 0.00

LATITUDE: 38.39000 **LONGITUDE:** -78.98000

Segment begins at the Rt 613 bridge at Lilly and continues downstream to the confluence with North River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

1BDUR000.02 - 8 E. Coli violations out of 29 samples during the 2004 assessment.

A TMDL has been approved by EPA for Fecal Coliform this segment.

1BDUR000.11 fully supported the Aquatic Life Use in 2004 as it always has. However, EPA improperly allowed it to be added to Appendix B of the 1998 Consent Decree. The fall 2001 and fall 2002 ratings were almost at the Not Impaired level. None the less EPA refuses to De-List it.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife, None

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Because there is no acutal benthic impairment there is no source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Muddy Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B22R-01

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 10.38 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2002

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.38

LATITUDE: 38.54528 **LONGITUDE:** -78.92278

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Dry River

RIVER MILE: 0.00

LATITUDE: 38.42694 **LONGITUDE:** -78.98167

Segment begins at Muddy Creek's headwaters and continues downstream to its confluence with Dry River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Public Water Supply Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic), Nitrate-Nitrogen

1BMDD000.40 - 20 E. Coli violations out of 27 samples and 1BMDD000.40 - 20 E. Coli violations out of 30 samples for the 2004 assessment period. A TMDL for the fecal coliform impairment has been approved by EPA. 1BMDD000.40 - 3 Nitrate-Nitrogen values exceeded the public drinking water standard of 10.0 mg/l during the 2004 assessment period. A TMDL for the nitrate-nitrogen has been approved by EPA. The length of the nitrate-nitrogen segment was only 2.15 miles because this is where the public water supply designation ends.

1BMDD002.10 and 1BMDD005.81- These Biological monitoring stations were Moderately Impaired during the 2004 assessment. A TMDL has been approved by EPA for this parameter.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife, Unkown, NPS - Ag/Pt Src

The primary source of the fecal coliform bacteria and other pollutants is from NPS agricultural and wildlife runoff. The sources of nitrate-nitrogen are agricultural activities and an industrial point source.

The source of the benthic impairment is sediment and nutrients from NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockingham

STREAM NAME: North River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B23R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 16.32 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Cooks Creek

RIVER MILE: 16.32

LATITUDE: 38.34536 **LONGITUDE:** -78.93962

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with South River

RIVER MILE: 0.00

LATITUDE: 38.29583 **LONGITUDE:** -78.80833

Segment begins at North River's confluence with Cooks Creek and continues downstream until its confluence with the South River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting - 1998

IMPAIRMENT CAUSE: General Standard (Benthic) 1998

The benthic monitoring station fully supported the Aquatic Life Use during the 2000, 2002 & 2004 assessment periods but EPA will De-List the parameter.

IMPAIRMENT SOURCE: None

None

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockingham

STREAM NAME: Long Glade Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B24R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.74 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.74

LATITUDE: 38.27250 **LONGITUDE:** -79.05639

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with North River

RIVER MILE: 0.00

LATITUDE: 38.36861 **LONGITUDE:** -78.97167

Segment begins at the headwaters and continues downstream to its confluence with the North River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BLGC000.96 - 9 fecal coliform violations out of 24 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Lake Shenandoah

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B29L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 38.4 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

1BCNG003.13 - 42 DO violations out of 56 samples below the thermocline during the 2004 assessment period. Scores of the Trophic Status Index indicated nutrient enrichment.

1BCNG003.13 - 7 chlorophyll a values exceeded the screening value out of 7 samples during the 2002 assessment period resulting in a threatened assessment.

IMPAIRMENT SOURCE: Nutrient enrichment

The source of the low dissolved oxygen is thermal stratification and nutrient enrichment from anthropogenic sources.

The source of the chlorophyll a is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: South River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B30R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.79 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 52.30

LATITUDE: 37.96333 **LONGITUDE:** -79.20806

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Stony Run

RIVER MILE: 40.51

LATITUDE: 38.01833 **LONGITUDE:** -79.08583

Segment begins at South River's headwaters and continues downstream to its confluence with Stony Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BSTH041.68 - Had 22 Fecal Coliform values exceed the standard out of 49 samples during the 2004 assessment cycle.

1BSTH044.90 - Had two Fecal Coliform values exceed the standard out of nine samples during the 2004 assessment cycle.

A TMDL is under development for this parameter.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Back Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B31R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.59 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 13.59

LATITUDE: 37.89778 **LONGITUDE:** -79.02500

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the South River confluence

RIVER MILE: 0.00

LATITUDE: 38.03917 **LONGITUDE:** -78.93500

Segment begins at the headwaters and ends at the South River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

1BBCK000.78 - Moderately Impaired Benthic Rating during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Mills Branch

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B31R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.07 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.07

LATITUDE: 37.91639 **LONGITUDE:** -79.05778

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Back Creek confluence

RIVER MILE: 0.00

LATITUDE: 37.98167 **LONGITUDE:** -78.95444

Segment begins at the headwaters and ends at the Back Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS 5084 had a severely impaired benthic rating during the 2002 assessment period. It was not visited during the 2004 assessment cycle so it remains on the 303(d) list.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source of the impairment is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Waynesboro, Augusta

STREAM NAME: South River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B32R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.91 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at Meadow Brook Road Bridge

RIVER MILE: 29.18

LATITUDE: 38.06218 **LONGITUDE:** -78.91299

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Sawmill Run.

RIVER MILE: 19.27

LATITUDE: 38.10333 **LONGITUDE:** -78.86583

Segment begins at the Meadow Brook road bridge and continues downstream to the confluence with Sawmill Run

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

1BSTH021.72 had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the moderately impaired rating is unknown.

IMPAIRMENT SOURCE: NPS - Urban, Legacy - Threatened

The source of the benthic impairment is believed to be NPS urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockbridge, Rockingham, Waynesboro

STREAM NAME: South River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B32R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 29.18 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at Meadow Brook Road Bridge

RIVER MILE: 29.18

LATITUDE: 38.06218 **LONGITUDE:** -78.91299

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with North River

RIVER MILE: 0.00

LATITUDE: 38.29611 **LONGITUDE:** -78.80750

Segment begins at the Meadow Brook Road Bridge and continues downstream to the confluence with the North River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BSTH007.80 - Had 10 Fecal Coliform values exceed the standard out of 48 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS - Ag/Urban

The source of the Fecal Coliform is believed to be NPS Ag/Urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta, Rockingham

STREAM NAME: Paine Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B32R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.25 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 6.25

LATITUDE: 38.22133 **LONGITUDE:** -78.74585

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the South River confluence

RIVER MILE: 0.00

LATITUDE: 38.20979 **LONGITUDE:** -78.83463

Segment begins at the headwaters and ends at the South River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

USGS: 01627395 - Had two pH values below the minimum standard out of two samples during the 2004 assessment period.

PAIN - Had two pH values below the minimum standard out of two samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source of the impairment is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Augusta

STREAM NAME: Meadow Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B32R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.87 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 6.87

LATITUDE: 38.18264 **LONGITUDE:** -78.77151

DOWNSTREAM LIMIT:

DESCRIPTION: Ends where the stream goes underground

RIVER MILE: 0.00

LATITUDE: 38.17823 **LONGITUDE:** -78.82474

Segment begins at the headwaters and ends where the stream goes underground.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

VT36 - Had two pH values below the minimum standard out of two samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source of the impairment is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page, Rockingham

STREAM NAME: South Fork Shenandoah River

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B33R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 58.6 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of North & South Rivers

RIVER MILE: 102.66

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Hawksbill Creek

RIVER MILE: 44.06

LATITUDE: **LONGITUDE:**

Segment begins at the North & South River confluence and continues downstream to the Hawksbill Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic) 1998

1BSSF100.10 - 20 fecal coliform violations out of 50 samples during the 2004 assessment period. 1BSSF078.20 - 9 fecal coliform values violated the standard out of 37 samples during the 2004 assessment period. 1BSSF 085.08 - 3 fecal coliform values violated the standard out of 8 samples during the 2004 assessment cycle. 1BSSF092.69 - 2 fecal coliform values violated the standard out of 8 samples. 1BSSF054.20 - 6 fecal coliform violations out of 48 samples during the 2004 assessment cycle.

DEQ's biological monitoring station at river miles 101.10 had a moderately impaired benthic assessmenst during the 1998 assessment cycle and was not visited during the 2004 assessment cycle. 1BSSF078.18 had a moderately impaired benthic rating during the 2004 assessment cycle. 1BSSF053.05 had a moderately impaired benthic rating during the 1998 assessment cycle and was not visited during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS, Unknown

The source of the fecal coliform is believed to be NPS.

The source(s) of the benthic impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Deep Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B33R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.33 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 4.33

LATITUDE: 38.26443 **LONGITUDE:** -78.73161

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the South Fork Shenandoah River confluence

RIVER MILE: 0.00

LATITUDE: 38.30418 **LONGITUDE:** -78.78303

Segment begins at the headwaters and ends at the South River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

DR01 - Had two pH values below the minimum standard out of two samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source of the impairment is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Cub Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.94 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 13.94

LATITUDE: 38.44000 **LONGITUDE:** -78.73000

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the SF Shenandoah R.

RIVER MILE: 0.00

LATITUDE: 38.34000 **LONGITUDE:** -78.72000

Segment begins at Cub Run's headwaters and continues downstream to its confluence with the S.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BCBR000.80 - 9 Fecal Coliform violations out of 19 samples during the 2004 assessment period.

1BCBR007.42 - 6 Fecal Coliform violations out of 8 samples and 2 E. Coli violations out of 2 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is from NPS agricultural & wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Boone Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B35R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.1 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 13.10

LATITUDE: 38.44889 **LONGITUDE:** -78.72417

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the SF Shenandoah River

RIVER MILE: 0.00

LATITUDE: 38.43972 **LONGITUDE:** -78.63472

Segment begins at the headwaters and ends at the South Fork Shenandoah River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BBON000.60 - 3 fecal coliform violations out of 15 samples during the 2002 assessment period.

1BBON000.60 - 11 total phosphorus values exceeded the screening value out of 15 samples during the 2002 assessment period resulting in a threatened assessment.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform is not known.

The source of the total phosphorus is not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Quail Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B35R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.89 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Massanutten STP discharge

RIVER MILE: 4.89

LATITUDE: 38.40500 **LONGITUDE:** -78.71278

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Boones Run

RIVER MILE: 0.00

LATITUDE: 38.43000 **LONGITUDE:** -78.64000

Segment begins at the Massanutten STP discharge and continues downstream to its confluence with Boones Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

1BQAL004.30 and 1BQAL005.04 had severely impaired benthic ratings during the 2004 assessment cycle. The exact cause of the severely impaired ratings is the discharge from the Massanutten STP. A TMDL for this parameter has been approved by EPA.

1BQAL004.30 - Three Fecal Coliform values exceeded the standard out of 20 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: PS - STP - Massanutten, NPS

The STP is the source of the benthic impairment.

The source of the Fecal Coliform bacteria is believed to be non-point source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Quail Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B35R-03

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 1.32 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 6.21

LATITUDE: 38.40917 **LONGITUDE:** -78.73444

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Massanutten discharge

RIVER MILE: 4.89

LATITUDE: 38.40500 **LONGITUDE:** -78.71278

Segment begins at the headwaters and ends at the Massanutten discharge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

1BQAL005.09 - Had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the moderately impaired rating is not known but is believed to be due to extremely low flows during the droughts of 1998 - 2002.

IMPAIRMENT SOURCE: Natural Conditions

The source of the benthic impairment is natural sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page, Rockingham

STREAM NAME: Naked Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B36R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.46 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 12.46

LATITUDE: 38.50743 **LONGITUDE:** -78.44893

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the SF Shenandoah

RIVER MILE: 0.00

LATITUDE: 38.46956 **LONGITUDE:** -78.62004

Segment begins at the headwaters and continues downstream to its confluence with the S.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting - 1998

IMPAIRMENT CAUSE: General Standard (Benthic) 1998

1BNAK001.24 fully supported the Aquatic Life Use during the 2002 assessment period, however EPA would not approve De-listing. The station was not assessed during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Unknown 1998

Unknown 1998

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page, Rockingham

STREAM NAME: Cub Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B37R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 9.29 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.29

LATITUDE: 38.47871 **LONGITUDE:** -78.69572

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with S.F. Shenandoah River

RIVER MILE: 0.00

LATITUDE: 38.55718 **LONGITUDE:** -78.59182

Segment begins at Cub Run's headwaters and continues downstream to its confluence with the S.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004), Temperature

1BCUB000.40 - 8 fecal coliform violations out of 38 samples during the 2004 assessment cycle. 1BCUB000.40 - 6 temperature values exceeded the standard out of 50 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife, Natural Condition

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff. The temperature standard violations are due to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B38R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.78 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 6.78

LATITUDE: 38.66000 **LONGITUDE:** -78.52000

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with S.F. Shenandoah River

RIVER MILE: 0.00

LATITUDE: 38.62000 **LONGITUDE:** -78.50000

Segment begins at Mill Creek's headwaters and continues downstream to its confluence with the S.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BMLC000.40 - 17 fecal coliform violations out of 50 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page

STREAM NAME: Pass Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B39R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.05 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.05

LATITUDE: 38.70861 **LONGITUDE:** -78.45583

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Hawksbill Creek confluence

RIVER MILE: 0.00

LATITUDE: 38.65250 **LONGITUDE:** -78.32694

Segment begins at the headwaters and ends at the Hawksbill Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BPSS000.64 - 17 fecal coliform violations out of 28 samples and 5 E. Coli violations out of six samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform bacteria is believed to be NPS and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page

STREAM NAME: Hawksbill Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B39R-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 12.26 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 19.30

LATITUDE: 38.51944 **LONGITUDE:** -78.44444

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with East Hawksbill Creek

RIVER MILE: 7.04

LATITUDE: 38.65639 **LONGITUDE:** -78.46167

Segment begins at the headwaters and continues downstream to the East Hawksbill Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Temperature (2002)

1BHKS009.58 - 10 fecal coliform violations out of 22 samples and 2 E. Coli violations out of 6 samples during the 2004 sampling period.
1BHKS009.58 - 4 temp violations out of 15 samples during the 2004 assessment cycle.

1BHKS000.96 - Fully supported the Recreation Use during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife, Natural Condition

The source is believed to be NPS agricultural and wildlife runoff. The source of the temperature impairment is natural.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page

STREAM NAME: Rocky Branch

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B39R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.17 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 4.17

LATITUDE: 38.69672 **LONGITUDE:** -78.32256

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Pass Run confluence

RIVER MILE: 0.00

LATITUDE: 38.67544 **LONGITUDE:** -78.38363

Segment begins at the headwaters and ends at the Pass Run confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

0163054325 - 2 pH minimum standard violations out of 2 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Acid Deposition

The source of the pH violations is believed to be acid deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page

STREAM NAME: Jeremy's Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B40R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.97 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.97

LATITUDE: 38.75911 **LONGITUDE:** -78.30588

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the S.F. Shenandoah River confluence

RIVER MILE: 0.00

LATITUDE: 38.76938 **LONGITUDE:** -78.39196

Segment begins at the headwaters and ends at the S.F. Shenandoah River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

01630565 - 2 pH minimum standard violations out of 2 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Acid Deposition

The source of the pH violations is believed to be acid deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Warren

STREAM NAME: Flint Run

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B40R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.46 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.46

LATITUDE: 38.79233 **LONGITUDE:** -78.28261

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the S.F. Shenandoah River confluence

RIVER MILE: 0.00

LATITUDE: 38.86770 **LONGITUDE:** -78.25788

Segment begins at the headwaters and ends at the S.F. Shenandoah River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BFNT002.16 - 3 Fecal Coliform violations out of 12 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Warren

STREAM NAME: Happy Creek

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-B41R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.44 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.44

LATITUDE: 38.84287 **LONGITUDE:** -78.19127

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the S.F. Shenandoah River confluence

RIVER MILE: 0.00

LATITUDE: 38.94437 **LONGITUDE:** -78.18802

Segment begins at headwaters and ends at the S.F. Shenandoah River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BHPY001.29 - 6 Fecal Coliform violations out of 12 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Little Dry River

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B43R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 33.9 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 33.9

LATITUDE: 38.62852 **LONGITUDE:** -79.07931

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the N. Fork Shen River

RIVER MILE: 0.00

LATITUDE: 38.66190 **LONGITUDE:** -78.92293

Segment begins at the headwaters and ends at the N. Fork Shen River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

1BLTD001.15 - 4 Fecal Coliform violations out of 19 samples and 2 pH minimum standard violations out of 19 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Atmospheric Deposition, NPS

The source of the Fecal Coliform Bacteria is Non-Point Source runoff.

The source of the pH violations is believed to be acid deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Long Meadow Run

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B45R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.62 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.62

LATITUDE: 38.54028 **LONGITUDE:** -78.80056

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the N. Fork Shen River

RIVER MILE: 0.00

LATITUDE: 38.63611 **LONGITUDE:** -78.74944

Segment begins at the headwaters and ends at the N. Fork Shen River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

1BLOM000.24 - Had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the moderately impaired benthic rating is not known.

IMPAIRMENT SOURCE: NPS - Agriculture

The source is believed to be NPS agricultural activity.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Turley Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B45R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.04 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 4.04

LATITUDE: 38.59139 **LONGITUDE:** -78.88611

DOWNSTREAM LIMIT:

DESCRIPTION: N. Fork Shen River confluence

RIVER MILE: 0.00

LATITUDE: 38.63333 **LONGITUDE:** -78.84222

Segment begins at the headwaters and ends at the N. Fork Shenandoah River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

1BTRL000.02 - 10 fecal coliform violations out of 27 samples during the 2004 assessment period.

1BTRL000.02 - Had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the moderately impaired rating is not known.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife, NPS

The primary source of the fecal coliform is NPS agricultural and wildlife runoff.

The source of the benthic impairment is believed to be NPS agricultural activity.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham, Shenandoah

STREAM NAME: Holmans Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B45R-03

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 10.42 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.42

LATITUDE: 38.69583 **LONGITUDE:** -78.79778

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with N.F. Shenandoah R.

RIVER MILE: 0.00

LATITUDE: 38.69778 **LONGITUDE:** -78.65611

Segment begins at Holmans Creek's headwaters and continues downstream to its confluence with the N.F. Shenandoah River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, 1

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

1BHMN002.09 - 29 fecal coliform violations out of 57 samples during the 2004 assessment period. A TMDL has been approved by EPA for fecal coliform.

1BHMN002.09, 1BHMN005.03 and 1BHMN007.59 had moderately impaired benthic ratings during the 2004 assessment period. A TMDL has been approved by EPA for the benthic parameter.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife/Human, NPS

The primary source of the fecal coliform is NPS agriculture, wildlife and human.

The source of the benthic impairment is sediment and nutrients from NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham, Shenandoah

STREAM NAME: North Fork Shenandoah River

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B45R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 52.97 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Turley Creek

RIVER MILE: 90.61

LATITUDE: 38.63344 **LONGITUDE:** -78.84220

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Pugh's Run

RIVER MILE: 37.64

LATITUDE: 38.90053 **LONGITUDE:** -78.47956

Segment begins at the N.F. Shenandoah River's confluence with Turley Creek and continues downstream to its confluence with Pugh's Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BNFS090.16 - 2 fecal coliform violations out of 9 samples during the 2004 assessment period.

1BNFS081.42 - 10 fecal coliform violations out of 50 samples during the 2004 assessment period.

1BNFS070.67 - 9 fecal coliform violations out of 53 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Fridley Run

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B47R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.4 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 2.40

LATITUDE: 38.46500 **LONGITUDE:** -78.71694

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Mountain Run confluence

RIVER MILE: 0.00

LATITUDE: 38.49444 **LONGITUDE:** -78.70333

Segment begins at the headwaters and ends at the Mountain Run confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS - 4074 had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the impairment is not known.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source of the impairment is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham, Shenandoah

STREAM NAME: Smith Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B47R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 31.18 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 31.18

LATITUDE: 38.47694 **LONGITUDE:** -78.77778

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with N.F. Shenandoah R.

RIVER MILE: 0.00

LATITUDE: 38.72806 **LONGITUDE:** -78.63333

Segment begins at Smith Creek's headwaters and continues downstream to its confluence with the N.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BSMT004.60 - 9 fecal coliform violations out of 50 samples, 1BSMST028.00 - 2 fecal coliform violations out of 9 samples, 1BSMT031.69 - 7 fecal coliform violations out of 12 samples and 1BSMT023.18 - 10 fecal coliform violations out of 18 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform is from NPS agricultural runoff and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Mountain Run

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B47R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.41 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.41

LATITUDE: 38.50111 **LONGITUDE:** -78.69667

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Smith Creek confluence

RIVER MILE: 0.00

LATITUDE: 38.50472 **LONGITUDE:** -78.75139

Segment begins at the headwaters and ends at the Smith Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS biological monitoring station 4076 had a moderately impaired benthic rating during the 2004 assessment period.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source of the impairment is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Harrisonburg, Rockingham

STREAM NAME: Smith Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B47R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 22.39 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Lacey Springs

RIVER MILE: 22.39

LATITUDE: 38.54083 **LONGITUDE:** -78.76028

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with N.F. Shenandoah R.

RIVER MILE: 0.00

LATITUDE: 38.72806 **LONGITUDE:** -78.63333

Segment begins at Smith Creek's confluence with Lacey Springs and continues downstream to its confluence with the N.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting 1998

IMPAIRMENT CAUSE: General Standard (Benthic) 1998

The biological monitoring station at river mile 5.71 & 6.62 were assessed as fully supporting during the 2004 assessment period. Despite the Fully Supporting Assessment EPA will not allow De-Listing of this segment.

IMPAIRMENT SOURCE: NPS - 1998

NPS 1998

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Rockingham

STREAM NAME: Dry Fork

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B47R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.11 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.11

LATITUDE: 38.45253 **LONGITUDE:** -78.84166

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Smith Creek confluence

RIVER MILE: 0.00

LATITUDE: 38.53909 **LONGITUDE:** -78.75820

Segment begins at the headwaters and ends at the Smith Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BDFK000.76 - 6 Fecal Coliform violations out of 8 samples during the 2004 assessment cycle.

A TMDL is being developed in the Smith Creek watershed.

IMPAIRMENT SOURCE: NPS

The source of the impairment is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page, Rockingham, Shenandoah

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B48R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 19.78 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters

RIVER MILE: 19.78

LATITUDE: 38.71704 **LONGITUDE:** -78.84057

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the N.F. Shen R.

RIVER MILE: 0.00

LATITUDE: 38.74161 **LONGITUDE:** -78.63745

Segment begins at Mill Creek's headwaters and continues downstream to its confluence with the N.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting (12.39 Miles)

IMPAIRMENT CAUSE: Fecal Coliform, General Standard Bentiic (1998 7.6 miles), Temperature (12.39 Miles

1BMIL002.20 - 11 fecal coliform violations out of 30 samples during the 2004 assessment period.

1BMIL002.20 - Had a Moderately Impaired benthic assessment during the 2004 assessment cycle.

1BMIL002.20 - 5 temperature violations out of 37 samples during the 2004 assessment period (12.39 Miles).

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife, Unknown, Natural (12.39 Miles)

The primary source of the fecal coliform is from NPS agricultural runoff and wildlife runoff.

The source of the benthic impairment is unknown.

The temperature impairment is natural (12.39 Miles).

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Stony Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B49R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.65 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the George's Chicken Discharge

RIVER MILE: 5.65

LATITUDE: 38.85972 **LONGITUDE:** -78.62083

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the N.F. Shen R confluence

RIVER MILE: 0.00

LATITUDE: 38.82222 **LONGITUDE:** -78.54889

Segment begins at the George's Chicken Discharge and ends at the North Fork confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BSTY001.22 - 2 fecal coliform violations out of 9 samples during the 2004 assessment cycle.

1BSTY004.24 - Fully supported the Aquatic Life Use during the 1998 & 2004 assessment cycles. However, EPA improperly allowed this station to be added to Appendix B of the 1998 Consent Decree and now refuses to allow it to be De-Listed.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The source is believed to be NPS agricultural and wildlife runoff.

Since there is no actual benthic impairment there is no source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Stony Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B49R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 18.43 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Foltz Creek confluence.

RIVER MILE: 18.43

LATITUDE: 38.85435 **LONGITUDE:** -78.72750

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the North Fork confluence

RIVER MILE: 0.00

LATITUDE: 38.82222 **LONGITUDE:** -78.54889

Segment begins at the Foltz Creek confluence and ends at the North Fork confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

1BSTY001.22 & 1BSTY005.85 - 7 temperature violations out of 42 samples during the 2004 assessment cycle.

The segment was shortened because new monitoring in the upper part of the watershed during the 2004 assessment cycle indicated no impairment.

IMPAIRMENT SOURCE: Natural Conditions

The source is natural.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Stony Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B49R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.48 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Foltz Creek Confluence

RIVER MILE: 18.43

LATITUDE: 38.85435 **LONGITUDE:** -78.72750

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Little Stony Creek confluence

RIVER MILE: 11.95

LATITUDE: 38.89444 **LONGITUDE:** -78.66535

Segment begins at the Foltz Creek confluence and ends at the Little Stony Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BSTY013.85 - 2 fecal coliform violations out of 8 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The source is believed to be NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Laurel Run

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B49R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.15 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.15

LATITUDE: 38.91472 **LONGITUDE:** -78.72917

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Stony Creek

RIVER MILE: 0.00

LATITUDE: 38.87066 **LONGITUDE:** -78.69051

Segment begins at the headwaters and ends at the Stony Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS 4002 - Had a Moderately Impaired benthic rating during the 2004 assessment period. The exact cause of the impairment is not known.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Little Stony Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B49R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.49 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 6.49

LATITUDE: 38.97579 **LONGITUDE:** -78.62118

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Stony Creek

RIVER MILE: 0.00

LATITUDE: 38.89396 **LONGITUDE:** -78.66511

Segment begins at the headwaters and ends at the confluence with Stony Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS 4016 - Had a Moderately Impaired benthic rating during the 2004 assessment period. The exact cause of the impairment is not known.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Toms Brook

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B50R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.18 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 7.18

LATITUDE: 38.96000 **LONGITUDE:** -78.49000

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with N.F. Shen R

RIVER MILE: 0.00

LATITUDE: 38.92389 **LONGITUDE:** -78.41944

Segment begins at Toms Brook's headwaters and continues downstream until its confluence with the N.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

1BTMB000.54 - Had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the moderately impaired rating is not known.

A TMDL is being developed for this parameter.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Narrow Passage Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B50R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.69 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.69

LATITUDE: 38.93056 **LONGITUDE:** -78.61722

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the N.F. Shen R.

RIVER MILE: 0.00

LATITUDE: 38.84583 **LONGITUDE:** -78.52861

Segment begins at the headwaters and ends at the North Fork confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BNPC000.02 - 3 fecal coliform violations out of 13 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source of the fecal coliform bacteria is believed to be Non-Point Source run off.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Pughs Run

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B50R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.88 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.88

LATITUDE: 38.93140 **LONGITUDE:** -78.54967

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with N.F. Shen R

RIVER MILE: 0.00

LATITUDE: 38.90053 **LONGITUDE:** -78.47956

Segment begins at Toms Brook's headwaters and continues downstream until its confluence with the N.F. Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BPGH000.60 - 5 Fecal Coliform violations out of 18 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Tumbling Run

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B51R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.05 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 4.05

LATITUDE: 39.02749 **LONGITUDE:** -78.42735

DOWNSTREAM LIMIT:

DESCRIPTION: One tenth of a mile North of the Rt 601 Bridge.

RIVER MILE: 0.00

LATITUDE: 38.97759 **LONGITUDE:** -78.39702

Segment begins at Tumbling Run's headwaters and continues downstream to a point approximately one tenth of a mile north of the Rt 601 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BTBL001.27 - 2 Fecal Coliform violations out of 12 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Cedar Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B52R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 18.94 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 39.03

LATITUDE: 38.95139 **LONGITUDE:** -78.58722

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Duck Run

RIVER MILE: 20.09

LATITUDE: 39.10056 **LONGITUDE:** -78.39333

Segment begins at the headwaters and ends at the confluence with Duck Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

1BCDR023.47 - 3 temperature violations out of 18 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is due to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah

STREAM NAME: Cedar Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B52R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.53 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 39.03

LATITUDE: 38.95153 **LONGITUDE:** -78.58714

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with an unnamed tributary.

RIVER MILE: 36.50

LATITUDE: 38.97492 **LONGITUDE:** -78.55826

Segment begins at the headwaters and ends at the confluence with an unnamed tributary.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS 4003 - Had a severely impaired benthic rating during the 2004 assessment period. The exact cause of the impairment is not known.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source of the impairment is believed to be due to Atmospheric Deposition .

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Shenandoah, Warren

STREAM NAME: Passage Creek

HYDROLOGIC UNIT: 02070006

TMDL ID: VAV-B54R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 18.52 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Peters Mill Creek confluence

RIVER MILE: 18.52

LATITUDE: 38.83631 **LONGITUDE:** -78.41744

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the N.F. Shenandoah River

RIVER MILE: 0.00

LATITUDE: 38.97693 **LONGITUDE:** -78.27002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BPSG001.36 - Had six Fecal Coliform values exceed the standard out of 49 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Warren

STREAM NAME: Manassas Run

HYDROLOGIC UNIT: 02070007

TMDL ID: VAV-B55R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.73 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 14.73

LATITUDE: 38.88899 **LONGITUDE:** -78.09698

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Shenandoah River

RIVER MILE: 0.00

LATITUDE: 38.95814 **LONGITUDE:** -78.12214

Segment begins at the headwaters and ends at the Shenandoah River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BMAN002.55 - 3 fecal coliform violations out of 9 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Frederick, Warren

STREAM NAME: Crooked Run

HYDROLOGIC UNIT: 02070007

TMDL ID: VAV-B56R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.83 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 12.83

LATITUDE: 39.07250 **LONGITUDE:** -78.16639

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Shenandoah River

RIVER MILE: 0.00

LATITUDE: 38.95694 **LONGITUDE:** -78.18222

Segment begins at the headwaters and ends at the Shenandoah River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BCRO002.75 - 4 fecal coliform violations out of 17 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is NPS

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Frederick, Warren

STREAM NAME: Stephens Run

HYDROLOGIC UNIT: 02070007

TMDL ID: VAV-B56R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.88 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 7.88

LATITUDE: 39.10513 **LONGITUDE:** -78.25504

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Crooked Run confluence

RIVER MILE: 0.00

LATITUDE: 39.01401 **LONGITUDE:** -78.16891

Segment begins at the headwaters and ends at the Crooked Run confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BCRO002.75 - 4 fecal coliform violations out of 17 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Clarke

STREAM NAME: Spout Run & Page Brook Run

HYDROLOGIC UNIT: 02070007

TMDL ID: VAV-B57R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.47 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of Page Brook Run

RIVER MILE: 12.47

LATITUDE: 39.14188 **LONGITUDE:** -78.04611

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Shenandoah River

RIVER MILE: 0.00

LATITUDE: 39.07083 **LONGITUDE:** -78.00306

Segment begins at Spout Run's headwaters and continues downstream to its confluence with the Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

1BSPR000.40 - Had a severely impaired benthic rating during the 2004 assessment period. The exact cause of the moderately impaired rating is not known.

1BSPR000.40 - 9 fecal coliform violations out of 40 samples during the 2004 assessment cycle.

1BPGE000.09 - 7 fecal coliform violatons out of 9 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS, NPS

The primary source iof the fecal coliform bacteria is NPS runoff.

The source of the benthic impairment is believed to be NPS runoff.

Page Brook Run was added to this segment in 2004 because it is a major tributary in a small watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Clarke

STREAM NAME: Long Branch

HYDROLOGIC UNIT: 02070007

TMDL ID: VAV-B57R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.62 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters

RIVER MILE: 3.62

LATITUDE: 39.04534 **LONGITUDE:** -78.07669

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Shenandoah River

RIVER MILE: 0.00

LATITUDE: 39.02251 **LONGITUDE:** -78.02179

Segment begins at Long Branch's headwaters and continues downstream to its confluence with the Shenandoah River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

1BLNG000.24 - 3 fecal coliform violations out of 8 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: Potomac River & Shenandoah River Basins

CITY/COUNTY: Page, Warren

STREAM NAME: South River/S.F. Shen R./N.F. Shen R./Shenando

HYDROLOGIC UNIT: 02070005

TMDL ID: VAV-Hg

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 128.82 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at DuPont foot bridge

RIVER MILE: 128.82

LATITUDE: 38.06111 **LONGITUDE:** -78.88667

DOWNSTREAM LIMIT:

DESCRIPTION: Warrenton Power Dam

RIVER MILE: 0.00

LATITUDE: 38.95417 **LONGITUDE:** -78.14833

Segment begins at the DuPont foot bridge over the South River in Waynesboro, continues downstream to the headwaters of the S.F. Shenandoah River (23.89 - 0.00) . The entire S.F. Shenandoah River is included (100.97 - 0.00). The segment ends on the main stem of the Shenandoah River at the Warrenton Power Dam (41.62 - 38.09). This segment also includes a small section of the lower N.F. Shenandoah River from its mouth upstream to the Riverton Dam (0.43 - 0.00).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: VDH Health Advisory (Mercury)

Mercury has been found in fish tissue and sediments at values high enough for the VDH to issue a fish consumption advisory.

IMPAIRMENT SOURCE: VDH Health Advisory (Mercury)

The source of the Mercury is from a process that was abandoned by DuPont in the early 1950s.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Fauquier, Rappahannock

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E01R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.17 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Jordan River

RIVER MILE: 175.58

LATITUDE: 38.76000 **LONGITUDE:** -78.02778

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 173.41

LATITUDE: 38.74083 **LONGITUDE:** -78.01944

Segment begins at the confluence of Jordan River to Rappahannock River at rivermile 175.58 and continues downstream to its confluence with an unnamed tributary at rivermile 173.41.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (3 of 19 samples - 15.8%) were recorded at DEQ's ambient water quality monitoring station (3-RPP175.51) at Route 647 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Fauquier

STREAM NAME: Carter Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.55 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Confluence of South Run

RIVER MILE: 3.55

LATITUDE: 38.73410 **LONGITUDE:** -77.90986

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rappahannock River

RIVER MILE: 0.00

LATITUDE: 38.69611 **LONGITUDE:** -77.90694

Segment begins at the confluence of South Run to Carter Run and continues downstream to its confluence with the Rappahannock River.

Segment length was extended from the 1998 303(d) listing based on hydrology, considering significant tributaries upstream from the monitoring station. The prior 2.67-mile segment started at the confluence of Locust Run to Carter Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (3 of 18 samples - 16.7%) were recorded at DEQ's ambient water quality monitoring station 3-CAE000.25 at Route 688 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Fauquier

STREAM NAME: Great Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E02R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 15.69 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Great Run

RIVER MILE: 15.69

LATITUDE: 38.77962 **LONGITUDE:** -77.84951

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rappahannock River

RIVER MILE: 0.00

LATITUDE: 38.62083 **LONGITUDE:** -77.86028

Segment begins at the headwaters of Great Run and continues downstream to its confluence with the Rappahannock River.

This segment was expanded from the 2002 303(d) listing to include all of Great Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998), e Coli (2004)

This listing of this segment is based on the water quality monitoring data from DEQ monitoring stations 3-GRT001.70 at Route 687 and 3-GRT007.72 at Route 802. The entire 15.69-mile segment was assessed as not supporting the Recreation Use goal for the 2004 water quality assessment due to exceedances of the instantaneous fecal coliform bacteria and e coli bacteria criteria. Four of 18 samples (22.2%) exceeded the instantaneous fecal coliform criteria, and two of 4 samples (50.0%) exceeded the e. coli criteria at station 3-GRT001.70. Three of 4 samples (75.0%) exceeded the instantaneous e. coli criteria at station 3-GRT007.72.

In addition, the 6.91-mile segment beginning at the confluence of an unnamed tributary to Great Run at rivermile 7.20, approximately 0.6 river miles downstream from Rt. 802, downstream to the confluence with the Rappahannock River was assessed as fully supporting the Aquatic Life Use with observed effects. The observed effects were noted in exceedances of the total phosphorus screening value of 0.20 mg/L at station 3-GRT001.70 (two of 15 - 13.3%).

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Rappahannock

STREAM NAME: Hughes River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.68 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Kilbys Run

RIVER MILE: 3.68

LATITUDE: 38.53847 **LONGITUDE:** -78.21516

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Hazel River

RIVER MILE: 0.00

LATITUDE: 38.52373 **LONGITUDE:** -78.16878

Segment begins at the confluence of Kilbys Run with the Hughes River and continues downstream to its confluence with the Hazel River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 17 samples - 11.8%) were recorded at DEQ's ambient water quality monitoring station 3-HUE000.20 at Route 644 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

In addition, two of 17 samples (11.8%) exceeded the total phosphorus screening value of 0.2 mg/L resulting in an assessment of fully supporting with an observed effect for the Aquatic Life Use goal.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Rappahannock

STREAM NAME: Hazel River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.58 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Blackwater Creek

RIVER MILE: 21.61

LATITUDE: 38.58000 **LONGITUDE:** -78.10167

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 16.03

LATITUDE: 38.59028 **LONGITUDE:** -78.03861

Segment begins at the confluence of Blackwater Creek to Hazel River and continues downstream to its confluence to an unnamed tributary at rivermile 16.03.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 20 samples - 20.0%) were recorded at DEQ's ambient water quality monitoring station 3-HAZ018.29 at Route 729 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Rappahannock

STREAM NAME: Rush River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.55 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 8.78

LATITUDE: 38.73472 **LONGITUDE:** -78.19306

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Big Branch

RIVER MILE: 4.23

LATITUDE: 38.69639 **LONGITUDE:** -78.15472

Segment begins at the confluence of an unnamed tributary to Rush River and continues downstream to its confluence with Big Branch, approximately 0.98 rivermiles upstream of Route 621.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 17 samples - 23.5%) were recorded at DEQ's ambient water quality monitoring station 3-RUS005.66 at Route 211/522 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Rappahannock

STREAM NAME: Thornton River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E05R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.28 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of the North Fork Thornton River

RIVER MILE: 21.88

LATITUDE: 38.65732 **LONGITUDE:** -78.21590

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of White Walnut Run

RIVER MILE: 17.6

LATITUDE: 38.63838 **LONGITUDE:** -78.15694

Segment begins at the confluence of the North Fork Thornton River and continues downstream to the confluence of White Walnut Run, approximately 0.8 rivermiles downstream of Route 621.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 16 samples - 12.5%) were recorded at DEQ's ambient water quality monitoring station 3-THO021.19 at Route 620 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper

STREAM NAME: Muddy Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.58 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Muddy Run

RIVER MILE: 12.58

LATITUDE: 38.52778 **LONGITUDE:** -78.07444

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Hazel River

RIVER MILE: 0.00

LATITUDE: 38.56167 **LONGITUDE:** -77.91111

Segment begins at the headwaters of Muddy Run and continues downstream to its confluence with the Hazel River.

This segment combines the two segments of Muddy Run identified in the 2002 303(d) listing, and has been expanded to include all of Muddy Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1996/2002/2004), e Coli (2004)

The listing of this stream segment is based on data from the following DEQ monitoring stations: 3-MUU010.72 at Route 729; 3-MUU004.98 at Route 630 and 3-MUU000.82 at Route 625. The monitoring data from these stations indicate that the entire length of Muddy Run does not support the Recreation Use goal. The bacteria monitoring results from the 2004 water quality assessment for these stations are summarized below:

1. Six (6) of 20 samples (30.0%) exceeded the instantaneous fecal coliform bacteria criterion at station 3-MUU000.82;

2. Five (5) of 16 samples (31.3%) exceeded the instantaneous fecal coliform bacteria criterion, and 2 of 5 samples (40.0%) exceeded the instantaneous e coli bacteria criterion at station 3-MUU004.98;

3. Four (4) of 11 samples (36.4%) exceeded the instantaneous fecal coliform bacteria criterion at station 3-MUU010.72.

IMPAIRMENT SOURCE: Unknown

The source of bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Fauquier

STREAM NAME: Marsh Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.16 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Craig Run

RIVER MILE: 8.16

LATITUDE: 38.56389 **LONGITUDE:** -77.75833

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Rappahannock River

RIVER MILE: 0.00

LATITUDE: 38.47417 **LONGITUDE:** -77.77639

Segment begins at the confluence of Craig Run to Marsh Run and continues downstream to its confluence with the Rappahannock River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform - 8.16 miles (1996), Dissolved Oxygen - 2.25 miles (2002)

The listing of this segment is based on data from DEQ monitoring stations 3-MAH000.19 at Route 651, and special study station 3-MAH004.18 at Route 668. The monitoring data from these stations revealed the following during the 2004 water quality assessment period:

1) The entire 8.16-mile segment is not supporting of the Recreation Use goal due to fecal coliform bacteria exceedances. Three of 14 samples (21.4%) exceeded the instantaneous fecal coliform criterion standard at station 3-MAH000.19, and 4 of 9 samples (44.4%) exceeded the criterion at station 3-MAH004.18;

2) Not supporting of the Aquatic Life Use goal due excursions from the dissolved oxygen (DO) water quality criteria recorded at station 3-MAH000.19. Two of 15 samples (13.3%) were below the minimum DO level (4.0 mg/L) for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. This segment is not supporting of the Aquatic Life Use in the 2.25-mile reach beginning at the confluence of Harpers Run to Marsh Run and continuing downstream to the confluence with the Rappahannock River.

This segment was first listed for a swimming use impairment due to fecal coliform bacteria exceedances in the 1996 303(d) report. A fecal coliform TMDL is scheduled to be developed by 2010. The TMDL to address the aquatic life use impairment may extend to 2014.

Additionally, citizen monitoring at station 3MAH-F12-SOS finds a high probability of adverse conditions for biota in the 5.91-mile segment beginning at the confluence of Craig Run and continuing downstream to the confluence of Harpers Run with Marsh Run.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Fauquier

STREAM NAME: Browns Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E08R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.39 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 2.39

LATITUDE: 38.54278 **LONGITUDE:** -77.73056

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Marsh Run

RIVER MILE: 0.00

LATITUDE: 38.52389 **LONGITUDE:** -77.76139

Segment begins at the confluence of an unnamed tributary to Browns Run, near the Route 17 bridge, and continues downstream to the confluence with Marsh Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 7 samples) were recorded at DEQ's water quality monitoring station 3-BOS000.72 at Route 653 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Fauquier

STREAM NAME: Craig Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E08R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.61 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Craig Run

RIVER MILE: 3.61

LATITUDE: 38.58394 **LONGITUDE:** -77.80852

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Marsh Run

RIVER MILE: 0.00

LATITUDE: 38.56392 **LONGITUDE:** -77.75875

Segment begins at the headwaters of Craig Run downstream to the confluence with Marsh Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (3 of 7 samples) were recorded at DEQ's ambient water quality monitoring station 3-CRA000.82 at Route 656 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Fauquier

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E08R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.02 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Ruffans Run

RIVER MILE: 148.82

LATITUDE: 38.53970 **LONGITUDE:** -77.83928

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Tinpot Run

RIVER MILE: 146.8

LATITUDE: 38.52669 **LONGITUDE:** -77.81213

Segment begins at the confluence of Ruffans Run to the Rappahannock River downstream to the confluence of Tinpot Run with the Rappahannock River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (8 of 37 samples - 21.6%) were recorded at DEQ's ambient water quality monitoring station 3-RPP147.10 at Route 15/29 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper

STREAM NAME: Lake Pelham

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E09L-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 253 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of Lake Pelham

RIVER MILE: 26.07

LATITUDE: 38.46603 **LONGITUDE:** -78.04666

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 23.99

LATITUDE: 38.46905 **LONGITUDE:** -78.01750

Segment includes all of Lake Pelham.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2004), pH (2004)

The listing of this station is based on data from DEQ lake monitoring station 3-MTN025.17. Water quality monitoring data revealed the following for the 2004 water quality assessment period:

1) The Aquatic Life Use is impaired due to low dissolved oxygen in the bottom waters of the reservoir. Eight of 12 samples (66.7%) in bottom waters were below the minimum DO level (4.0 mg/L) for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

A Trophic State Index (TSI) value was calculated for total phosphorus (TP) and secchi depth using surface data (0.3 m depth) collected during the summer months (June through September). Chlorophyll a TSI values were not calculated because the reservoir was treated with algaecide. The calculated TSI values are summarized below:

Secchi, avg (m)	Secchi, TSI	TP, avg (ug/L)	TP TSI
0.68	65.67	30	53.22

The divergence in TSI values from the TP and secchi depth are considered to be caused by inorganic material. This reservoir should be considered for a use attainability analysis to establish the appropriate dissolved oxygen criteria, rather than proceeding with TMDL development.

2) Sufficient excursions from the pH water quality criteria were recorded to assess this segment as not supporting of the aquatic life use. Four of 13 samples (30.8%) were above the upper range (9.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

3) The Aquatic Life Use has observed effects due to the following:

a. An exceedance of the manganese taste and odor water quality criterion in one of one sample collected in August, 1998;

b. An exceedance of the acute copper criterion in one of one sample collected in August, 1998;

c. The consensus based probable effects concentration (PEC) sediment screeing values for copper (149 ppm, dry weight) was exceeded in a sediment sample collected in August, 1998.

IMPAIRMENT SOURCE: Unconfirmed Natural Conditions

The source of impairments is considered natural

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper

STREAM NAME: Mountain Run Lake

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E09L-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 75 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream limit of Mountain Run Lake

RIVER MILE:

LATITUDE: 38.47839 **LONGITUDE:** -78.07873

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: 38.47929 **LONGITUDE:** -78.06694

Segment includes all of Mountain Run Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2004)

The listing of this station is based on data from DEQ lake monitoring station 3-MTN028.68. Water quality monitoring data revealed the following for the 2004 water quality assessment period:

1) The Aquatic Life Use is impaired due to low dissolved oxygen in the bottom waters of the reservoir. Ten of 17 samples (58.8%) in bottom waters were below the minimum DO level (4.0 mg/L) for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

A Trophic State Index (TSI) value was calculated for total phosphorus (TP), chlorophyll a, and secchi depth using surface data (0.3 m depth) collected during the summer months (June through September). The calculated TSI values are summarized below:

Secchi, avg (m)	Secchi, TSI	TP, avg (ug/L)	TP TSI	Chlor a, avg (ug/L)	Chlor a TSI
0.98	60.3	30.0	50.8	9.7	52.9

The divergence in TSI values from the TP and chlorophyll a versus the secchi depth are considered to be caused by inorganic material. This reservoir should be considered for a use attainability analysis to establish the appropriate dissolved oxygen criteria, rather than proceeding with TMDL development.

IMPAIRMENT SOURCE: Unconfirmed Natural Conditions

The source of impairments is considered natural

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Fauquier, Stafford

STREAM NAME: Deep Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.83 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Green Branch

RIVER MILE: 4.83

LATITUDE: 38.46667 **LONGITUDE:** -77.63472

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Rappahannock River

RIVER MILE: 0.00

LATITUDE: 38.41028 **LONGITUDE:** -77.63556

Segment begins at the confluence of Green Branch to Deep Run and continues downstream to its confluence with the Rappahannock River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1996)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (6 of 17 samples - 35.3%) were recorded at DEQ's ambient water quality monitoring station at Route 17 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Madison

STREAM NAME: Rapidan River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.8 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Kinsey Run

RIVER MILE: 81.06

LATITUDE: 38.42361 **LONGITUDE:** -78.36778

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Garth Run

RIVER MILE: 76.26

LATITUDE: 38.36611 **LONGITUDE:** -78.37028

Segment begins at the confluence of Kinsey Run to Rapidan River, at rivermile 81.06, downstream to its confluence to Garth Run, approximately one rivermile downstream of Rt. 662.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 17 samples - 11.8%) were recorded at DEQ's ambient water quality monitoring station 3-RAP077.28 at Route 662 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Additionally, citizen monitoring data from station 3RAP-M3-SOS finds a medium probability of adverse conditions for biota.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Madison, Orange

STREAM NAME: Blue Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.21 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Barbour Run

RIVER MILE: 4.21

LATITUDE: 38.20111 **LONGITUDE:** -78.22306

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rapidan River

RIVER MILE: 0.00

LATITUDE: 38.24556 **LONGITUDE:** -78.19222

Segment begins at the confluence of Barbour Run with Blue Run, approximately 0.13 rivermiles upstream of the Southern Rail Road bridge, and continues downstream to its confluence with the Rapidan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (8 of 20 samples - 40.0%) were recorded at DEQ's ambient water quality monitoring station 3-BLU002.60 at Route 20 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Additionally, citizen monitoring data from station 3BLU-01-SOS finds a medium probability of adverse conditions for biota.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Madison, Orange

STREAM NAME: Rapidan River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.5 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Poplar Run

RIVER MILE: 47.41

LATITUDE: 38.26583 **LONGITUDE:** -78.15667

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Robinson River

RIVER MILE: 39.91

LATITUDE: 38.31167 **LONGITUDE:** -78.09444

Segment begins at the confluence of Poplar Run to the Rapidan River and continues downstream to its confluence with the Robinson River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (10 of 35 samples - 28.6%) were recorded at DEQ's ambient water quality monitoring station 3-RAP045.08 at Route 15 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Greene, Madison, Orange

STREAM NAME: Marsh Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E13R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Marsh Run

RIVER MILE: 5.19

LATITUDE: 38.23246 **LONGITUDE:** -78.33414

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rapidan River

RIVER MILE: 0.00

LATITUDE: 38.23400 **LONGITUDE:** -78.25096

Segment begins at the headwaters of Marsh Run and continues downstream to the confluence with the Rapidan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 3 samples) were recorded at DEQ's ambient water quality monitoring station 3-MAS001.55 at Route 644 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Madison, Orange

STREAM NAME: Unnamed Tributary to the Rapidan River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E13R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.57 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of the unnamed tributary

RIVER MILE: 2.57

LATITUDE: 38.27515 **LONGITUDE:** -78.09067

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rapidan River

RIVER MILE: 0.00

LATITUDE: 38.28003 **LONGITUDE:** -78.12244

Segment begins at the headwaters of the unnamed tributary and continues downstream to the confluence with the Rapidan River. This tributary flows into the Rapidan River from the south/southeast just downstream from the Route 634 bridge crossing over the Rapidan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 2 samples) were recorded at DEQ's ambient water quality monitoring station 3-XEC000.12 at Route 634 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Madison

STREAM NAME: Robinson River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.92 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Rose River

RIVER MILE: 24.65

LATITUDE: 38.47222 **LONGITUDE:** -78.31528

DOWNSTREAM LIMIT:

DESCRIPTION: Route 231

RIVER MILE: 21.73

LATITUDE: 38.44583 **LONGITUDE:** -78.26611

Segment begins at the confluence of the Rose River, just downstream of Route 670, and continues downstream to the end of the Class V designation at Route 231. The downstream extent of this segment was shortened from 2002 303(d) listing to reflect Class V designation.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002), Temperature (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (5 of 19 samples - 26.3%) were recorded at DEQ's ambient water quality monitoring station 3-ROB024.06 at Route 649 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Two of 18 samples (11.1%) recorded at station 3-ROB024.06 exceeded the Class V maximum temperature criterion of 21 °C established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. As a result, this stream segment does not support the Aquatic Life Use goal for the 2004 water quality assessment.

Additionally, the Aquatic Life Use goal has observed effects for the following:

a. DEQ benthic macroinvertebrate biological monitoring conducted at Route 642 finds this segment to be slightly impaired;

b. Three of 19 samples (15.8%) exceeded the total phosphorus screening level of 200 ug/L at DEQ station 3-ROB024.06.

A TMDL to address the Recreation Use impairment due to fecal coliform bacteria exceedances is subject to the schedule of the Consent Decree. The TMDL to address the Aquatic Life Use impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Madison

STREAM NAME: Little Dark Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.26 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Little Dark Run

RIVER MILE: 4.26

LATITUDE: 38.36611 **LONGITUDE:** -78.26889

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Dark Run

RIVER MILE: 0.00

LATITUDE: 38.38306 **LONGITUDE:** -78.21139

Segment begins at the headwaters of Little Dark Run and continues downstream to its confluence with Dark Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

The listing of this stream segment is based on data from DEQ ambient water quality monitoring stations 3-LDR000.70 at Route 680 and 3-LDR003.19 at Route 634. Water quality monitoring data revealed the following for the 2004 water quality assessment period:

1) The entire 4.26-mile segment does not support the Recreation Use goal due to exceedances of the instantaneous fecal coliform bacteria criterion. Ten of 36 samples (27.8%) and two of 9 samples (22.2%) exceeded the instantaneous fecal coliform bacteria criterion at stations 3-LDR000.70 and 3-LDR003.19, respectively.

2) The Aquatic Life Use goal was found to be fully supporting with observed effects due to exceedances of the total phosphorus screening value. Two of 10 samples (20%) exceeded the screening level of 0.2 mg/L at station 3-LDR003.19. This assessment effects the 2.27-mile segment beginning at the headwaters of Little Dark Run downstream to the confluence of an unnamed tributary to Little Dark Run at rivermile 2.17.

3) DEQ benthic macroinvertebrate biological monitoring at station 3-LDR000.70 finds a 1.99-mile portion of this segment to be slightly impaired, resulting in a determination of fully supporting with observed effects for the Aquatic Life Use goal. The effected segment begins at the confluence of an unnamed tributary to Little Dark Run at rivermile 2.17 and continues downstream to its confluence to Dark Run.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Madison

STREAM NAME: Robinson River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E15R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.21 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of White Oak Run

RIVER MILE: 5.21

LATITUDE: 38.35129 **LONGITUDE:** -78.11140

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rapidan River

RIVER MILE: 0.00

LATITUDE: 38.31138 **LONGITUDE:** -78.09468

Segment begins at the confluence of White Oak Run with the Robinson River, at rivermile 5.18, downstream to its confluence with the Rapidan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (9 of 35 samples - 25.7%) were recorded at DEQ's ambient water quality monitoring station 3-ROB001.90 at Route 614 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Orange

STREAM NAME: Cedar Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E16R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Cabin Branch

RIVER MILE: 2.19

LATITUDE: 38.37066 **LONGITUDE:** -77.99938

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rapidan River

RIVER MILE: 0.00

LATITUDE: 38.35922 **LONGITUDE:** -77.97256

Segment begins at the confluence of Cabin Branch with Cedar Run downstream to its confluence with the Rapidan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (5 of 20 samples - 25.0%) were recorded at DEQ's ambient water quality monitoring station 3-CED000.59 at Route 522 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Additionally, citizen monitoring data from station 3CED-C2-SOS finds a medium probability of adverse conditions for biota.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Orange

STREAM NAME: Mine Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.95 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Cormack Run

RIVER MILE: 9.95

LATITUDE: 38.29000 **LONGITUDE:** -77.84778

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rapidan River

RIVER MILE: 0.00

LATITUDE: 38.37806 **LONGITUDE:** -77.84278

Segment begins at the confluence of Cormack Run to Mine Run, approximately 0.6 rivermiles upstream of Route 20, and continues downstream to its confluence with the Rapidan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 17 samples - 23.5%) were recorded at DEQ's ambient water quality monitoring station 3-MIR004.05 at Route 611 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Orange

STREAM NAME: Mountain Run

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.79 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Mill Run

RIVER MILE: 9.79

LATITUDE: 38.30639 **LONGITUDE:** -77.96278

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Mine Run

RIVER MILE: 0.00

LATITUDE: 38.37722 **LONGITUDE:** -77.84278

Segment begins at the confluence of Mill Run to Mountain Run, approximately 0.25 rivermiles downstream of Route 617, and continues downstream to its confluence with Mine Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (7 of 19 samples - 36.8%) were recorded at DEQ's ambient water quality monitoring station 3-MTR003.51 at Route 611 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Culpeper, Spotsylvania

STREAM NAME: Rapidan River

HYDROLOGIC UNIT: 02080103

TMDL ID: VAN-E18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.47 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Wilderness Run

RIVER MILE: 7.78

LATITUDE: 38.36000 **LONGITUDE:** -77.70139

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Middle Run

RIVER MILE: 5.31

LATITUDE: 38.37083 **LONGITUDE:** -77.66833

Segment begins at the confluence of Wilderness Run to the Rapidan River, at rivermile 7.78, and continues downstream to its confluence with Middle Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (12 of 38 samples - 31.6%) were recorded at DEQ's ambient water quality monitoring station 3-RAP006.53 at Route 610 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Caroline, Fredericksburg, King George, Spotsylvania, Stafford

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAN-E20E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.22 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: The fall line at Route 1

RIVER MILE: 110.6

LATITUDE: 38.32039 **LONGITUDE:** -77.47221

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Mill Creek with the Rappahannock River

RIVER MILE: 78.94

LATITUDE: 38.16730 **LONGITUDE:** -77.17405

Segment extends from the fall line at Route 1 downstream to the confluence of Mill Creek with the Rappahannock River, downstream from the Route 301 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002), Fish Tissue - PCBs (2004)

The Recreation Use impairment on this stream segment is based on data from the following DEQ monitoring stations: 3-RPP107.91, 3-RPP104.47, 3-RPP098.81, 3-RPP091.55, and 3-RPP080.19. Based on monitoring data during the 2004 water quality assessment period, this segment was assessed as not supporting the Recreation Use goal due to exceedances of the instantaneous fecal coliform bacteria criterion recorded at each of the identified stations. The fecal coliform bacteria exceedance rates for each station are summarized below:
- 3-RPP107.91, 5 of 35 samples (14.3%);
- 3-RPP104.47, 4 of 35 samples (11.4%);
- 3-RPP098.81, 9 of 50 samples (18.0%);
- 3-RPP091.55, 9 of 51 samples (17.6%)
- 3-RPP080.19, 6 of 51 samples (11.8%).

All stations, except 3-RPP080.19, were identified in Attachment B of the June 1999 Consent Decree and are therefore subject to the TMDL schedule outlined by the consent decree.

This segment was also assessed as not supporting of the Fish Consumption Use goal for the 2004 water quality assessment. Fish tissue data from DEQ fish tissue/sediment monitoring stations 3-RPP107.33 and 3-RPP080.19 revealed exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in samples collected in May, 2001. The TV was exceeded in three species of fish samples collected May 15, 2001, at monitoring station 3-RPP107.33 (gizzard shad, channel catfish, and carp). The TV was exceeded in two species of fish samples collected May 14, 2001, at monitoring station 3-RPP080.19 (gizzard shad and blue catfish).

This segment was first listed for a swimming use impairment due to fecal coliform bacteria exceedances in the 2002 303(d) report. A fecal coliform TMDL is scheduled to be developed by 2010 in accordance with the Consent Decree schedule. The TMDL to address the Fish Consumption Use impairment may extend to 2016.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Stafford

STREAM NAME: Claiborne Run

HYDROLOGIC UNIT: 02080104

TMDL ID: VAN-E20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.12 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 5.12

LATITUDE: 38.35889 **LONGITUDE:** -77.46583

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rappahannock River

RIVER MILE: 0.00

LATITUDE: 38.30306 **LONGITUDE:** -77.45583

Segment begins at the confluence of an unnamed tributary to Claiborne Run, near Stafford High School, and continues downstream to its confluence with the Rappahannock River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998), pH (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (3 of 15 samples - 20.0%) were recorded at DEQ's ambient water quality monitoring station 3-CLB000.50 at the Access Road off Route 3 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Claiborne Run was initially listed in the 1998 303(d) report for a swimming use impairment based on fecal coliform bacteria exceedances recorded at monitoring station 3-CLB000.50. Data from the 2002 305(b) water quality assessment monitoring period (1/1/96 through 12/31/00) indicated the stream was fully supporting of the Clean Water Act's Swimmable Use goal. Two of 20 samples (10%) exceeded the instantaneous fecal coliform bacteria standard in the 2002 water quality assessment monitoring period.

Sufficient excursions from the pH water quality criteria were recorded at monitoring station 3-CLB000.50 to assess this segment as not supporting of the Aquatic Life Use goal in the 2004 water quality assessment. Two of 13 samples (15.4%) were below the lower range (6.0-9.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

Exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in one species of fish samples collected in 2001 (american eel) at DEQ fish tissue station 3-CLB000.50. As a result, this segment was assessed as fully supporting of the Fish Consumption Use goal with an observed effect.

This segment was first listed for a swimming use impairment due to fecal coliform bacteria exceedances in the 1998 303(d) report. A fecal coliform TMDL is scheduled to be developed by 2010. The TMDL to address the aquatic life use impairment may extend to 2014.

IMPAIRMENT SOURCE: Unknown, Unknown

Fact Sheets for Category 5 Waters

The source of the impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Fredericksburg, Spotsylvania

STREAM NAME: Hazel Run

HYDROLOGIC UNIT: 02080104

TMDL ID: VAN-E20R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.76 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 2.76

LATITUDE: 38.28803 **LONGITUDE:** -77.49013

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rappahannock River

RIVER MILE: 0.00

LATITUDE: 38.28951 **LONGITUDE:** -77.45038

Segment begins at the confluence of an unnamed tributary with Hazel Run, approximately 0.5 rivermiles upstream of Route 1, downstream to its confluence to the Rappahannock River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (3 of 15 samples - 20%) were recorded at DEQ's ambient water quality monitoring station 3-HAL000.57 at the Route 17/2 bridge to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Exceedance of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue was recorded in one species of fish samples collected in May, 2001 (american eel). As a result, the segment was assessed as fully supporting of the Fish Consumption Use goal with an observed effect.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Spotsylvania

STREAM NAME: Massaponax Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAN-E20R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.04 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 7.6

LATITUDE: 38.23496 **LONGITUDE:** -77.50300

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with an unnamed tributary

RIVER MILE: 1.56

LATITUDE: 38.23271 **LONGITUDE:** -77.41490

Segment begins at the confluence of an unnamed tributary to Massaponax Creek, just upstream of Route 1, and continues downstream to its confluence with an unnamed tributary, approximately 0.25 rivermiles upstream of Ruffins Pond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 14 samples - 14.3%) were recorded at DEQ's ambient water quality monitoring station 3-MAP002.61 at Route 609 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Additionally, citizen monitoring data from stations 3MAP-14-SOS, 3MAP-12-SOS, and 3MAP-10-SOS find a medium probability of adverse conditions for biota.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: King George, Stafford

STREAM NAME: Muddy Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAN-E21R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.87 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 3.87

LATITUDE: 38.28892 **LONGITUDE:** -77.33985

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Rappahannock River

RIVER MILE: 0.00

LATITUDE: 38.24633 **LONGITUDE:** -77.32694

Segment begins at the confluence of an unnamed tributary to Muddy Creek, approximately 0.7 rivermiles downstream from Route 218, and continues downstream to the confluence with the Rappahannock River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2004)

Sufficient excursions from the pH water quality criteria were recorded at DEQ's ambient water quality monitoring station 3-MUY001.43 at Route 3 to assess this segment as not supporting of the Aquatic Life Use goal in the 2004 water quality assessment. Two (2) of 12 samples (16.7%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH.

IMPAIRMENT SOURCE: Unconfirmed natural conditions

The source of the impairment is unknown, but is believed to be attributable to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Caroline

STREAM NAME: Ware Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAN-E21R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.94 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Ware Creek

RIVER MILE: 7.56

LATITUDE: 38.17870 **LONGITUDE:** -77.38788

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 4.62

LATITUDE: 38.20175 **LONGITUDE:** -77.35021

Segment begins at the headwaters of Ware Creek and continues downstream to the confluence of an unnamed tributary, just downstream from Burma Road.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2004)

Sufficient excursions from the pH water quality criteria were recorded at DEQ's 2002 freshwater probabilistic monitoring station 3-WAE005.95 in Fort AP Hill property to assess this segment as not supporting of the Aquatic Life Use goal in the 2004 water quality assessment. Two (2) of 2 samples were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH.

IMPAIRMENT SOURCE: Unconfirmed natural conditions

The source of the impairment is unknown, but is believed to be attributable to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex, King George, Lancaster, Middlesex, Richmond, Westmoreland

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E22E-08

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 141.3 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Devils Elbow at Toby Point and Green Bay

RIVER MILE: 70.52

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

The tidal mainstem Rappahannock River from Devils Point downstream to the mouth at the Chesapeake Bay

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Chloride, Dissolved Oxygen, Nutrient/Eutrophication Biological Indicators

The lower tidal freshwater and transitional areas (river mile 70.52 to river mile)of the Rappahannock River are assessed as not supporting the Aquatic Life and Wildlife Uses based on chloride violations at multiple stations.

The mainstem of the Rappahannock River from Myrtle Swamp to its mouth was originally listed in 1998 by DEQ due to dissolved oxygen violations and nutrient overenrichment. The EPA extended the segment upstream to the confluence with Totuskey Creek (river mile . In the 2004 cycle dissolved oxygen violations were noted in deepwater and deep channel stations downstream of the confluence with Lancaster Creek (Morattico), which is further downstream at only river mile .

The mesohaline portion of the mainstem Rappahannock (river mile 48.51 to river mile) indicated benthic impairment based on the Chesapeake Bay Benthic Index of Biological Integrity. As this is a probabilistic study and the lower part of the segment has hypoxia (DO measurements <0.3 mg/L), the benthic impairment is most likely due to low dissolved oxygen and the entire area is listed as impaired for dissolved oxygen.

The Corrotoman River was included in EPA's 1998 Overlist. During the year 2004 cycle, the chlorophyll a and DO violation rates were acceptable. The B-IBI segment CRRMHa was insufficient. The segment was called impaired solely on EPA's overlist (nutrients/eutrophication biological indicators).

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The chloride violations are attributed to low freshwater inflow in the summer months.

The dissolved oxygen violations are believed to be caused by a naturally occurring ridge in the river bed that prevents tidal flushing of the lower water column in the Rappahannock River. The low DO bottom water causing the DO violations is thus believed to be bottom water

from the Chesapeake Bay. This bottom water flows into the Rappahannock with the incoming tide and then gets trapped by the naturally occurring ridge. Natural conditions are thus considered the main source of the recorded violations and subsequent benthic impairment. However, the low DO conditions may be exacerbated by nutrient loadings in the water body.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Occupacia Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E22R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.76 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Hunters Millpond Dam

RIVER MILE: 10.50

LATITUDE: 38.04060 **LONGITUDE:** -77.00650

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE: 7.80

LATITUDE: 37.05280 **LONGITUDE:** -76.98740

Occupacia Creek from the Hunters Millpond Dam to the extent of tidal influences.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially assessed as impaired during the 2002 cycle. During the 2004 cycle, the segment remained not supporting of the Recreation use based on a fecal coliform violation rate of 4/20 at the Route 17 bridge (3-OCC010.47). The fecal coliform TMDL is due 4/1/2014.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Occupacia Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E22R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.76 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Hunters Millpond Dam

RIVER MILE: 10.50

LATITUDE: 38.04060 **LONGITUDE:** -77.00650

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE: 7.80

LATITUDE: 37.05280 **LONGITUDE:** -76.98740

Occupacia Creek from the Hunters Millpond Dam to the extent of tidal influences.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

In 1998, the segment was identified to Virginia for listing consideration. During the 2002 cycle, the segment was assessed as impaired of supporting of the Aquatic Life use based on a pH standard violations at the Route 17 bridge (3-OCC010.47).

During the 2004 cycle, the segment was assessed as not supporting due to a pH violation rate of 4/20. The pH TMDL is due in 2010.

IMPAIRMENT SOURCE: Natural Conditions

The pH violations in this segment are attributed to natural conditions.

Continued monitoring to increase the data set and make a confident assessment is recommended. Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Farmers Hall Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E22R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.38 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.38

LATITUDE: 37.99060 **LONGITUDE:** -76.99960

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 38.02780 **LONGITUDE:** -76.95440

Farmers Hall Creek from its headwaters to its mouth at the Rappahannock River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as not supporting the Recreation Use support goal based on a fecal coliform violation rate of 3/10 at the Route 631 bridge (3-FAR002.88).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex, Richmond

STREAM NAME: Upper Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 3.7 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 068A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 068A, 3/6/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Richmond

STREAM NAME: Little Carter Creek, Jugs Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.32 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.95990 **LONGITUDE:** -76.82750

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.90690 **LONGITUDE:** -76.77580

As described in VDH Notice and Description of Shellfish Condemnation 068B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 068B, 3/6/2002

Size decreased in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Hoskins Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23E-03

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Town of Tappahannock STP

RIVER MILE: 3.00

LATITUDE: 37.91080 **LONGITUDE:** -76.87840

DOWNSTREAM LIMIT:

DESCRIPTION: Rappahannock River confluence

RIVER MILE: 0.00

LATITUDE: 37.92190 **LONGITUDE:** -76.85280

Segment begins at the Town of Tappahannock STP discharge, and extends downstream to its mouth at the Rappahannock River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Chloride

This segment was initially included on the 1994 303(d) list based on excessive fecal coliform standard violations recorded at the Rt. 360 bridge (3-HOK000.74).

For the 2004 cycle, the segment was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 9/49 recorded at 3-HOK000.74. The upstream limit was extended to the Town of Tappahannock STP in the 1998 cycle in recognition that the STP may be a contributing source, although this has not been verified.

In the 2004 cycle, the segment was assessed as not supporting the Aquatic Life and Wildlife uses based on chloride violations at 3-HOK000.74. The TMDL for chloride is due in 2016.

Pfiesteria complex organisms were detected in water samples collected in the Rappahannock River off Hoskins Creek in September 1997.

IMPAIRMENT SOURCE: Unknown, PS - Municipal, Natural Conditions

The source of the fecal coliform impairment is considered unknown. The Tappahannock STP may be a contributing source, but there is a tour boat dock and public boat landing at the Route 360 bridge, which may also be contributing sources, as well as unknown nonpoint sources near the monitoring station.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

The chloride violations are attributed to natural conditions, although this has not been verified.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Piscataway Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23E-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 0.71 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Fall Line

RIVER MILE: 8.20

LATITUDE: 37.88090 **LONGITUDE:** -76.88860

DOWNSTREAM LIMIT:

DESCRIPTION: Rappahannock River confluence

RIVER MILE: 0.00

LATITUDE: 37.90460 **LONGITUDE:** -76.81070

Segment begins at the limit of tide and extends downstream to its mouth at the Rappahannock River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: pH, Chloride

The tidal Piscataway Creek was assessed not supporting of the Aquatic Life Use based on a pH violation rate of 2/19 at the Route 17 bridge (3-PIS004.79). The pH TMDL is due in 2014.

In the 2004 cycle, the segment was also assessed not supporting of the Aquatic Life and Wildlife Uses due to chloride violations. This TMDL is due in 2016.

IMPAIRMENT SOURCE: Natural Conditions

The pH impairment is attributed to natural conditions.

The source of the chloride is attributed to natural salinity.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Richmond, Westmoreland

STREAM NAME: Cat Point Creek Watershed

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 66.9 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 14.10

LATITUDE: 38.07720 **LONGITUDE:** -76.84370

DOWNSTREAM LIMIT:

DESCRIPTION: Canal Swamp

RIVER MILE: 11.00

LATITUDE: 38.02833 **LONGITUDE:** -76.82083

Cat Point Creek and its major tributaries above Canal Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Cat Point Creek from Ruin Branch to Canal Swamp (4.99 miles) was assessed as not supporting of the Aquatic Life use support goal during the 1998 cycle based on pH standard violations recorded at monitoring station 3-CAT011.62, located at the Route 637 bridge. During the year 2004 cycle, the segment was extended due to the following pH violations:

25/55 at 3-CAT011.62
3/3 at 3-CAT011.62
3/3 at 3-BLA002.31
3/3 at 3-BLY000.27
2/3 at 3-BRL000.15
1/3 at 3-CMR000.50
2/3 at 3-NSS000.77
1/2 at 3-PAN003.00
2/3 at 3-SYN000.42
3/3 at 3-CYN002.57
3/3 at 3-TBS001.06
3/3 at 3-TBS003.39
1/3 at 3-RUN001.39

The TMDL for the original segment is due in 2014, but the TMDL for the upstream portion of Cat Point Creek and the tributaries are not due until 2016.

During the 1998 cycle, Canal Swamp was mistakenly called Bellfield Creek.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Mount Landing Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 1.19 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: First tributary above the Route 716 bridge

RIVER MILE: 5.63

LATITUDE: 37.96360 **LONGITUDE:** -76.94980

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE: 4.44

LATITUDE: 37.96290 **LONGITUDE:** -76.93040

The segment starts at the first tributary upstream of the Route 716 bridge, and extends downstream to the effect of tide.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, Dissolved Oxygen

Mount Landing Creek from the Route 716 bridge to the tidal limit at river mile 1.00 was assessed not supporting of the Aquatic Life use support goal in 1998 based on pH violations recorded at monitoring station 3-MTL004.82, located at the Route 716 bridge.

The segment location was changed during the year 2002 cycle because it was determined that the tidal limit is actually located at approximately river mile 4.44 and that the swamp conditions that may cause the DO impairment extend upstream of the bridge. In addition, the segment was also listed as impaired for dissolved oxygen.

During the year 2004 cycle, the pH violation rate was 22/46 and the dissolved oxygen violation rate was 10/48. The pH TMDL is due in 2010 and the DO TMDL is due in 2014.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairments is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Piscataway Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23R-03

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.5 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Sturgeon Swamp

RIVER MILE: 10.50

LATITUDE: 37.88200 **LONGITUDE:** -76.93600

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE: 8.20

LATITUDE: 37.88090 **LONGITUDE:** -76.88860

From Sturgeon Creek confluence downstream to extent of tide.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Assessed not supporting of Aquatic Life use support goal based on previous pH standard violations recorded at monitoring station 3-PIS009.24, located at the Route 691 bridge.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is suspected to be caused by natural swampwater conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Hoskins Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23R-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 12.96 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: 37.94670 **LONGITUDE:** -77.06800

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: 37.92040 **LONGITUDE:** -76.89600

Headwaters to tidal limit

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Assessed not supporting of the Aquatic Life use support goal based on a pH standard violation rate of 6/10 recorded at monitoring station 3-HOK011.45, located at the Route 717 bridge.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is attributed to natural swampwater conditions in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: UT to Mount Landing Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23R-05

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.43 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.43

LATITUDE: 37.95450 **LONGITUDE:** -77.03640

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 0.00

LATITUDE: 37.96770 **LONGITUDE:** -76.99830

Headwaters to mouth

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Assessed not supporting of the Aquatic Life use support goal based on a pH standard violation rate of 2/3 recorded at monitoring station 3-XFK001.38, located at the Route 628 bridge.

This station is a TMDL study station to address the low pH in Mount Landing Creek.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is attributed to natural swampwater conditions in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Mount Landing Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: First tributary above the Route 716 bridge

RIVER MILE: 5.63

LATITUDE: 37.96360 **LONGITUDE:** -76.94980

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE: 4.44

LATITUDE: 37.96290 **LONGITUDE:** -76.93040

The segment starts at the first tributary upstream of the Route 716 bridge, and extends downstream to the effect of tide.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as not supporting of the Recreation Use during the year 2004 cycle based on a fecal coliform violation rate of 4/35 at the Route 716 bridge (3-MTL004.82).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Mount Landing Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23R-07

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 4.91 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Bull Neck Creek

RIVER MILE:

LATITUDE: 37.97860 **LONGITUDE:** -77.00650

DOWNSTREAM LIMIT:

DESCRIPTION: First tributary upstream of Route 716 bridge

RIVER MILE: 5.63

LATITUDE: 37.96360 **LONGITUDE:** -76.94980

Mount Landing Creek from the confluence with Bull Neck Creek downstream to the first tributary above the Route 716 bridge

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Assessed not supporting of the Aquatic Life use support goal based on a pH standard violation rate of 5/13 recorded at monitoring station 3-MTL010.40, located at the Route 629 bridge.

This station is a TMDL study station to address the low pH in Mount Landing Creek.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is attributed to natural swampwater conditions in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: UT to Piscataway Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E23R-08

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.58 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.58

LATITUDE: 37.89700 **LONGITUDE:** -77.02570

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.87720 **LONGITUDE:** -76.99270

Headwaters to mouth at headwaters of Piscataway Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Assessed not supporting of the Aquatic Life Use goal based on a pH violation rate of 3/5 taken at TMDL study station 3-XFL001.04.

IMPAIRMENT SOURCE: Natural Conditions

The pH impairment is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Richmond

STREAM NAME: Totuskey Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E24E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.75 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.90720 **LONGITUDE:** -76.72250

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 071B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 071B, 10/7/2002

Previous condemnation included Totuskey and Richardson Creeks. In 2004, the segment was shortened and the creeks were separated.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Richmond

STREAM NAME: Totuskey Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E24E-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 0.81 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: 37.91580 **LONGITUDE:** -76.66290

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at the Rappahannock River

RIVER MILE: 0.00

LATITUDE: 37.86590 **LONGITUDE:** -76.75250

The tidal portions of Totuskey Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Chloride

The segment was assessed as not supporting the Recreation Use because of 6 violations in 27 fecal coliform samples collected at the Route 3 bridge (3-TOT005.11). The fecal coliform TMDL is due in 2010.

In addition, in the 2004 cycle the segment was assessed not supporting of the Aquatic Life and Wildlife Uses based on chloride violations at 3-TOT005.11. The chloride TMDL is due in 2016.

Size corrected in 2004 cycle.

IMPAIRMENT SOURCE: NPS/PS, Natural Conditions

The source of the fecal coliform is unknown.

The chloride violations are attributed to natural salinity.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Essex

STREAM NAME: Rappahannock River: Garretts Marina

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E24E-03

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.81010 **LONGITUDE:** -76.74490

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.81190 **LONGITUDE:** -76.74320

As described in VDH Notice and Description of Shellfish Condemnation 181A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 181A, 12/27/1991

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Rappahannock River: Mark Haven Beach

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E24E-04

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.79210 **LONGITUDE:** -76.73010

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.79340 **LONGITUDE:** -76.72740

As described in VDH Notice and Description of Shellfish Condemnation 181B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 181B, 12/27/1991

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Richmond

STREAM NAME: Richardson Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E24E-06

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.15 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 071A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 071A, 10/7/2002

Previous condemnation included Totuskey and Richardson Creeks. In 2004, the segment was shortened and the creeks were separated.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Richmond

STREAM NAME: Bookers Mill Stream

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E24R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.22 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.22

LATITUDE: 37.88120 **LONGITUDE:** -76.53490

DOWNSTREAM LIMIT:

DESCRIPTION: Totuskey Creek

RIVER MILE: 0.00

LATITUDE: 37.90970 **LONGITUDE:** -76.62100

Bookers Mill Stream from its headwaters to its mouth at the confluence with Totuskey Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Bookers Mill Stream was assessed not supporting of the Recreation Use support goal based on a fecal coliform violation rate of 4/19 recorded at the Route 612 bridge (3-BMS002.00).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown. Continued monitoring is necessary to increase the data set size and ensure a confident assessment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Lagrange Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.56 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.68390 **LONGITUDE:** -76.64180

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 127

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 127, 1/18/2002

Size reduced by 0.02 sq. mi. in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Robinson Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-02

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.18 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.65830 **LONGITUDE:** -76.60070

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 177

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction, Fecal Coliform

VDH-DSS Shellfish Condemnation 177, 2/13/2001
The TMDL is due in 2010

In 2002, the segment was also assessed as not supporting the Recreation Use due to fecal coliform violations at the end of Route 680 (3-ROS001.35). The violation rate in the 2004 cycle was 4/20. The TMDL is due in 2014.

The segment size was reduced by 0.10 sq. mi. in 2004.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Urbanna Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-04

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.21 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.62490 **LONGITUDE:** -76.57860

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.64090 **LONGITUDE:** -76.56620

As described in VDH Notice and Description of Shellfish Condemnation 042A, 9/17/1993

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 042A, 9/17/1993

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Richmond

STREAM NAME: Farnham Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-05

ASSESSMENT CATEGORY: 5A, 5B, 5C

SEGMENT SIZE: 0.43 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: Notice

LATITUDE: 37.85890 **LONGITUDE:** -76.64840

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary (Mouth at Rappahannock River)

RIVER MILE: 070

LATITUDE: 37.82410 **LONGITUDE:** -76.68140

The boundaries of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation 070.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Shellfishing Use - Not Supporting, Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Chloride

The segment was been assessed as not supporting the Shellfishing Use since 1998 due to VDH-DSS Shellfish Condemnation 070, 10/17/2000. The TMDL is due in 2010.

In 2002, the segment was assessed as not supporting the Recreation Use due to fecal coliform violations at 3-FAM002.62. During the 2004 cycle, the violation rate was 5/27. The TMDL is due in 2014.

In the 2004 cycle, impairments of the Aquatic Life and Wildlife Uses were added due to chloride violations at 3-FAM002.62. The chloride TMDL is due in 2016.

IMPAIRMENT SOURCE: NPS, Natural Conditions

The source of the fecal coliform impairments is considered unknown.

The chloride impairment is attributed to natural salinity.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Parrotts Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-07

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.16 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.72270 **LONGITUDE:** -76.64220

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 090

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 090, 9/20/2001

Size reduced by 0.03 sq. mi. in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Weeks Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.69580 **LONGITUDE:** -76.61410

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 202

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 202, 8/27/2002

Size reduced by 0.09 sq. mi. in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.21 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.78190 **LONGITUDE:** -76.57710

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 121

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 121, 7/17/2002

Segment size increased and joined in 2004.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster, Richmond

STREAM NAME: Lancaster Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-11

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.55 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.82740 **LONGITUDE:** -76.58240

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 120B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction, Fecal Coliform

VDH-DSS Shellfish Condemnation 120B, 7/17/2001
Size increased in 2004 cycle.

In 2004, the segment was also assessed as not supporting the Recreation Use due to a fecal coliform violation rate of 2/18 at 3-LAN002.81, located at the end of Route 1105. The TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Richmond

STREAM NAME: Morattico Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.11 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.81910 **LONGITUDE:** -76.65270

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.81320 **LONGITUDE:** -76.63910

As described in VDH Notice and Description of Shellfish Condemnation 120A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 120A, 7/17/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Mulberry Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-13

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.27 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.78410 **LONGITUDE:** -76.59350

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.78590 **LONGITUDE:** -76.62200

As described in VDH Notice and Description of Shellfish Condemnation 120C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction, Fecal Coliform

VDH-DSS Shellfish Condemnation 120C, 7/17/2001

In 2004, the segment was also assessed as not supporting the Recreation Use due to a fecal coliform violation rate of 2/18 at 3-MUB000.46, located at the end of Route 748. The TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Rappahannock River: Beach Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66890 **LONGITUDE:** -76.52920

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66160 **LONGITUDE:** -76.53280

As described in VDH Notice and Description of Shellfish Condemnation 116

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 116, 1/7/1992

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Greenvale Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.72600 **LONGITUDE:** -76.54750

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.71220 **LONGITUDE:** -76.54410

As described in VDH Notice and Description of Shellfish Condemnation 094

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 094, 10/30/1998

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster, Richmond

STREAM NAME: Lancaster and Morattico Creeks

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-16

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 1.9 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE:

LATITUDE: **LONGITUDE:**

The tidal portion of Lancaster Creek, includes Morattico Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Chloride

Lancaster and Morattico Creeks were assessed not supporting of the Aquatic Life and Wildlife Uses based on chloride violations at:

3-LAN000.00
3-LAN001.69
3-LAN002.81
3-MTT000.31

IMPAIRMENT SOURCE: Natural Conditions

Source is attributed to natural salinity.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Masons Mill Swamp

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-17

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE:

LATITUDE: **LONGITUDE:**

Masons Mill Swamp from its tidal limit to the mouth at the Rappahannock River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Assessed not supporting of the Aquatic Life Use due to a pH violation rate of 2/2 at 3-MAO000.62 (Route 604).

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Mud Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-18

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Rappahannock River

RIVER MILE:

LATITUDE: **LONGITUDE:**

The tidal portion of Mud Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The segment was assessed not supporting of the Aquatic Life use support goals based on a dissolved oxygen violation rate of 2/2 at 3-MUC002.31, located at Route 648.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Urbanna Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25E-19

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.17 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: 37.63070 **LONGITUDE:** -76.59870

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.62490 **LONGITUDE:** -76.57860

Tidal limit to downstream boundary of shellfish prohibition

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 3/20 at 3-URB001.50, located at the end of Route 418.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Lagrange Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E25R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.72 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.89

LATITUDE: 37.69000 **LONGITUDE:** -76.68010

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE: 3.75

LATITUDE: 37.66660 **LONGITUDE:** -76.58820

Lagrange Creek from the headwaters to the extent of tide at approximately river mile 3.75.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Lagrange Creek was assessed in 2004 as not supporting of the Recreation Use support goal based on a fecal coliform violation rate of 3/20 recorded at the Route 610 bridge (3-LGG004.54).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Meachim Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.59800 **LONGITUDE:** -76.46270

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.60560 **LONGITUDE:** -76.46050

As described in VDH Notice and Description of Shellfish Condemnation 179A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 179A, 8/24/1998

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Meachim Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.60510 **LONGITUDE:** -76.45120

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.60890 **LONGITUDE:** -76.45510

As described in VDH Notice and Description of Shellfish Condemnation 179B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 179B, 8/24/1998

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Corrotoman River: Taylor Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-03

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.68620 **LONGITUDE:** -76.43660

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 205

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 205, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Mosquito Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-04

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.62580 **LONGITUDE:** -76.36610

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.62420 **LONGITUDE:** -76.36380

As described in VDH Notice and Description of Shellfish Condemnation 203

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 203, 10/29/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Myer Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-05

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.69680 **LONGITUDE:** -76.50400

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.69140 **LONGITUDE:** -76.49260

As described in VDH Notice and Description of Shellfish Condemnation 198B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 198B, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Ewells Prong

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-06

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66690 **LONGITUDE:** -76.51210

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66110 **LONGITUDE:** -76.50460

As described in VDH Notice and Description of Shellfish Condemnation 187C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 187C, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Town Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-07

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.67700 **LONGITUDE:** -76.48860

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.67510 **LONGITUDE:** -76.48700

As described in VDH Notice and Description of Shellfish Condemnation 187A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 187A, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Senior Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-08

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.72840 **LONGITUDE:** -76.52330

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 132B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 132B, 3/27/2002

Size reduced in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Western Branch Corrotoman River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.6 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.77070 **LONGITUDE:** -76.47580

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 132A, 3/27/2002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 132A, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Bush Park Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.56310 **LONGITUDE:** -76.39940

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.57350 **LONGITUDE:** -76.38500

As described in VDH Notice and Description of Shellfish Condemnation 109

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 109, 4/27/1989

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.58070 **LONGITUDE:** -76.44580

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.58710 **LONGITUDE:** -76.42780

As described in VDH Notice and Description of Shellfish Condemnation 103

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 103, 12/10/1991

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Rappahannock River: Sturgeon Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.55990 **LONGITUDE:** -76.35430

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.56260 **LONGITUDE:** -76.34030

As described in VDH Notice and Description of Shellfish Condemnation 104

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 104, 11/28/1994

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Rappahannock River: Locklies Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.58830 **LONGITUDE:** -76.45190

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 102

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 102, 1/25/2001

Size reduced by 0.04 sq. mi. in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Hills Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.71790 **LONGITUDE:** -76.47220

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 058A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 058A, 3/27/2002

Size reduced by 0.02 sq. mi. in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Bells Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.72280 **LONGITUDE:** -76.46030

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.71420 **LONGITUDE:** -76.45830

As described in VDH Notice and Description of Shellfish Condemnation 058B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 058B, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Eastern Branch Corrotoman River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.39 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.73930 **LONGITUDE:** -76.73930

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.72230 **LONGITUDE:** -76.43240

As described in VDH Notice and Description of Shellfish Condemnation 058C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 058C, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Eastern Branch Carter Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-17

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.15 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66200 **LONGITUDE:** -76.40860

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 041A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction, Fecal Coliform

VDH Shellfish Condemnation 041A, 10/3/2002
The segment was shortened in 2004 cycle. The TMDL is due in 2010.

In the 2004 cycle, the segment was also listed as impaired of the Recreation Use goal based on a fecal coliform violation rate of 5/38 at 3-CEB001.92, located at Route 200. The TMDL is due in 2014.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Carter Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66150 **LONGITUDE:** -76.43460

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.65710 **LONGITUDE:** -76.43680

As described in VDH Notice and Description of Shellfish Condemnation 041B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 041B, 10/3/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Broad Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-21

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.55950 **LONGITUDE:** -76.31350

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.56190 **LONGITUDE:** -76.31470

As described in VDH Notice and Description of Shellfish Condemnation 038A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 038A

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-22

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.14 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.62430 **LONGITUDE:** -76.54800

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.61690 **LONGITUDE:** -76.53630

As described in VDH Notice and Description of Shellfish Condemnation 051A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 051D, 9/10/1997

Size corrected in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-23

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.61400 **LONGITUDE:** -76.51570

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.61420 **LONGITUDE:** -76.51270

As described in VDH Notice and Description of Shellfish Condemnation 051B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 051B, 9/10/1997

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Middlesex

STREAM NAME: Whiting Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-24

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.18 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.60460 **LONGITUDE:** -76.48090

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.61040 **LONGITUDE:** -76.50610

As described in VDH Notice and Description of Shellfish Condemnation 051C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 051C, 9/10/1997

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Rappahannock River

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-28

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.61520 **LONGITUDE:** -76.29550

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.61410 **LONGITUDE:** -76.28610

As described in VDH Notice and Description of Shellfish Condemnation 053A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 053A, 9/16/1993

Size was corrected in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Carter Cove

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-30

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66070 **LONGITUDE:** -76.45160

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.65980 **LONGITUDE:** -76.44460

As described in VDH Notice and Description of Shellfish Condemnation 041C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 041C, 10/3/2002

Segment was threatened in 1998 b/c it was a part of the larger seasonal condemnation. During the 2002 cycle, the segment was split off and downgraded to restricted. The TMDL is due in 2014.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Myer Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-31

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.68190 **LONGITUDE:** -76.49480

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.68470 **LONGITUDE:** -76.49000

As described in VDH Notice and Description of Shellfish Condemnation 198C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 198C, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Millenbeck Prong

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-32

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66690 **LONGITUDE:** -76.50230

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.66050 **LONGITUDE:** -76.50170

As described in VDH Notice and Description of Shellfish Condemnation 187B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 187B, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Whitehouse Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-33

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.65760 **LONGITUDE:** -76.51480

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.65290 **LONGITUDE:** -76.51160

As described in VDH Notice and Description of Shellfish Condemnation 187D

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 187D, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Davis Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-35

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.73360 **LONGITUDE:** -76.50590

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.73070 **LONGITUDE:** -76.50510

As described in VDH Notice and Description of Shellfish Condemnation 132C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 132C, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Myer Creek

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26E-36

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

As described in VDH Notice and Description of Shellfish Condemnation 198A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH Shellfish Condemnation 198A, 3/27/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Rappahannock River Basin

CITY/COUNTY: Lancaster

STREAM NAME: Belwood Swamp

HYDROLOGIC UNIT: 02080104

TMDL ID: VAP-E26R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.75 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: McMahon Swamp

RIVER MILE: 3.75

LATITUDE: 37.78300 **LONGITUDE:** -76.49790

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.76550 **LONGITUDE:** -76.48510

Segment starts at McMahon Swamp and extends downstream to mouth at Western Branch Corrotoman River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially assessed in 1998 as fully supporting but threatened of the Recreation Use based on violations of the fecal coliform standard at monitoring station 3-BLD000.58, located at the Route 3 bridge. During the year 2002 cycle, the segment was downgraded to impaired.

During the 2004 cycle, the segment continues to be impaired based on a fecal coliform violation rate of 8/19. The fecal coliform TMDL is due in 2014.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Continued monitoring is recommended to increase the data set and to make a confident assessment.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Louisa, Orange

STREAM NAME: South Anna River

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of the South Anna River

RIVER MILE: 103.93

LATITUDE: 38.16861 **LONGITUDE:** -78.21556

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Dove Fork

RIVER MILE: 96.93

LATITUDE: 38.08278 **LONGITUDE:** -78.18194

Segment starts at the headwaters of the South Anna River downstream to the confluence of Dove Fork to the South Anna River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002), pH (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (9 of 18 samples - 50.0%) were recorded at DEQ's ambient water quality monitoring station 8-SAR097.82 at Route 603 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Sufficient excursions from the pH water quality criteria were recorded at monitoring station 8-SAR097.82 to assess this segment as not supporting of the Aquatic Life Use goal. Two of 16 samples (12.5%) were above the upper range of the pH water quality criteria (6.0 - 9.0 SU) for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards.

Additionally, the Aquatic Life Use has an observed effect due to exceedances to the total phosphorus screening level of 0.2 mg/L (11 of 18 samples - 61.1%).

This segment was first listed for a swimming use impairment due to fecal coliform bacteria exceedances in the 2002 303(d) report. A bacteria TMDL is scheduled to be developed by 2010 in accordance with the Consent Decree. The TMDL to address the Aquatic Life Use impairment may extend to 2016.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Louisa

STREAM NAME: South Anna River

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.27 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Roundabout Creek

RIVER MILE: 76.32

LATITUDE: 37.95953 **LONGITUDE:** -78.02445

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Beaver Creek

RIVER MILE: 70.05

LATITUDE: 37.94576 **LONGITUDE:** -77.97536

Segment starts at the confluence of Roundabout Creek to the South Anna River downstream to the confluence of Beaver Creek to the South Anna River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 18 samples - 11.1%) were recorded at DEQ's ambient water quality monitoring station 8-SAR070.96 at Route 646 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover, Louisa

STREAM NAME: Taylors Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 16.26 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Taylors Creek

RIVER MILE: 16.26

LATITUDE: 37.87083 **LONGITUDE:** -77.82417

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the South Anna River

RIVER MILE: 0.00

LATITUDE: 37.75583 **LONGITUDE:** -77.63028

Segment starts at the headwaters of Taylors Creek downstream to the confluence with the South Anna River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

This stream segment was listed in the 2002 303(d) impaired waters list for fecal coliform bacteria exceedances (3 of 20 samples - 15%) recorded at DEQ's water quality monitoring station (8-TLR002.54) at Route 673. For the 2004 water quality assessment, 2 of 19 samples (10.5%) were recorded at this station.

Additionally, DEQ benthic macroinvertebrate biological monitoring at station 8-TLR014.44 finds this segment to be slightly impaired resulting in a determination of fully supporting with observed effects for the aquatic life use.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Orange

STREAM NAME: Mountain Run

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.52 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Madison Run

RIVER MILE: 2.52

LATITUDE: 38.17083 **LONGITUDE:** -78.12778

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the North Anna River

RIVER MILE: 0.00

LATITUDE: 38.15139 **LONGITUDE:** -78.09389

Segment begins at the confluence of Madison Run and Mountain Run downstream to its confluence with the North Anna River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (3 of 17 samples - 17.6%) were recorded at DEQ's ambient water quality monitoring station 8-MTN000.96 at Route 643 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Louisa, Orange

STREAM NAME: Beaver Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F06R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.51 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Cooks Creek

RIVER MILE: 2.51

LATITUDE: 38.16528 **LONGITUDE:** -78.04861

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the North Anna River

RIVER MILE: 0.00

LATITUDE: 38.14139 **LONGITUDE:** -78.02250

Segment begins at the confluence of Cooks Creek and Beaver Creek, approximately 0.68 rivermiles upstream from the Route 638 bridge, downstream to its confluence with the North Anna River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 21 samples - 19.0%) were recorded at DEQ's ambient water quality monitoring station 8-BRC001.88 at Route 638 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Louisa

STREAM NAME: Goldmine Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F06R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.16 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Goldmine Creek

RIVER MILE: 8.59

LATITUDE: 38.02222 **LONGITUDE:** -77.96472

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Lake Anna

RIVER MILE: 1.43

LATITUDE: 38.10444 **LONGITUDE:** -77.95639

Segment includes all of Gold Mine Creek from the headwaters to the confluence with Lake Anna.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (8 of 22 samples - 36.4%) were recorded at DEQ's ambient water quality monitoring station 8-GMC002.19 at Route 613 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Louisa

STREAM NAME: North Fork Hickory Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F06R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.82 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of North Fork Hickory

RIVER MILE: 4.82

LATITUDE: 38.07900 **LONGITUDE:** -78.09732

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with South Fork Hickory Creek

RIVER MILE: 0.00

LATITUDE: 38.10764 **LONGITUDE:** -78.04758

Segment begins at the headwaters of North Fork Hickory Creek and continues downstream to the confluence of North Fork Hickory Creek and South Fork Hickory Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2004)

This segment was identified in Attachment B of the Consent Decree dated June 11, 1999 (Plaintiff's List of Waters). The basis of the consent decree listing was data collected in the 1990's at DEQ monitoring station 8-HCN000.20 at Route 692. Two of 13 samples (15.4%) were outside of the pH criteria range in samples recorded between July 1, 1992, and June 30, 1997 at station 8-HCN000.20. Monitoring of this station was resumed in late 2003 with one sampling event occuring during the 2004 water quality assessment period. While there is insufficient data to assess this segment for the 2004 water quality assessment, the segment is listed for not supporting the Aquatic Life Use based earlier monitoring data collected by DEQ. The DEQ will continue to monitor this station in order to further evaluate the Aquatic Life Use support.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Louisa, Spotsylvania

STREAM NAME: Lake Anna

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F07L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2512 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

The water quality impairments for Lake Anna are all addressed in this fact sheet. The three separate impairments that were addressed in separate fact sheets in the 2002 303(d) list are now combined into this fact sheet. These include:

1. The lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge downstream to the dam;

2. The Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters of Contrary Creek. The Freshwater Creek arm is not included in the segment;

3. The Gold Mine Creek arm of Lake Anna, beginning at the start of the inundated waters of Gold Mine Creek.

The total acreage of the impairments has been updated for the 2004 water quality assessment to reflect to more accurate measurement tools. The location and description of the segments have not changed since the initial 303(d) listing in 2002.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs (2002)

The three segments discussed below were each assessed as not supporting of the Fish Consumption Use goal for the 2004 water quality assessment.

1. The lower lake impairment is the 1941-acre segment beginning near the northern end of the Route 690 bridge downstream to the dam. Exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded at DEQ's fish tissue/sediment monitoring station 8-NAR034.92, approximately 0.5 rivermiles upstream from the dam near Route 622. The TV for PCB's was exceeded in one species (channel catfish) in samples collected in October, 1994, and May, 2000.

2. The Contrary Creek impairment includes the 480-acre Contrary Creek arm of Lake Anna. Exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded at DEQ's fish tissue/sediment monitoring station 8-CON003.84. The TV for PCB's was exceeded in two species (channel catfish and carp) in samples collected May 11, 2000.

In addition, the consensus based probable effects concentration (PEC) sediment screeing values for copper (149 ppm, dry weight), lead (128 ppm, dry weight), and zinc (459 ppm, dry weight) were exceeded in sediment samples collected May 11, 2000, at the same station. As a result, this segment was identified with an observed effect for the aquatic life use goal.

3. The Goldmine Creek impairment includes the 91-acre Gold Mine Creek arm of Lake Anna. Exceedances of the water quality criterion based tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded at DEQ's fish tissue/sediment monitoring station 8-GMC001.43. The TV for PCB's was exceeded in two species (striped bass and largemouth bass) in samples collected August 30, 2000.

IMPAIRMENT SOURCE: Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Orange

STREAM NAME: Pamunkey Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.14 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Tomahawk Creek and Church Creek, where Pamunkey Creek begins

RIVER MILE: 21.20

LATITUDE: 38.22444 **LONGITUDE:** -78.07167

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Lake Anna

RIVER MILE: 9.06

LATITUDE: 38.14639 **LONGITUDE:** -77.93500

Segment begins at the confluence of Tomahawk Creek and Church Creek, where Pamunkey Creek begins, and continues downstream to the confluence with Lake Anna.

The lower portion of this segment, from the confluence of Clear Creek with Pamunkey Creek downstream to the lake, was listed in the 1998 303(d) report. The upstream portion was added to the 1998 303(d) listed segment because of an additional monitoring station established on Pamunkey Creek at Route 630 (rivermile 14.75).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998/2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion were recorded at DEQ's water quality monitoring stations at Route 651 (8-PMC009.85) and Route 630 (8-PMC014.75) to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment. Six of 18 samples (33.3%) exceeded the instantaneous fecal bacteria criterion at station 8-PMC009.85; two of 13 samples (15.4%) exceeded the criterion at station 8-PMC014.75.

Note that two sampling events were conducted during the assessment period at DEQ water quality monitoring station 8-PMC013.60 at Route 669. There were no bacteria exceedances in either of the two sampling events. However, the entire segment remains impaired and will be studied in more detail as part of the TMDL development.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Orange

STREAM NAME: Terrys Run

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F07R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.45 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Horsepen Branch

RIVER MILE: 8.91

LATITUDE: 38.23083 **LONGITUDE:** -77.89806

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Lake Anna

RIVER MILE: 3.46

LATITUDE: 38.16861 **LONGITUDE:** -77.91611

Segment starts at the confluence of Horsepen Branch with Terrys Run and continues downstream to the confluence of Terrys Run with Lake Anna.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform - 1.83 miles (1998), Dissolved Oxygen - 3.62 miles (2002)

The listing of this segment is based data from DEQ's ambient monitoring station 8-TRY004.98 at Route 629, and the special study station 8-TRY006.72 at Route 624. The monitoring data from these stations revealed the following during the 2004 water quality assessment period:

1) Not supporting of the Recreation Use goal due to exceedances of the instantaneous fecal coliform bacteria criterion. Six of 18 samples (33.3%) exceeded the criterion at station 8-TRY004.98. The segment is considered not supporting of the Recreation Use use in the 1.83-mile reach beginning at the confluence of Riga Run to Terrys Run and continuing downstream to the confluence of Terrys Run to Lake Anna.

2) Not supporting of the Aquatic Life Use goal due to excursions from the dissolved oxygen criteria at station 8-TRY006.72. Two of 13 samples (15.4%) were below the minimum DO level (4.0 mg/L) for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The segment is considered not supporting of the Aquatic Life Use in the 3.62-mile reach beginning at the confluence of Horsepen Branch to Terrys Run continuing downstream to the confluence of Riga Run to Terrys Run.

Note that the entire segment was included in the 1998 303(d) report for partially supporting the swimming use due to fecal coliform bacteria exceedances. The special study monitoring station 8-TRY006.72 was established based on the 1998 303(d) listing of this segment. The bacteria TMDL for this segment must be developed by 2010 in accordance with the Consent Decree. The TMDL to address the Aquatic Life Use impairment may extend to 2014.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Spotsylvania

STREAM NAME: Plentiful Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F07R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.15 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 4.94

LATITUDE: 38.17583 **LONGITUDE:** -77.84333

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Lake Anna

RIVER MILE: 1.79

LATITUDE: 38.14750 **LONGITUDE:** -77.85917

Segment begins at the confluence of an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream to the confluence with Lake Anna.

The 1998 303(d) list identified a 4.94-mile segment length for Plentiful Creek. This mileage included the inundated waters of Lake Anna in the Plentiful Creek arm of the lake. The current segment size only accounts for the free-flowing portion of Plentiful Creek and does not include the inundated waters of Lake Anna.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 19 samples - 21.1%) were recorded at DEQ's ambient water quality monitoring station 8-PLT002.82 at Route 653 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Orange

STREAM NAME: Tomahawk Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F07R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.25 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Tomahawk Creek

RIVER MILE: 3.25

LATITUDE: 38.22727 **LONGITUDE:** -78.11944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Church Run

RIVER MILE: 0.00

LATITUDE: 38.22444 **LONGITUDE:** -78.07167

Segment begins at the headwaters of Tomahawk Creek downstream to the confluence with Church Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 10 samples - 20.0%) were recorded at DEQ's water quality monitoring station 8-THK000.09 at Route 612 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Louisa

STREAM NAME: Contrary Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAN-F08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.49 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Contrary Creek

RIVER MILE: 9.33

LATITUDE: 38.02444 **LONGITUDE:** -77.92194

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Lake Anna

RIVER MILE: ~3.84

LATITUDE: 38.06333 **LONGITUDE:** -77.85806

Segment begins at the headwaters of Contrary Creek and continues downstream to the confluence with Lake Anna.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002)

Sufficient excursions from the pH water quality criteria were recorded at the DEQ water quality monitoring station (8-CON005.38) at the Route 522 bridge to assess this segment as not supporting of the Aquatic Life Use goal in the 2004 water quality assessment. Seventeen (17) of 18 samples (94.4%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. Additionally, observed effects for the Aquatic Life Use were noted with exceedances of the acute copper and zinc water quality criteria (1 of 1 sample each) measured in samples collected in July, 1998.

IMPAIRMENT SOURCE: Resource Extraction/Abandoned mining

Resource Extraction/Abandoned mining

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline, Spotsylvania

STREAM NAME: Ni River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F15R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 5.42 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an Unnamed Tributary

RIVER MILE: 5.42

LATITUDE: 38.18519 **LONGITUDE:** -77.52684

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Po River

RIVER MILE: 0.00

LATITUDE: 38.14326 **LONGITUDE:** -77.46326

Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream to its confluence with the Po River to form the Poni River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2004)

Sufficient excursions from the pH water quality criteria were recorded at the DEQ water quality monitoring station (8-NIR003.96) at the Route 1 bridge to assess this segment as not supporting of the Aquatic Life Use goal. Five (5) of 31 samples (16.1%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH.

IMPAIRMENT SOURCE: Unconfirmed Natural Conditions

The source of pH impairment is unknown, but is believed to be attributable to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Spotsylvania

STREAM NAME: Po River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F16R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.06 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Whitehall Creek

RIVER MILE: 22.40

LATITUDE: 38.24583 **LONGITUDE:** -77.70333

DOWNSTREAM LIMIT:

DESCRIPTION: Start of Wrights Pond

RIVER MILE: 20.34

LATITUDE: 38.22083 **LONGITUDE:** -77.67583

Segment begins at the confluence of Whitehall Creek with the Po River and continues downstream to the start of Wrights Pond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 18 samples - 22.2%) were recorded at DEQ's ambient water quality monitoring station 8-POR022.56 at Route 612 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Spotsylvania

STREAM NAME: Po River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F16R-02

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 7.38 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Glady Run

RIVER MILE: 14.07

LATITUDE: 38.18836 **LONGITUDE:** -77.64209

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 6.69

LATITUDE: 38.16004 **LONGITUDE:** -77.55913

Segment begins at the confluence of Glady Run with the Po River and continues downstream to the confluence of an unnamed tributary to the Po River at rivermile 6.69, near the upstream boundary of the Old Trap development.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH (2004), Fecal Coliform (2004)

Sufficient excursions from the pH water quality criteria were recorded at the DEQ water quality monitoring station (8-POR008.97) at the Route 208 bridge to assess this segment as not supporting of the Aquatic Life Use goal. Four (4) of 33 samples (12.1%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH.

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 33 samples - 12.1%) were recorded at station 8-POR008.97 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unconfirmed Natural Conditions, Unknown

The source of pH impairment is unknown, but is believed to be attributable to natural conditions. The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Spotsylvania

STREAM NAME: Ta River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.27 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Bluff Run

RIVER MILE: 3.27

LATITUDE: 38.13806 **LONGITUDE:** -77.62167

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Mat River

RIVER MILE: 0.00

LATITUDE: 38.11667 **LONGITUDE:** -77.58639

Segment begins at the confluence of Bluff Run to Ta River, approximately 0.7 rivermiles upstream of Route 738, downstream to its confluence with Mat River (to form Matta River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 19 samples - 21.1%) were recorded at DEQ's water quality monitoring station (8-TAR002.40) at Route 738 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Additionally, two of 18 samples (11.1%) exceeded the total phosphorus screening value of 0.20 mg/L resulting in an assessment of fully supporting with an observed effect for the Aquatic Life use goal.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline, Spotsylvania

STREAM NAME: Matta River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F18R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.14 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary

RIVER MILE: 11.14

LATITUDE: 38.10794 **LONGITUDE:** -77.57626

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Poni River

RIVER MILE: 0.00

LATITUDE: 38.11284 **LONGITUDE:** -77.43613

Segment begins at the confluence of an unnamed tributary to Matta River, approx. 0.5 rivermiles upstream from the Route 646 bridge, downstream to its confluence to the Poni River forming the Mattaponi River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (5 of 35 samples - 14.3%) were recorded at DEQ's water quality monitoring station (8-MTA001.69) at Route 632 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

Additionally, DEQ benthic macroinvertebrate biological monitoring finds this segment to be slightly impaired resulting in a determination of fully supporting with observed effects for the Aquatic Life use goal.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline

STREAM NAME: South River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.25 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of White Run

RIVER MILE: 4.98

LATITUDE: 38.05385 **LONGITUDE:** -77.45132

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Mays Run

RIVER MILE: 1.73

LATITUDE: 38.04101 **LONGITUDE:** -77.40726

Segment begins at the confluence of White Run to South River, approximately 0.6 rivermiles upstream of Rt. 638, and continues downstream to the confluence with Mays Run at rivermile 1.73.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

Sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 14 samples - 14.3%) were recorded at DEQ's water quality monitoring station (8-STH004.37) at Route 638 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline

STREAM NAME: Polecat Creek

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F20R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 6.63 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Hackett Creek

RIVER MILE: 6.63

LATITUDE: 37.97198 **LONGITUDE:** -77.43396

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence to Mattaponi River

RIVER MILE: 0.00

LATITUDE: 37.96105 **LONGITUDE:** -77.33368

Segment begins at the confluence of Hackett Creek to Polecat Creek, approximately 0.5 rivermiles upstream of Route 207, downstream to its confluence to Mattaponi River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2004)

Sufficient excursions from the pH water quality criteria were recorded at the DEQ water quality monitoring station (8-PCT002.29) at the Route 601 bridge to assess this segment as not supporting of the Aquatic Life Use goal. Five (5) of 35 samples (14.3%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH. One of seven samples was below the lower range of the pH criteria at citizen monitoring station 8PCT-SR20-MPRA at Rt. 301.

IMPAIRMENT SOURCE: Unconfirmed Natural Conditions

The source of pH impairment is unknown, but is believed to be attributable to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William

STREAM NAME: Herring Creek

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F21R-01

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 4.81 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Dorrell Creek

RIVER MILE: 7.04

LATITUDE: 37.84917 **LONGITUDE:** -77.19139

DOWNSTREAM LIMIT:

DESCRIPTION: Start of Herring Creek Millpond

RIVER MILE: 2.23

LATITUDE: 37.80944 **LONGITUDE:** -77.14333

Segment starts at the confluence of Dorrell Creek with Herring Creek and continues to the start of Herring Creek Millpond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002), pH (2002)

The sampling data from DEQ monitoring station (8-HER005.12) at the Route 609 bridge revealed the following for this stream segment during the 2004 water quality assessment period:

1) Not supporting of the Recreation Use goal due to sufficient exceedances of the instantaneous fecal coliform bacteria criterion (4 of 19 samples - 21%);

2) Not supporting of the Aquatic Life Use goal due to excursions from the pH water quality criteria. Thirteen (13) of 17 samples (76.5%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH.

The Aquatic Life Use impairment is subject to the schedule of the consent decree. Accordingly, a TMDL and/or evaluation of the water quality standard is scheduled to be completed by 2010. The TMDL to address the Recreation Use impairment may extend to 2014.

IMPAIRMENT SOURCE: Unknown, Unconfirmed Natural Conditions

The source of pH impairment is unknown, but is believed to be attributable to natural conditions. The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline, King and Queen, King William

STREAM NAME: Mattaponi River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F21R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 8.15 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Maracossic Creek

RIVER MILE: 57.37

LATITUDE: 37.89167 **LONGITUDE:** -77.18139

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Gravel Run

RIVER MILE: 49.22

LATITUDE: 37.86611 **LONGITUDE:** -77.13556

Segment begins at the confluence of Maracossic Creek and continues downstream to the confluence of Gravel Run to the Mattaponi River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002)

DEQ monitoring station 8-MPN054.17 and USGS station 01674500 are co-located on the Mattaponi River at the Rt. 628 bridge. This station was sampled by both agencies through mid-2003 at which time DEQ ceased monitoring activities to eliminate duplicated efforts at this location.

DEQ monitoring data from this station was used as the basis for an Aquatic Life Use impairment listed in the 2002 303(d) report due to excursions from the pH criteria. For the 2002 assessment period between 1/1/1996 and 12/31/2000, ten (10) of 53 samples (18.9%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH.

For the 2004 assessment period, the combination of DEQ and USGS data indicate that thirteen (13) of 178 samples (7.3%) were below the lower range (6.0 SU) of the pH water quality criteria indicating full support of the Aquatic Life Use goal. DEQ will not petition to have this segment removed from the 303(d) impaired waters list as unconfirmed USGS monitoring data support the impairment. These data, once finalized, will be evaluated as part of the 2006 water quality assessment.

IMPAIRMENT SOURCE: Unconfirmed Natural Conditions

The source of pH impairment is unknown, but is believed to be attributable to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline

STREAM NAME: Reedy Creek

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F21R-03

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 12.4 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Reedy Creek

RIVER MILE: 13.62

LATITUDE: 37.94139 **LONGITUDE:** -77.46417

DOWNSTREAM LIMIT:

DESCRIPTION: Start of Reedy Millpond

RIVER MILE: 1.22

LATITUDE: 37.89583 **LONGITUDE:** -77.30444

Segment begins at the headwaters of Reedy Creek downstream to the start of Reedy Millpond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002), Fecal Coliform (2004)

Sufficient excursions of the pH water quality criteria were recorded at the DEQ water quality monitoring station (8-RDY003.43) at the Route 648 bridge to assess this segment as not supporting of the Aquatic Life Use goal. Thirteen (13) of 16 samples (81.3%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH.

Additionally, sufficient exceedances of the instantaneous fecal coliform bacteria criterion (2 of 17 samples - 11.8%) were recorded at station 8-RDY003.43 to assess this stream segment as not supporting of the Recreation Use goal for the 2004 water quality assessment.

IMPAIRMENT SOURCE: Unconfirmed Natural Conditions, Unknown

The source of pH impairment is unknown, but is believed to be attributable to natural conditions. The source of fecal coliform bacteria exceedances is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline, King and Queen

STREAM NAME: Maracossic Creek

HYDROLOGIC UNIT: 02080105

TMDL ID: VAN-F22R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 4.32 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Doctors Creek

RIVER MILE: 7.94

LATITUDE: 37.95667 **LONGITUDE:** -77.22167

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Beverly Run

RIVER MILE: 3.62

LATITUDE: 37.91889 **LONGITUDE:** -77.18222

Segment begins at the confluence of Doctors Creek to Maracossic Creek downstream to its confluence with Beverly Run, approximately 0.66 rivermiles downstream of Route 646.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002)

Sufficient excursions from the pH water quality criteria were recorded at the DEQ water quality monitoring station (8-MAR004.41) at the Route 646 bridge to assess this segment as not supporting of the Aquatic Life Use goal. Four (4) of 18 samples (22.2%) were below the lower range (6.0 SU) of the pH water quality criteria for Class III waters as established in 9 VAC 25-260-50 of the Virginia Water Quality Standards. The pH excursions may be attributable to natural conditions as this segment is a low-lying Coastal Plain environment with no riffles and slow moving pools that are subject to low pH.

IMPAIRMENT SOURCE: Unconfirmed Natural Conditions

The source of pH impairment is unknown, but is believed to be attributable to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover

STREAM NAME: South Anna River

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 22.22 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Taylors Creek

RIVER MILE: 22.52

LATITUDE: 37.75570 **LONGITUDE:** -77.63060

DOWNSTREAM LIMIT:

DESCRIPTION: Ashland Municipal STP

RIVER MILE: 4.83

LATITUDE: 37.80850 **LONGITUDE:** -77.47140

The South Anna River from Taylors Creek downstream to the Ashland Municipal STP discharge near the confluence with Falling Creek. Includes PWS Section 8-3a.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The South Anna River from Route 33 to the Ashland Municipal STP was assessed as fully supporting but threatened during the 1998 cycle. In 2002, the segment was extended upstream to Taylors Creek and downgraded to impaired. The TMDL is due in 2014. During the 2004 cycle, the fecal coliform violation rate was 5/19 at the Route 33 bridge (8-SAR021.22).

IMPAIRMENT SOURCE: Unknown

The source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline, Hanover

STREAM NAME: South Anna River

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F04R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.63 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Ashland Municipal STP discharge

RIVER MILE: 4.83

LATITUDE: 37.80850 **LONGITUDE:** -77.47140

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.80310 **LONGITUDE:** -77.40820

The South Anna River from the Ashland Municipal STP near the confluence with Falling Creek downstream to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially listed as impaired during the 1998 cycle. During the 2004 cycle, the fecal coliform violation rate was 9/48 at the Route 738 bridge (8-SAR001.11). The TMDL is due in 2010.

IMPAIRMENT SOURCE: Unknown

The source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover

STREAM NAME: Newfound River

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.61 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Needstan Creek

RIVER MILE: 10.60

LATITUDE: 37.85630 **LONGITUDE:** -77.59560

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.80980 **LONGITUDE:** -77.49480

Newfound River from the confluence of Needstan Creek to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 5/18 at the Route 667 bridge (8-NFD002.26).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Spotsylvania

STREAM NAME: Northeast Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.04 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Tributary upstream of Route 622.

RIVER MILE: 4.46

LATITUDE: 38.04630 **LONGITUDE:** -77.69430

DOWNSTREAM LIMIT:

DESCRIPTION: Tributary downstream of Route 622.

RIVER MILE: 2.05

LATITUDE: 38.03350 **LONGITUDE:** -77.69510

Northeast Creek as noted around the Route 622 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2002), pH (2004), Fecal Coliform

During the 2002 cycle, the segment was assessed not supporting of the Aquatic Life and Recreation Uses because of dissolved oxygen and fecal coliform impairments at the Route 622 bridge (8-NST003.46). The TMDL for these impairments would be due in 2014. In 2004, the segment was also assessed for pH. This TMDL would be due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the dissolved oxygen and pH violations is unknown but is suspected to be caused by natural conditions during low-flow periods. The source of the fecal coliform is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover, King William

STREAM NAME: Mechumps Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F12R-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 5.53 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Slayden Creek

RIVER MILE: 5.69

LATITUDE: 37.75020 **LONGITUDE:** -77.40790

DOWNSTREAM LIMIT:

DESCRIPTION: Pamunkey River confluence

RIVER MILE: 0.00

LATITUDE: 37.76650 **LONGITUDE:** -77.33780

Mechumps Creek from its confluence with Slayden Creek to the Pamunkey River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

Sufficient pH violations were recorded at DEQ's Ambient Monitoring Station 8-MCP002.42, located at the Route 301 bridge, to assess this stream as partially supporting the Clean Water Act's Aquatic Life Use goal for the 1994 305(b) report.

The segment was similarly assessed this cycle based on a pH violation rate of 5/43 at 8-MCP002.42 and 2/5 at 8-MCP005.64.

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 6/34 at 8-MCP002.42.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The source of the fecal coliform impairment in this segment is currently unknown.

Targeted monitoring in 2002 indicates that Mechumps Creek upstream of Slayden has acceptable pH violation rates. However, Slayden Creek itself and the small tributaries feeding Mechumps and Slayden show significant pH violations and are most likely the contributing source to the pH violations in Mechumps Creek (see VAP-F12R-04).

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Caroline, Hanover, King William

STREAM NAME: Hornquarter Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F12R-03

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 6.59 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.59

LATITUDE: 37.82380 **LONGITUDE:** -77.34020

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.75400 **LONGITUDE:** -77.31130

All of mainstem Hornquarter Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Evaluated not supporting of the Aquatic Life use support goal based on a pH standard violation rate of 2/4 during the 2002 cycle at the Route 614 bridge (8-HQT002.12). The station was discontinued in 1996.

IMPAIRMENT SOURCE: Natural Conditions

The source of the pH violations is attributed to natural swampwater conditions in the watershed.

Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments shall be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover

STREAM NAME: Slayden Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F12R-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 4.52 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.52

LATITUDE: 37.77300 **LONGITUDE:** -77.47180

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Mechumps Creek

RIVER MILE: 0.00

LATITUDE: 37.75020 **LONGITUDE:** -77.40790

Slayden Creek from its headwaters to its mouth at Mechumps Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

TMDL monitoring in the Mechumps watershed indicated widespread pH violations throughout Slayden Creek:

5/5 at 8-SLD000.06
5/5 at 8-SLD002.15
1/1 at multiple streamwalk stations

IMPAIRMENT SOURCE: Natural Conditions

The source of the pH conditions is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William, New Kent

STREAM NAME: Pamunkey River

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.71 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Extent of tide at Totopotomoy Creek

RIVER MILE: 60.22

LATITUDE: 37.68550 **LONGITUDE:** -77.20900

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.52290 **LONGITUDE:** -76.79960

From the extent of tide at Totopotomoy Creek to the mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Estuarine bioassessments, Chloride, Estuarine bioassessments

The segment was initially listed on the 1998 303(d) list as fully supporting but threatened of the aquatic life use goal because a 1995 special study showed river subject to 33% violation rate of daily mean DO standard during warm weather conditions May through October. Estuarine Pamunkey River is considered fully allocated relative to dissolved oxygen. New discharges cannot result in further DO depression.

The Chesapeake Bay and its tidal tributaries were added by EPA to the 1998 303(d) list. EPA listed the impairment as dissolved oxygen violations caused by nutrient overenrichment. This listing included the entire mainstem estuarine Pamunkey River.

During the year 2004 cycle, the DO violation rate was 0/47 at 8-PMK048.80, 0/48 at 8-PMK006.36, 0/213 at 8-PMK034.17, 0/48 at 8-PMK056.87, and 10/200 at 8-PMK006.36. No chlorophyll A violations were recorded.

In the 2004 cycle, the segment from Sweet Hall Landing to the mouth (4.44 sq. mi.) was assessed not supporting of the Aquatic Life and Wildlife uses based on chloride violations at 8-PMK006.36. The TMDL is due in 2016.

In the 2004 cycle, the segment from the mesohaline boundary to the mouth (0.92 sq. mi.) was assessed as not supporting of the Aquatic Life use based on the results of the Chesapeake Bay Benthic - Index of Biological Integrity. The TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown, Natural conditions

Tidal marshes contribute to organic loading resulting in DO depressions and full allocation judgment.

The chloride violations are attributed to natural salinity.

Fact Sheets for Category 5 Waters

The source of the benthic impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover, King William, New Kent

STREAM NAME: Pamunkey River

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.84 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Route 654, Pampatike Landing

RIVER MILE: 48.80

LATITUDE: 37.66720 **LONGITUDE:** -77.13670

DOWNSTREAM LIMIT:

DESCRIPTION: Macon Creek

RIVER MILE: 37.31

LATITUDE: 37.59710 **LONGITUDE:** -77.05510

From Pampatike Landing to Macon Creek (the downstream boundary of watershed F13). Nested within VAP-F13E-01.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The Pamunkey River was initially listed on the 1998 303(d) list as impaired of the Recreation Use goal because of fecal coliform violations at Pampatike Landing (Route 654). EPA also identified the station on their list of "Waters Identified to Virginia for Consideration During Development of the Next Listing Cycle." This inclusion was probably in error as the segment was already 303(d) listed.

During the 2004 assessment cycle, the segment continues to be impaired of the Swimming use goal with a fecal coliform violation rate of 5/47 at Pampatike Landing (8-PMK048.80).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover, King William, New Kent

STREAM NAME: Matadequin Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 11.39 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 11.39

LATITUDE: 37.63800 **LONGITUDE:** -77.29170

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.62670 **LONGITUDE:** -77.12390

Headwaters to mouth

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

Matadequin Creek from Parsleys Creek to its mouth was assessed in 1998 as impaired of the Aquatic Life use support goal based on pH standard violations at the Route 606 bridge (8-MDQ001.58). During the 2004 cycle, TMDL monitoring indicated pH impairment further upstream and the pH impairment was extended to the headwaters (miles). The TMDL for the original segment is due in 2010; the TMDL for the upstream portion is due in 2016.

Matadequin Creek from Parsleys Creek to its mouth (5.01 miles) was assessed in 1998 as fully supporting but threatened of the Recreation use goal. In 2002, the segment was downgraded to impaired and the fecal coliform TMDL is due in 2014. The segment continues to be impaired of the Recreation use goal based on a fecal coliform standard violation rate of 8/33 at 8-MDQ001.37 in the 2004 cycle.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The source of the fecal coliform impairment is considered unknown.

The pH impairment is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover

STREAM NAME: Totopotomoy Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.6 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Strawhorn Creek

RIVER MILE: 9.60

LATITUDE: 37.65140 **LONGITUDE:** -77.32740

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.68550 **LONGITUDE:** -77.20950

Strawhorn Creek to the Pamunkey River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Unknown

Totopotomoy Creek was assessed not supporting of the Recreation Use goal based on a fecal coliform violation rate of 3/23 at the Route 606 bridge (8-TPT004.37). The segment was initially listed in 2002, therefore the fecal coliform TMDL is due in 2014.

In the 2004 cycle, the segment was also assessed as not supporting the Aquatic Life use due to a pH violation rate of 4/22 at 8-TPT004.37. The pH TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform and pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William

STREAM NAME: Jacks Creek and major tributaries

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-03

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 22.99 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.50

LATITUDE: 37.69280 **LONGITUDE:** -77.10170

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.60240 **LONGITUDE:** -77.06220

Jacks Creek, Acquinton Creek, and Mallory Creek in their entirety.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The mainstem of Jacks Creek was assessed as fully supporting but threatened of the Aquatic Life Use in 1998 due to dissolved oxygen violations at the Rt. 621 bridge (8-JCK004.15). In 2002, the segment was downgraded to impaired and extended to incorporate Acquinton and Mallory Creeks based on the results of a special study:
DO 1/1 at 8-ACQ008.01;
DO 1/1 at 8-ACQ001.35;
DO 1/1 at 8-MLY001.58.

The TMDL is due in 2014.

During the 2004 cycle, the violation rate was 5/19 at 8-JKC004.15, so the segment remains impaired.

IMPAIRMENT SOURCE: Natural Conditions

Natural conditions suspected in both streams

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William

STREAM NAME: Moncuin Creek, Webb Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-04

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 11.83 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Webb Creek

RIVER MILE: 6.09

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Swamp at river mile 2.0

RIVER MILE: 2.00

LATITUDE: 37.68780 **LONGITUDE:** -77.14180

From the headwaters of Webb Creek downstream to the swampy area around river mile 2.0.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Su`pporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

In 1998, the Moncuin Creek was assessed as fully supporting but threatened of the Recreation use because of fecal coliform violations at the Route 618 bridge.

In the 2002 cycle, the segment was extended to incorporate the station on Webb Creek and was assessed not supporting of the Aquatic Life and Recreation Uses because of fecal coliform and pH exceedances. The TMDLs are due in 2014.

Fecal coliform 2/17 at 8-MNQ004.19 (Rt. 618)
pH 7/184 at the 8-MNQ004.19;
pH 1/1 at 8-WEB002.00 (1995 study)

IMPAIRMENT SOURCE: Natural Conditions, Unknown

Natural conditions suspected source of pH violations;
The fecal coliform source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: New Kent

STREAM NAME: Black Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.61 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Southern Branch Clompton Swamp

RIVER MILE: 2.61

LATITUDE: 37.57260 **LONGITUDE:** -77.09110

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.59480 **LONGITUDE:** -77.07960

Black Creek downstream of the first major upstream tributary.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Not supporting of the Recreation Use because of fecal coliform exceedances (5/18) at the Route 608 bridge (8-BLC001.77).

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William

STREAM NAME: Sullens Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.68 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Pond at Etna Mills

RIVER MILE:

LATITUDE: 37.75890 **LONGITUDE:** -77.26280

DOWNSTREAM LIMIT:

DESCRIPTION: Mehixen Creek

RIVER MILE:

LATITUDE: 37.73100 **LONGITUDE:** -77.25340

Sullens Creek from the pond at Etna Mills downstream to the confluence with Mehixen Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Not supporting of the Aquatic Life Use goal based on a pH violation rate of 2/2 at the Route 652 bridge (8-SLN001.46).

IMPAIRMENT SOURCE: Unknown

The source of the violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover

STREAM NAME: Parsleys Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.07 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.07

LATITUDE: 37.59380 **LONGITUDE:** -77.26980

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Matadequin Creek

RIVER MILE: 0.00

LATITUDE: 37.62250 **LONGITUDE:** -77.19040

The mainstem of Parsleys Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Not supporting of the Aquatic Life Use goal because of the following pH violation rates:

1/1 at 8-PRS000.01
3/4 at 8-PRS001.96
3/4 at 8-PRS002.81
1/1 at 8-PRS003.35

IMPAIRMENT SOURCE: Unknown

The source of the violations is considered unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Hanover

STREAM NAME: Sandy Valley Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-08

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.03 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.03

LATITUDE: 37.61820 **LONGITUDE:** -77.29130

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Matadequin Creek

RIVER MILE: 0.00

LATITUDE: 37.62240 **LONGITUDE:** -77.25000

The mainstem of Sandy Valley Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Not supporting of the Aquatic Life Use goal based on a pH violation rate of 4/4 at Matadequin TMDL study station 8-SVC002.31 (Route 635).

IMPAIRMENT SOURCE: Unknown

The source of the violations is considered unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William

STREAM NAME: UT XDX to UT XDW to Pamunkey River

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F13R-09

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.75 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.75

LATITUDE: 37.72370 **LONGITUDE:** -77.17130

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Matadequin Creek

RIVER MILE: 0.00

LATITUDE: 37.69240 **LONGITUDE:** -77.20310

The mainstem of unnamed tributary XDX.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Not supporting of the Recreation Use goal based on a fecal coliform violation rate of 2/3 at the Route 604 (8-XDX000.38).

IMPAIRMENT SOURCE: Unknown

The source of the violations is considered unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William

STREAM NAME: Cohoke Mill Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.93 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.45

LATITUDE: 37.65910 **LONGITUDE:** -76.99900

DOWNSTREAM LIMIT:

DESCRIPTION: Cohoke Millpond

RIVER MILE: 2.52

LATITUDE: 37.59510 **LONGITUDE:** -76.94240

Mainstem upstream of Cohoke Millpond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Not supporting of the Recreation Use based on a fecal coliform violation rate of 4/30 at the Route 626 bridge (8-CMC005.16).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William

STREAM NAME: Harrison Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F14R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.59 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream of pond at Elsing Green

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Nearest downstream tributary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Upstream of pond at Elsing Green downstream to nearest tributaries

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Not supporting of the Aquatic Life Use based on a pH violation rate of 2/2 at the Route 632 bridge (8-HSN002.12).

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William

STREAM NAME: UT to Cohoke Mill Creek

HYDROLOGIC UNIT: 02080106

TMDL ID: VAP-F14R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.2 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.2

LATITUDE: 37.61240 **LONGITUDE:** -76.92120

DOWNSTREAM LIMIT:

DESCRIPTION: Cohoke Millpond

RIVER MILE: 0.00

LATITUDE: 37.59060 **LONGITUDE:** -76.93610

Mainstem upstream of Cohoke Millpond

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Not supporting of the Aquatic Life Use based on a pH violation rate of 2/2 at 8-XDM000.50.

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King William, King and Queen

STREAM NAME: Mattaponi River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAP-F23E-03

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 6.87 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit near Aylett

RIVER MILE: 39.25

LATITUDE: 37.74740 **LONGITUDE:** -77.07960

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at York River

RIVER MILE: 0.00

LATITUDE: 37.52410 **LONGITUDE:** -76.78520

The tidal portion of the Mattaponi River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Nutrients/Eutrophication Biological Indicators, chloride, pH, Estuarine bioassessments

The Mattaponi River from the tidal limit near Aylett downstream to Garnetts Creek (1.96 sq. mi.) was assessed in 1998 as impaired of the Aquatic Life Use due to pH violations. During the 2004 cycle, the violation rate is 15/116 at the Route 629 bridge (8-MPN029.08) and 6/48 at the Route 360 bridge (8-MPN039.10.)

The Chesapeake Bay and its tidal tributaries were added by EPA to the 1998 303(d) list. This includes the entire tidal portion of the Mattaponi River. EPA listed the impairment as dissolved oxygen violations caused by nutrient overenrichment. During the 2002 cycle, dissolved oxygen and chlorophyll A violation rates at multiple monitoring stations were all acceptable (see below). Since the listing is based solely on the EPA overlist, the impairment is considered Nutrients/Eutrophication Biological Indicators.

In 2004, the Mattaponi River from the oligohaline boundary downstream to its mouth (sq. mi.) is assessed as impaired of the Aquatic Life and Wildlife goals based on chloride violations at 8-MPN017.46 and 8-MPN04.39. The chloride TMDL is due in 2016.

The mesohaline portion of the York River, which includes the downstream portion of the Mattaponi River (0.82 sq. mi.), is impaired for the Aquatic Life use in 2004 due to the results of the Chesapeake Bay Benthic Index of Biological Integrity study.

IMPAIRMENT SOURCE: NPS/PS, natural conditions, Unknown

Natural conditions are suspected in the pH violations.

The source of the Nutrients/Eutrophication Biological Indicator impairment (EPA) is considered unknown.

The chloride violations are attributed to natural salinity.

Fact Sheets for Category 5 Waters

The source of the benthic impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King and Queen, King William

STREAM NAME: Mattaponi River

HYDROLOGIC UNIT: 02080105

TMDL ID: VAP-F23R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.72 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Herring Creek

RIVER MILE: 43.48

LATITUDE: 37.80860 **LONGITUDE:** -77.12070

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit at Aylett

RIVER MILE: 39.25

LATITUDE: 37.74740 **LONGITUDE:** -77.07960

Free flowing Mattaponi from watershed boundary to tidal limit.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - benzo(k)fluoranthene

The segment is considered not supporting of the Fish Consumption Use because in 1996 sampling the screening value (SV) for benzo(k)fluoranthene was exceeded in 3 sp.

In addition, the SV for benzo(b)fluoranthene was exceeded in 1 sp., and the SV for arsenic was exceeded in 2 sp. during the 1996 sampling. These parameters are not impairing and are listed as observed effects.

In the 1998 cycle, the segment was considered threatened because the screening value for PCBs in fish tissue at 8-MPN041.41 was exceeded in 1 sp. In 1996 was acceptable, therefore PCBs was removed as an observed effect.

The segment length was revised during the 2002 cycle because the location of the tidal limit was corrected.

IMPAIRMENT SOURCE: Unknown

Source of chemicals in fish tissue is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King and Queen

STREAM NAME: Dickeys Swamp, Dogwood Fork, Garnetts Creek

HYDROLOGIC UNIT: 02080105

TMDL ID: VAP-F23R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 16.46 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 11.18

LATITUDE: 37.80210 **LONGITUDE:** -77.05280

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.72550 **LONGITUDE:** -76.96720

Dickeys Swamp, Dogwood Fork, and an unnamed trib to Garnetts Creek in their entireties.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Dickeys Swamp from Dogwoods Fork downstream to the mouth was initially assessed as fully supporting but threatened in 1998 based on dissolved oxygen violations at the Route 620 bridge (8-DKW000.12)

The segment was downgraded and extended in 2002 cycle to incorporate Dogwood Fork, the UT to Garnetts Creek (at the confluence of Garnetts and Dickeys), and the headwaters of Dickeys Swamp based on the results of a special study. The TMDL is due in 2014.

In the 2004 cycle, the dissolved oxygen violation rate at 8-DKW000.12 was still unacceptable (3/19), but monitoring upstream on Dickeys Swamp showed acceptable results. However, the segment length was not modified pending further monitoring.

IMPAIRMENT SOURCE: Natural Conditions

The source of the dissolved oxygen impairments is considered unknown, but is suspected to be attributable to natural conditions.

Targeted monitoring to identify wetlands is recommended.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King and Queen

STREAM NAME: Walkerton Branch

HYDROLOGIC UNIT: 02080105

TMDL ID: VAP-F23R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.95 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Walkerton Millpond

RIVER MILE:

LATITUDE: 37.73610 **LONGITUDE:** -77.03010

Watershed upstream of Walkerton Millpond

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Not supporting of the Aquatic Life Use goal based on a pH violation rate of 2/2 at Route 636 (8-WKN003.16).

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King and Queen

STREAM NAME: Garnetts Creek

HYDROLOGIC UNIT: 02080105

TMDL ID: VAP-F23R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.12 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Dickeys Swamp

RIVER MILE: 3.12

LATITUDE: 37.72530 **LONGITUDE:** -76.96730

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.69110 **LONGITUDE:** -76.95830

Dickeys Swamp downstream to mouth at Mattaponi River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Not supporting of the Aquatic Life Use goal based on a pH violation rate of 2/10 at Route 633 (8-GNT001.54).

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King and Queen

STREAM NAME: Tastine Swamp and Little Tastine Swamp

HYDROLOGIC UNIT: 02080105

TMDL ID: VAP-F25R-01

ASSESSMENT CATEGORY: 5A,5C

SEGMENT SIZE: 6.02 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 10.22

LATITUDE: 37.58870 **LONGITUDE:** -76.75460

DOWNSTREAM LIMIT:

DESCRIPTION: Corbins Pond

RIVER MILE: 4.2

LATITUDE: 37.65760 **LONGITUDE:** -76.76800

From the headwaters of Little Tastine Swamp to Corbins Pond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Tastine Swamp from the Route 611 bridge downstream to Corbins Pond was initially assessed in 1998 as fully supporting but threatened of the Recreation and Aquatic Life use goals.

During the year 2002 cycle the segment was downgraded and extended to incorporate Little Tastine Swamp.

In the 2004 cycle, the segment continues to be impaired of both goals based on dissolved oxygen and fecal coliform violation rates of 3/20 at 8-TST001.81 (Route 611 bridge).

IMPAIRMENT SOURCE: Natural Conditions, Unknown

DO violation suspected to be caused by natural conditions.

Source of fecal coliform violations is considered unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester, James City, King and Queen, King William, New Kent, York

STREAM NAME: York River Mainstem (Upper & Lower)

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 53.69 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: York River mainstem waters from start of F26E (at West Point).

RIVER MILE: 33.48

LATITUDE: 37.52590 **LONGITUDE:** -76.79420

DOWNSTREAM LIMIT:

DESCRIPTION: York River mainstem waters to downstream terminus of segment F27E (line across mouth of York R.).

RIVER MILE: 0.00

LATITUDE: 37.24550 **LONGITUDE:** -76.38840

York River mainstem waters from start of F26E (at West Point) downstream to terminus of segment F27E (line across mouth of York R.).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: EPA Overlisting (General Standards), General Standard (Benthic)

EPA 1998 303d OVERLISTING is the basis to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.The cause of the nutrient designation is unknown.DEQ's addition of turbidity as an impairment cause is based on the best scientific information available since the EPA overlisted this segment in 1999 for nonattainment of aquatic life use due to nutrients.Benthic BIBI probabilistic station surveys (VERSAR 2002) in the CBP segment YRKMHa & YRKPHa are the basis to assess this segment as impaired of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report.

The cause of the lower benthic diversity designation is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

EPA OVERLISTING on 1998 303d for the mainstem York River. The specific source of the low benthic diversity is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Williamsburg, York

STREAM NAME: Queen Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the estuarine/riverine transition portion of creek.

RIVER MILE: 5.62

LATITUDE: 37.30170 **LONGITUDE:** -76.61390

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth of creek, confluence with York River.

RIVER MILE: 0.00

LATITUDE: 37.30220 **LONGITUDE:** -76.70080

Segment extends from start of estuarine portion to mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for dissolved oxygen and Fecal Coliform bacteria were recorded at DEQ's ambient water quality monitoring station on Queen Cr. to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Goal and not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the dissolved oxygen standard violation is unknown. The cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the Aquatic Life Use impairment is unknown. The source of the Swimming Use impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester

STREAM NAME: Adams Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.89

LATITUDE: 37.27521 **LONGITUDE:** -76.58440

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27533 **LONGITUDE:** -76.58451

VDH-DSS shellfish harvesting condemnation # 128B,Poropotank River and Adams Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester

STREAM NAME: Jones Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.52

LATITUDE: 37.35833 **LONGITUDE:** -76.62222

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.36667 **LONGITUDE:** -76.60833

VDH-DSS shellfish harvesting condemnation # 115, York River:Jones and Sandy Creeks

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester, King and Queen

STREAM NAME: Poropotank River & Morris Bay

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.48 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3.41

LATITUDE: 37.27514 **LONGITUDE:** -76.58431

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27524 **LONGITUDE:** -76.58442

VDH-DSS shellfish harvesting condemnation # 128A,Poropotank River and Adams Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester

STREAM NAME: York River: Aberdeen Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.7

LATITUDE: 37.35833 **LONGITUDE:** -76.59583

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.36667 **LONGITUDE:** -76.58333

VDH-DSS shellfish harvesting condemnation number 78, located in York River: Aberdeen Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Williamsburg, York

STREAM NAME: York River: Queen Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3

LATITUDE: 37.30000 **LONGITUDE:** -76.61667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.30000 **LONGITUDE:** -76.66250

VDH-DSS shellfish harvesting condemnation #35, located in York River, Queen Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: James City, York

STREAM NAME: York River: Skimino Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-17

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3.2

LATITUDE: 37.36944 **LONGITUDE:** -76.67222

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.36583 **LONGITUDE:** -76.70417

VDH-DSS shellfish harvesting condemnation number 87, located in York River: Skimino Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: James City

STREAM NAME: York River: Taskinas Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.1

LATITUDE: 37.41667 **LONGITUDE:** -76.71111

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.40000 **LONGITUDE:** -76.72500

VDH-DSS shellfish harvesting condemnation # 166, York River: Taskinas Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: James City, New Kent

STREAM NAME: York River: Ware Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 4.9

LATITUDE: 37.45833 **LONGITUDE:** -76.75417

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.43333 **LONGITUDE:** -76.77917

VDH-DSS shellfish harvesting condemnation number 73, located in York River: Ware Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King and Queen, King William

STREAM NAME: York River & tributaries (Upper)

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-20

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 4.88 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.6

LATITUDE: 37.52540 **LONGITUDE:** -76.79320

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.47340 **LONGITUDE:** -76.74420

VDH-DSS shellfish harvesting condemnation #4-Upper York River (to Mattaponi & Pamunkey Rs) #4

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King and Queen

STREAM NAME: Bakers Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-21

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.8

LATITUDE: 37.52540 **LONGITUDE:** -76.79320

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.47340 **LONGITUDE:** -76.74420

VDH-DSS shellfish harvesting condemnation #4A (portion) -Upper York River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: King and Queen

STREAM NAME: Hockley Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26E-22

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.6

LATITUDE: 37.52540 **LONGITUDE:** -76.79320

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.47340 **LONGITUDE:** -76.74420

VDH-DSS shellfish harvesting condemnation #4A (portion) -Upper York River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: York

STREAM NAME: Carter Creek (York Co)

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F26R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.04 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of an unnamed tributary with Carter Creek (northwest of Barlow Rd.).

RIVER MILE: 4.28

LATITUDE: 37.35295 **LONGITUDE:** -76.71634

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at riverine/estuarine transition portion of creek.

RIVER MILE: 3.24

LATITUDE: 37.33879 **LONGITUDE:** -76.68635

Segment begins at confluence of unnamed tributary with creek (northwest of Barlow Rd.) and ends downstream at the riverine/estuarine transition portion of creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

Benthic biological monitoring at station 8-CTC003.78 (located at State Route 604) indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform bacteria were recorded at DEQ's biological water quality monitoring station (2/3) on Carter Cr. to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard and General Standard (VR680-21-01.2) exceedances are unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the Aquatic Life Use impairment is unknown. The source of the Swimming Use impairment is unknown .

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester, York

STREAM NAME: York River (Lower mainstem bottom layer)

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.56 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins upstream of Coleman Bridge (line across from Roosevelt Pond north to Mumfort Island

RIVER MILE: 12.90

LATITUDE: 37.31100 **LONGITUDE:** -76.59760

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at downstream terminus of segment F27E (line across mouth of York R.).

RIVER MILE: 0.00

LATITUDE: 37.24550 **LONGITUDE:** -76.38840

Segment begins upstream of Coleman Bridge (line across from Roosevelt Pond north to Mumfort Islands) and extends downstream to terminus of segment F27E (line across mouth of York R.).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of the standard for Dissolved Oxygen at bottom water (deeper than 10 meters) observations at monitoring station on the York River (8-YRK011.14 & 8-YRK001.64) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the standard violation is attributed to naturally occurring conditions in bottom waters of deep estuarine trenches.

IMPAIRMENT SOURCE: Unknown

The source of the low dissolved oxygen impairment in bottom waters is attributed to naturally occurring low dissolved oxygen conditions in bottom waters of deep estuarine trenches.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: York

STREAM NAME: King Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the estuarine/riverine transition.

RIVER MILE: 4.96

LATITUDE: 37.26960 **LONGITUDE:** -76.61030

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream 0.50 mi. from station at Colonial Parkway crossing.

RIVER MILE: 0.50

LATITUDE: 37.27600 **LONGITUDE:** -76.60190

Segment begins at the estuarine/riverine transition and ends downstream 0.50 mi. from station at Colonial Parkway crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standards for Fecal Coliform Bacteria and Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on King Cr. to assess this segment as not supporting of the Clean Water Act's Recreation Use and Aquatic Life Use Support Goals for the 2002 305(b) report. The cause of the standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the Swimming Use impairment and Aquatic Life Use impairment are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: York

STREAM NAME: King Creek (Mouth)

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.21 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at RM 0.50 upstream of mouth of King Creek.

RIVER MILE: 0.50

LATITUDE: 37.27910 **LONGITUDE:** -76.58910

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth of King Creek.

RIVER MILE: 0.00

LATITUDE: 37.27980 **LONGITUDE:** -76.58590

Segment extends 0.5 mi upstream of mouth and extends downstream to confluence with York River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Sufficient exceedance of criterion based fish tissue value for PCBs in 4 species of fish sampled in 2000 at monitoring station (8-KNG000.18) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report.

The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The King Creek monitoring station is in the area of the confluence with the York River. The York mainstem in this area has also yielded fish tissue with PCBs contamination. The land use in the watershed is mixed military installation, forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding area. The specific source of the elevated fish tissue toxic concentration is currently unknown, but may be related to the sediment PCBs located in Queen Creek sediments.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: York

STREAM NAME: Wormley Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.26 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.85 miles upstream from mouth of Wormley Creek.

RIVER MILE: 0.85

LATITUDE: 37.21290 **LONGITUDE:** -76.46890

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth of Wormley Creek.

RIVER MILE: 0.00

LATITUDE: 37.21610 **LONGITUDE:** -76.46940

Segment begins 0.85 miles upstream from mouth of Wormley Creek and ends at the mouth of Wormley Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Data collected for PCBs in fish tissue @ 8-WOR000.35 indicated sufficient exceedance of the criterion based tissue values is used to evaluate this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report. Additional monitoring for confirmatory data is needed.

The cause of the elevated PCBs concentrations in fish tissue is currently unknown.

IMPAIRMENT SOURCE: Unknown

The Wormley Creek monitoring station is within the migratory area of Queen Creek, which contains sediment PCBs. The land use in the watershed is mixed military installation, forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding area. The specific source of the elevated fish tissue toxic concentration is currently unknown, but may be related to the sediment PCBs located in Queen Creek sediments.

Additional monitoring is necessary to confirm impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: York

STREAM NAME: Wormley Creek Area Only

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.38 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.3

LATITUDE: 37.23333 **LONGITUDE:** -76.42917

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.23194 **LONGITUDE:** -76.47500

VDH-DSS shellfish harvesting condemnation #6A-York River and Wormley Cr

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester, York

STREAM NAME: York River Area Only

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 2.75 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.65

LATITUDE: 37.23333 **LONGITUDE:** -76.42917

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.23194 **LONGITUDE:** -76.47500

VDH-DSS shellfish harvesting condemnation # 6A, York River (Area of refinery not due to outfall).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: York

STREAM NAME: Felgates Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.2 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27500 **LONGITUDE:** -76.58333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27222 **LONGITUDE:** -76.62500

VDH-DSS shellfish harvesting condemnation # 134B, located in York River: King & Felgates Creeks

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: York

STREAM NAME: King Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27500 **LONGITUDE:** -76.58333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27222 **LONGITUDE:** -76.62500

VDH-DSS shellfish harvesting condemnation # 134A, York River:King & Felgates Creeks

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester

STREAM NAME: Perrin River (Upper)

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.26944 **LONGITUDE:** -76.42500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27500 **LONGITUDE:** -76.43611

VDH-DSS shellfish harvesting condemnation number 81, located in Perrin River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester

STREAM NAME: Sarah Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.49 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3.4

LATITUDE: 37.25278 **LONGITUDE:** -76.48333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27500 **LONGITUDE:** -76.48333

VDH-DSS shellfish harvesting condemnation number # 52, located in Sarah Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester

STREAM NAME: Timberneck Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.22 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.08333 **LONGITUDE:** -76.28567

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.08333 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 3, located in Timberneck Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester

STREAM NAME: York River: Cedarbush Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-17

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.30833 **LONGITUDE:** -76.55000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.32500 **LONGITUDE:** -76.55000

VDH-DSS shellfish harvesting condemnation # 108,York River: Cedarbush Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: Gloucester

STREAM NAME: York River:N Shore, Carter Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.31667 **LONGITUDE:** -76.56667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.35000 **LONGITUDE:** -76.55417

VDH-DSS shellfish harvesting condemnation # 107, York River - North Shore: Carter Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: York River Basin

CITY/COUNTY: York

STREAM NAME: York River: Indian Field Creek

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-F27E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.25870 **LONGITUDE:** -76.56240

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.26780 **LONGITUDE:** -76.55660

VDH-DSS shellfish harvesting condemnation # 130, York River: Indian Field Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

VIRGINIA

305(b)/303(d)

WATER QUALITY INTEGRATED REPORT

APPENDIX A, VOLUME 2

Richmond, Virginia

August 2004

Appendix A, continued

Category 5 Waters Fact Sheets

James, Chowan and Dismal Swamp, and Chesapeake Bay/ Atlantic/Small Coastal River Basins

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst

STREAM NAME: Pedlar Lake

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H02L-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 116.98 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Backwaters

RIVER MILE:

LATITUDE: 37.68950 **LONGITUDE:** -79.27940

DOWNSTREAM LIMIT:

DESCRIPTION: Impoundment Structure

RIVER MILE:

LATITUDE: 37.66930 **LONGITUDE:** -79.27730

Pedlar Reservoir from its impounding structure to its backwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, Dissolved Oxygen

Pedlar Lake was assessed not supporting of the Aquatic Life Use based on low dissolved oxygen below the thermocline at 2-POL017.59. Pedlar Lake is stratified June-October. Trophic State Indices were calculated for the following parameters: Chlorophyll a - 54.14, Total Phosphorous - 40 and Secchi Depth - 48.30.

Pedlar Lake is considered mesotrophic and non-impaired based on these calculations.

Pedlar Lake is not supporting the Aquatic Life Use based on pH violations recorded in 13/45 measurements below the thermocline.

IMPAIRMENT SOURCE: Unknown, Hypolimnetic Waters

The low DO is caused by stratification of the lake.

The source of the pH violations are considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Lynchburg

STREAM NAME: Blackwater Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.24 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Tomahawk and Burton Creeks

RIVER MILE: 10.24

LATITUDE: 37.38639 **LONGITUDE:** -79.21000

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Blackwater Creek on the James River

RIVER MILE: 0.00

LATITUDE: 37.41944 **LONGITUDE:** -79.14611

Blackwater Creek from the confluence of Tomahawk and Burton Creeks to the mouth of Blackwater Creek on the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Blackwater Creek is not supporting the recreation use due to excessive counts of fecal coliform in 10/16 samples taken at 2BKW000.40.

IMPAIRMENT SOURCE: NPS - Urban/CSO

The source of the fecal coliform is urban nonpoint source pollution and combined sewer overflows.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Lynchburg

STREAM NAME: Fishing Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.45 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: East of the Rt. 460 and Rt. 29 Junction

RIVER MILE: 5.45

LATITUDE: 37.37528 **LONGITUDE:** -79.16333

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with James River

RIVER MILE: 0.00

LATITUDE: 37.39944 **LONGITUDE:** -79.12361

Fishing Creek mainstem from its confluence with the James River upstream to east of the Rt. 460 and Rt. 29 junction.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Fishing Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/25 samples taken at 2-FSG000.85.

IMPAIRMENT SOURCE: NPS - Urban/CSO

The source of the fecal coliform is urban nonpoint source pollution and combined sewer overflows.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Lynchburg

STREAM NAME: Ivy Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H03R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.37 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Mouth of Cheese Creek

RIVER MILE: 5.37

LATITUDE: 37.42167 **LONGITUDE:** -79.22333

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Blackwater Creek

RIVER MILE: 0.00

LATITUDE: 37.41833 **LONGITUDE:** -79.18556

Ivy Creek mainstem from the mouth of Cheese Creek downstream to Ivy Creek's confluence with Blackwater Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Ivy Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/19 samples taken at 2-IVA000.22.

IMPAIRMENT SOURCE: NPS - Urban/CSO

The source of the fecal coliform is urban nonpoint source pollution and combined sewer overflows.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Lynchburg

STREAM NAME: James River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H03R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.15 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Reusens dam

RIVER MILE: 262.77

LATITUDE: 37.46306 **LONGITUDE:** -79.18590

DOWNSTREAM LIMIT:

DESCRIPTION: Archer Creek confluence with the James R.

RIVER MILE: 252.62

LATITUDE: 37.42417 **LONGITUDE:** -79.14155

James River mainstem from Reusens dam downstream to the Archer Creek confluence with the James River. The segment spans the Lynchburg and Kelly Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, PCBs in Fish Tissue (2004)

This segment of James River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceed the instantaneous 400 n/100 ml criterion in 15/49 samples at 2-JMS258.54. The segment is not supporting the fish consumption use due to elevated levels of PCBs found in 4 species at station 2-JMS258.54, during a 2001 sampling event. The segment begins in watershed VAC-H03R and ends in the upper portion of VAC-H05R.

A Consent Order requires the City of Lynchburg to embark on a long term project to correct sewage overflows (CSOs) by removing roof drains from homes and most importantly upgrading interceptor lines within the City. The total project cost was estimated to be 218 million dollars in 1989 dollars. A rough estimate for total project cost in today's dollars is 290 million dollars.

Since July 1, 1993 Lynchburg City has expended, authorized and appropriated 126.4 million dollars. A total of approximately 89.4 million dollars has been authorized for CSOs and 76.3 million dollars expended as reported in the DEQ Compliance Report for FY02. The City continues to work with the Virginia Revolving Loan Fund to obtain low interest and no interest loans for CSO and water quality projects. The total amount to be appropriated for FY 03 CSO projects is 10.9 million dollars and $735,000 in water quality projects.

As of October 2002, 4,787 structures have had rainleaders disconnected representing approximately 69% of the total 6,934 structures. Citizens voluntarily disconnecting rainleaders saved the City an approximate 1 million dollars. The total disconnected impervious area represented by these disconnections exceeds 8,244,430 suare feet. Completed interceptor projects include Blackwater, Fishing and Ivy Creeks. 89 of the original 132 overflow points have been eliminated. The updated Lynchburg City sewer model shows a 77% reduction in combined sewer overflow volume since 1989 due to completed CSO projects. In addition to remaining rainleader disconnects and overflow points other projects include the replacement of the James River interceptor and infrastucture upgrades within the collection and waste treatment system.

The segment was shortened during the 2002 cycle from the 1998 303(d) Listing. Two upstream stations 2-JMS282.28 and 2-JMS275.75

find no exceedances of the fecal coliform bacteria instantaneous criterion each with 58 sample collections. Thus the segment is shortened to reflect these upstream conditions. The downstream end of the 1998 segment is shortened also as no data are available to substantiate extension beyond Archer Creek.

IMPAIRMENT SOURCE: NPS - Urban/CSO, Unknown

The source of the fecal coliform is urban nonpoint source pollution and combined sewer overflows. The source of PCBs is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst

STREAM NAME: Graham Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.2 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.20

LATITUDE: 37.49000 **LONGITUDE:** -79.16611

DOWNSTREAM LIMIT:

DESCRIPTION: Graham Creek Reservoir backwaters

RIVER MILE: 0.00

LATITUDE: 37.55556 **LONGITUDE:** -79.20389

Graham Creek mainstem from the Graham Creek Reservoir backwaters upstream to its headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Graham Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/6 samples taken at 2-GRA0002.89.

IMPAIRMENT SOURCE: NPS - Urban

The source of the fecal coliform is urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Appomattox, Nelson

STREAM NAME: James River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.15 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Wreck Island Creek confluence

RIVER MILE: 235.08

LATITUDE: 37.51222 **LONGITUDE:** -78.89944

DOWNSTREAM LIMIT:

DESCRIPTION: Bent Creek

RIVER MILE: 228.93

LATITUDE: 37.53611 **LONGITUDE:** -78.83000

James River mainstem from the Wreck Island Creek confluence downstream to the watershed boundary at the mouth of Bent Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of James River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/40 samples taken at 2-JMS229.14.

IMPAIRMENT SOURCE: Unknown

The sources of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Campbell, Amherst

STREAM NAME: Beaver Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H05R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.5 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Route 501 Bridge

RIVER MILE: 8.5

LATITUDE: 37.32120 **LONGITUDE:** -79.10430

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.39070 **LONGITUDE:** -79.06000

Beaver Creek mainstem from its mouth on the James River upstream to an unnamed tributaries mouth at the Rt. 501 Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Beaver Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/24 samples taken at
2-BCR000.20.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Campbell

STREAM NAME: Opposum Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H05R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.86 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Route 660 Bridge

RIVER MILE: 2.86

LATITUDE: 37.35910 **LONGITUDE:** -79.09040

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.38710 **LONGITUDE:** -79.06510

Opossum Creek mainstem from its mouth on the James River upstream to the Rt. 660 crossing

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Opposum Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 2/10 samples taken at
2-OPP000.16.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Appomattox

STREAM NAME: Wreck Island Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.75 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Little Wreck Island Creek

RIVER MILE: 10.15

LATITUDE: 37.41722 **LONGITUDE:** -78.89889

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth on the James River

RIVER MILE: 0.40

LATITUDE: 37.50722 **LONGITUDE:** -78.89833

Wreck Island Creek mainstem from its mouth on the James River upstream to the confluence of Little Wreck Island Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Wreck Island Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/17 samples taken at 2-WIC000.40.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Appomattox, Nelson

STREAM NAME: Bent Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.5 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 13.5

LATITUDE: 37.40710 **LONGITUDE:** -78.80770

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.53510 **LONGITUDE:** -78.82860

Bent Creek mainstem from its mouth on the James River upstream to its headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Bent Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria found in 3/17 samples taken at station 2-BTC000.16.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Appomattox, Nelson, Buckingham

STREAM NAME: James River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.08 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Bent Creek Confluence

RIVER MILE: 228.93

LATITUDE: 37.53510 **LONGITUDE:** -78.82860

DOWNSTREAM LIMIT:

DESCRIPTION: Tye River Confluence

RIVER MILE: 218.85

LATITUDE: 37.63990 **LONGITUDE:** -78.80670

James River from Bent Creek to its confluence with the Tye River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of James River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/40 samples taken at 2-JMS229.14.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst

STREAM NAME: Buffalo River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.87 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Franklin Creek

RIVER MILE: 15.39

LATITUDE: 37.65990 **LONGITUDE:** -79.14450

DOWNSTREAM LIMIT:

DESCRIPTION: An unimproved road crossing just downstream of the Mill Creek confluence

RIVER MILE: 9.52

LATITUDE: 37.64940 **LONGITUDE:** -79.07400

Buffalo River mainstem from an unimproved road crossing just downstream of the Mill Creek confluence (upstream end of the WQS public water supply (PWS) designation) upstream to the mouth of Franklin Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Buffalo River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 2/5 samples taken at
2-BUF023.21.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst

STREAM NAME: Rutledge Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H12R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.16 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Amherst STP outfall

RIVER MILE: 3.16

LATITUDE: 37.58361 **LONGITUDE:** -79.03056

DOWNSTREAM LIMIT:

DESCRIPTION: mouth on Buffalo River

RIVER MILE: 0.00

LATITUDE: 37.58889 **LONGITUDE:** -79.00194

Rutledge Creek mainstem from the Town of Amherst outfall downstream to its mouth on the Buffalo River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Rutledge Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in7/22 samples taken at 2-RTD003.08. The segment is fully supporting but there is an observed effect for the aquatic life use due to exceedances of the nutrient screening value. Total phosphorus exceeded the screening value in 9/20 samples taken at 2-RTD003.08.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Nelson

STREAM NAME: Buffalo River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H12R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Rocky Creek

RIVER MILE: 7.61

LATITUDE: 37.60972 **LONGITUDE:** -78.92389

DOWNSTREAM LIMIT:

DESCRIPTION: Tye River

RIVER MILE: 0.00

LATITUDE: 37.62250 **LONGITUDE:** -78.89694

The segment begins at the Rocky Creek confluence and extends downstream to the Buffalo River mouth on the Tye River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) (2.45 miles), Fecal Coliform (2004) (7.61 miles)

This segment of the Buffalo River is not supporting the recreation use goal due to high counts of fecal coliform bacteria. Counts were observed at 2-BUF002.10 at a violation rate of 7 out of 49 samples.

DEQ's biological monitoring station at river mile 2.10 indicated slight impairment during a Spring 2002 sampling event. The 1998 305b report assessed the 2.45 mile segment (from the low water dam at the Route 629 bridge to the Tye River confluence) of the stream as not supporting the Clean Water Act's Aquatic Life Use Support Goal. The slightly impaired rating recorded in one survey does not constitute a delisting. Therefore the 2.45 mile segment will remain on the 303d list.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the fecal coliform and benthic impairment is unknown. There is dam upstream that could cause fluctuations in water levels.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham, Fluvanna

STREAM NAME: Bear Garden Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.4 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 9.40

LATITUDE: 37.62361 **LONGITUDE:** -78.36111

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at James River

RIVER MILE: 0.00

LATITUDE: 37.70806 **LONGITUDE:** -78.29000

Bear Garden Creek from the headwaters to the mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Bear Garden Creek is not supporting the recreation use due to excessive fecal coliform bacteria counts in 5/27 samples taken at 2-BGC000.58.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Fluvanna

STREAM NAME: North Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H20R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.24 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the FUMA STP

RIVER MILE: 3.51

LATITUDE: 37.75750 **LONGITUDE:** -78.25028

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with an X-Trib

RIVER MILE: 2.27

LATITUDE: 37.76361 **LONGITUDE:** -78.22889

Segment begins at the FUMA discharge and continues downstream to the confluence with an X-Trib.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

This segment of North Creek is not supporting of the Aquatic Life use support goal. A benthic assessment rated the benthic macroinvertebrate community as moderately impaired for the 2004 305(b) cycle, based on surveys taken at 2-NOR003.28.

IMPAIRMENT SOURCE: Minor Municipal Point Source

The source is believed to be the FUMA discharge.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Austin Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.14 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.14

LATITUDE: 37.51583 **LONGITUDE:** -78.72333

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at North River

RIVER MILE: 0.00

LATITUDE: 37.55556 **LONGITUDE:** -78.65056

Austin Creek from its headwaters to the mouth at North River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH (2002), Fecal Coliform (2004)

Austin Creek is not supporting the aquatic life use support goal due to pH violations in 3/9 monitoring events at 2-AUS001.12, a confined animal feeding operation (CAFO) special study station. Austin Creek is also not supporting the recreation use due to fecal coliform violations in 3/9 monitoring events at the same station.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the pH and fecal coliform violations is unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Frisby Branch

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.93 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.93

LATITUDE: 37.52472 **LONGITUDE:** -78.67472

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Grease Creek

RIVER MILE: 0.00

LATITUDE: 37.51950 **LONGITUDE:** -78.61240

Frisby Branch from its headwaters to the mouth at Grease Creek.

Note: The mileage adjustments made for Frisby Branch are a result of the National Hydrography Dataset used during the 2004 cycle.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2002), pH (2004) (1.34 miles)

Frisby Branch is not supporting the recreation use due to excessive counts of fecal coliform bacteria. High counts were found in 4/9 samples taken at 2-FRY003.00 and 2/8 samples taken at 2-FRY000.35, confined animal feeding operation (CAFO) special study stations.

The upper portion of Frisby Branch (1.34 miles) is not supporting the aquatic life use due to pH violations found in 2/9 samples at 2-FRY003.00.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of fecal coliform and pH violations are unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: North River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.44 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Meadow Creek

RIVER MILE: 8.44

LATITUDE: 37.55833 **LONGITUDE:** -78.64222

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Slate River

RIVER MILE: 0.00

LATITUDE: 37.57056 **LONGITUDE:** -78.54833

The North River from the confluence with Meadow Creek to the mouth at the Slate River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of North River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. High counts were found in 5/36 samples taken at 2-NTH001.65 and 7/9 samples taken at 2-NTH003.88.

IMPAIRMENT SOURCE: Unknown

The sources of fecal coliform violations is unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Slate River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.28 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Grease Creek

RIVER MILE: 34.93

LATITUDE: 37.54972 **LONGITUDE:** -78.57222

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Walton Fork

RIVER MILE: 21.65

LATITUDE: 37.51694 **LONGITUDE:** -78.52306

The Slate River from the confluence with Grease Creek downstream to the confluence with Walton Fork.

Note: Slate River mileage adjustments are a result of the National Hydrography Dataset used during the 2004 cycle.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Slate River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/9 samples taken at 2-SLT024.72 and in 5/9 samples taken at 2-SLT030.19, confined animal feeding operation (CAFO) special study stations.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Troublesome Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H21R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.95 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Troublesome Creek Reservoir dam

RIVER MILE: 0.95

LATITUDE: 37.56870 **LONGITUDE:** -78.53150

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Slate River

RIVER MILE: 0.00

LATITUDE: 37.58040 **LONGITUDE:** -78.53110

Troublesome Creek from the Troublesome Creek Reservoir dam to the mouth at the Slate River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Troublesome Creek is not supporting the recreation use goal due to excessive counts of fecal coliform bacteria. Violations of the instantaneous standard were recorded in 2/9 samples taken at 2-TBM000.80.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Slate River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAC-H22R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.12 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Sharps Creek

RIVER MILE: 7.12

LATITUDE: 37.69417 **LONGITUDE:** -78.41889

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at James River

RIVER MILE: 0.00

LATITUDE: 37.71444 **LONGITUDE:** -78.32417

The Slate River from the confluence with Sharps Creek to the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Slate River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/27 samples taken at 2-SLT003.88.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Willis River, UT (XQM)

HYDROLOGIC UNIT: 02080205

TMDL ID: VAC-H35R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.72 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2002

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.72

LATITUDE: 37.45722 **LONGITUDE:** -78.57250

DOWNSTREAM LIMIT:

DESCRIPTION: Willis River

RIVER MILE: 0.00

LATITUDE: 37.43611 **LONGITUDE:** -78.56611

Unnamed tributary to the Willis River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (2002), Fecal Coliform

The unnamed tributary to Willis River is not supporting the aquatic life use due to violations of the dissolved oxygen (DO) standard. Low DO levels were recorded in 2/9 monitoring events at 2-XQM000.03, a confined animal feeding operation (CAFO) special study station.

The unnamed tributary to Willis River is not supporting the recreation use due to violations of the fecal coliform standard. High counts of fecal coliform bacteria were recorded in 3/9 monitoring events at 2-XQM000.03, a confined animal feeding operation (CAFO) special study station.

IMPAIRMENT SOURCE: Unknown, Non-Point Source

The source of the fecal coliform and DO standard violations are unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward, Cumberland, Amelia, Chesterfield, Buckingham, Appomattox, Powhatan

STREAM NAME: Appomattox River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 97.2 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Suanee Creek

RIVER MILE: 143.57

LATITUDE: 37.33880 **LONGITUDE:** -78.65920

DOWNSTREAM LIMIT:

DESCRIPTION: Sappony Creek

RIVER MILE: 46.37

LATITUDE: 37.33400 **LONGITUDE:** -77.79670

Segment begins at the confluence of the Appomattox River with Suanee Creek in Appomattox County, and extends downstream to the confluence of the Appomattox River with Sappony Creek in Chesterfield County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Appomattox River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. The violation rates were as follows:
3/12 at the Route 618 bridge (2-APP143.57)
9/44 at the Route 15 bridge (2-APP118.04)
12/47 at the Route 620 bridge (2-APP090.12)
18/53 at the Route 360 bridge (2-APP050.23).

The orginal segment listed in 1994 has been modifed in the 2004 cycle to reflect monitoring results upstream and downstream. The original segment was 80.6 miles long, stretching from Vaughn's Creek downstream to the Deep Creek confluence. The new segment has been extended to the confluence with Suanee Creek due to excessive counts found at 2-APP143.57 and shortened due to an acceptable violation rate of 1/11 samples found at the Route 602 bridge (2-APP044.78).

IMPAIRMENT SOURCE: Agriculture

The source is believed to be agricultural nonpoint source (NPS) runoff in the watershed, however this is unverified.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Spring Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.5 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Mud Creek

RIVER MILE: 5.50

LATITUDE: 37.22000 **LONGITUDE:** -78.57583

DOWNSTREAM LIMIT:

DESCRIPTION: Buffalo Creek

RIVER MILE: 0.00

LATITUDE: 37.24250 **LONGITUDE:** -78.49861

Spring Creek from the confluence with Mud Creek to Buffalo Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Spring Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/20 samples taken at 2-SPA001.46.

IMPAIRMENT SOURCE: Non-Point Source

The violations of the fecal coliform standard is believed to be caused by non-point sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Little Sandy Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.35 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.35

LATITUDE: 37.14944 **LONGITUDE:** -78.29028

DOWNSTREAM LIMIT:

DESCRIPTION: Sandy River Reservoir

RIVER MILE: 0.00

LATITUDE: 37.23806 **LONGITUDE:** -78.31667

Little Sandy Creek from headwaters to Sandy Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Little Sandy Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/11 samples taken at 2-LIT002.40.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Marrowbone Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.98 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.98

LATITUDE: 37.23611 **LONGITUDE:** -78.24583

DOWNSTREAM LIMIT:

DESCRIPTION: Sandy River

RIVER MILE: 0.00

LATITUDE: 37.25861 **LONGITUDE:** -78.31722

Marrowbone Creek from headwaters to Sandy River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Marrowbone Creek is not supporting the aquatic life use due to violations of the dissolved oxygen (DO) standard. Marrowbone Creek was reassessed during the 2004 Appomattox TMDL study and was found as impaired, based on TSI calculations.

IMPAIRMENT SOURCE: Unknown

The source of the DO standard violations is due to one or more pollutants from anthropognic sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Sandy River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J03R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.31 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Marrowbone Creek Confluence

RIVER MILE: 4.31

LATITUDE: 37.25890 **LONGITUDE:** -78.31750

DOWNSTREAM LIMIT:

DESCRIPTION: Bush River Confluence

RIVER MILE: 0.00

LATITUDE: 37.29960 **LONGITUDE:** -78.32530

Sandy River from Marrowbone Creek to its confluence with Bush River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Sandy River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/17 samples taken at the Route 460 bridge (2-SDY003.00).

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward, Cumberland

STREAM NAME: Bush River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Millers Creek

RIVER MILE: 5.00

LATITUDE: 37.26111 **LONGITUDE:** -78.35972

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.30000 **LONGITUDE:** -78.32556

Bush River from the confluence with Millers Creek downstream to its mouth at the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Bush River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/26 samples taken at the Route 460 bridge (2-BSR002.82).

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward

STREAM NAME: Briery Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.94 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Briery Creek Lake Dam

RIVER MILE: 9.94

LATITUDE: 37.20667 **LONGITUDE:** -78.44361

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Bush River

RIVER MILE: 0.00

LATITUDE: 37.28167 **LONGITUDE:** -78.35111

Briery Creek from Unnamed tributary to Briery Creek to confluence with Bush River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Briery Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 5/25 samples taken at 2-BRI001.00

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Cumberland

STREAM NAME: Angola Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.15 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.15

LATITUDE: 37.36861 **LONGITUDE:** -78.35028

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.37611 **LONGITUDE:** -78.24139

Angola Creek from its headwaters to the confluence the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Angola Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 9/10 samples taken at 2-ANG003.35 and 8/10 samples taken at 2-ANG001.27. Angola Creek is fully supporting but has an observed effect on the aquatic life use due to exceedances of the nutrient screening value. Total phosphorus exceeded the screening value in 3/10 samples taken at 2-ANG001.27.

During the 2004 cycle the upstream and downstream impaired segments were combined into one impaired segment.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform and phosphorous is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Cumberland

STREAM NAME: Horsepen Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J06R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.82 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.82

LATITUDE: 37.40333 **LONGITUDE:** -78.32750

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Big Guinea Creek

RIVER MILE: 0.00

LATITUDE: 37.42056 **LONGITUDE:** -78.27583

Horsepen Creek from its headwaters to the mouth at Big Guinea Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Horsepen Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/11 samples taken at 2-HRP000.42, a former confined animal feeding operation (CAFO) special study station. Horsepen Creek is fully supporting but has an observed effect on the aquatic life use due to exceedances of the nutrient screening value. Total phosphorus exceeded the screening value in 3/9 samples taken at 2-HRP000.42.

IMPAIRMENT SOURCE: Unknown

The sources of fecal coliform and phosphorous unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince Edward, Nottoway, Amelia

STREAM NAME: Saylers Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J06R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.2 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 9.20

LATITUDE: 37.23917 **LONGITUDE:** -78.23944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.34278 **LONGITUDE:** -78.26139

Saylers Creek from its headwaters to the confluence with the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998), E. Coli (2004)

The segment was evaluated not supporting of the recreation use support goal based on a fecal coliform violation rate of 9/20 and a E. coli violation rate of 2/8 at the Route 619 bridge (2-SYL001.26).

Both the Fecal Coliform standard (400cfu/100mL or 200cfu/100mL for two or more samples over a calendar month) and the E. coli standard (235cfu/100mL or 126cfu/100mL for two or more samples over a calendar month) apply during the transition betweeen the Fecal Coliform standard and the recently approved E coli standard. Once a dataset of 12 or more samples are collected for E coli or after June 30, 2008 whichever comes first, only the new standard will apply.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the bacteria is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Cumberland

STREAM NAME: Big Guinea Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAC-J06R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.46 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.46

LATITUDE: 37.43060 **LONGITUDE:** -78.31400

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.44070 **LONGITUDE:** -78.18560

Big Guinea Creek from its headwaters downstream to Appomattox River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Big Guinea Creek is not supporting of the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/27 samples taken at 2-BGU001.39.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Henrico, Richmond City

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.84 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Fall Line (Mayos Bridge)

RIVER MILE: 110.30

LATITUDE: 37.52810 **LONGITUDE:** -77.43500

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River

RIVER MILE: 77.84

LATITUDE: 37.32400 **LONGITUDE:** -77.27920

Estuarine James River from the fall line at Mayos Bridge downstream to the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: e.Coli, Fecal Coliform

Assessed not supporting of the Recreation use support goal based on the results of a summer special study in the fall zone. The special study was designed to monitor the effects of summertime rain and combined sewer overflow (CSO) events on water quality in the James River and to monitor the effects of Richmond's CSO abatement efforts.

The segment has been included on the Impaired Waters list for fecal coliform since 1996. During the 2004 cycle, the bacteria standard changed to e.Coli for those stations with enough data. Some of the areas in this segment have converted to the e.Coli standard, for others the fecal coliform standard is still in effect. The TMDL for both is due in 2010.

IMPAIRMENT SOURCE: NPS - Urban, CSO

The source of the impairment in this section of the river is believed to be urban runoff from the tributary drainage basin and from combined sewer overflow events from the City of Richmond's combined sewer system.

The City is currently undertaking CSO abatement efforts. It is recommended that the ongoing CSO special study be continued to gauge the effects of CSO abatement efforts on water quality in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Henrico, Richmond City

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 25.18 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE: 110.30

LATITUDE: 37.52810 **LONGITUDE:** -77.43500

DOWNSTREAM LIMIT:

DESCRIPTION: Flowerdew Hundred

RIVER MILE: 66.58

LATITUDE: 37.31890 **LONGITUDE:** -77.22170

Estuarine James River from the fall line to Flowerdew Hundred where the power lines cross the river about 7 miles from the Benjamin Harrison Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, VDH Fish Consumption Restriction

Considered not supporting of the Fish Consumption Use due to a VDH Fish Consumption Restriction issued because of PCBs in multiple fish species at the following DEQ monitoring locations:
2-JMS098.64
2-JMS086.22
2-BLY000.55
2-JMS074.44
2-APP004.12
2-APP001.53
2-JMS066.88

IMPAIRMENT SOURCE: Unknown

The source of the PCBs is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, City of Richmond

STREAM NAME: Falling Creek Reservoir

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 110 - Acres

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Extent of backwater

RIVER MILE: 6.53

LATITUDE: 37.45750 **LONGITUDE:** -77.49480

DOWNSTREAM LIMIT:

DESCRIPTION: Dam

RIVER MILE: 3.76

LATITUDE: 37.46190 **LONGITUDE:** -77.46630

Falling Creek Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Public Water Supply - Not Supporting

IMPAIRMENT CAUSE: Nutrients

The lake was assessed as not supporting the Public Water Supply Use during the 1998 cycle. The lake was subject to chronic problems resulting from nutrients and organic loadings. It no longer supports it original use as a public water supply.

IMPAIRMENT SOURCE: Unknown

Runoff from watershed

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Richmond City

STREAM NAME: Goode Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.23 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Broad Rock Creek

RIVER MILE: 1.23

LATITUDE: 37.48710 **LONGITUDE:** -77.43780

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.49870 **LONGITUDE:** -77.42410

Goode Creek from the confluence with Broad Rock Creek to its mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Goode Creek was assessed based on past sampling at 2-GOD000.07 and a fecal coliform violation rate of 14/20 at 2-GOD000.77 (Commerce Road).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico, Richmond City

STREAM NAME: Almond Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.26 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.30

LATITUDE: 37.48670 **LONGITUDE:** -77.38310

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.50330 **LONGITUDE:** -77.41830

Almond Creek from its headwaters to its mouth at the James River, including unnamed tributaries.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Landfill Runoff

IMPAIRMENT CAUSE: Fecal Coliform, pH

Almond Creek was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 12/29 recorded at the Route 5 bridge (2-ALM000.42). The segment has been listed since the 1998 cycle, therefore the TMDL is due in 2010.

In 2004, the segment was also considered impaired of the Aquatic Life uses due to pH violations at 2-ALM000.42 as well as pH violations at station located downstream of the BFI landfill (2-XVO000.10 and 2-XVP000.04). The pH TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown, NPS - Urban

The source of the fecal coliform violations is considered unknown, but is suspected to be caused by urban runoff and combined sewer overflow discharges.

The pH impairment is believed to be caused by runoff from the landfill.

Targeted monitoring is necessary to further delineate the extent of the impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Falling Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.81 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Falling Creek Reservoir dam

RIVER MILE: 3.81

LATITUDE: 37.46190 **LONGITUDE:** -77.46630

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.43650 **LONGITUDE:** -77.42800

Falling Creek from the Falling Creek Reservoir dam to its confluence with the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Falling Creek was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 10/49 recorded at the Route 1 bridge (2-FAC000.85).

IMPAIRMENT SOURCE: Unknown

The source of the fecal contamination is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico, Richmond City

STREAM NAME: Gillies Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.79 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.79

LATITUDE: 37.53900 **LONGITUDE:** -77.33210

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.52190 **LONGITUDE:** -77.41790

Gillies Creek from its headwaters to its mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, pH

The segment was assessed as not supporting the Aquatic Life and Recreation uses based on monitoring at the Government Road Bridge (2-GIL000.42). The pH violation rate was 2/9 and the fecal coliform violation rate was 2-GIL000.42.

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Richmond City

STREAM NAME: Pocoshock Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.33 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.33

LATITUDE: 37.51090 **LONGITUDE:** -77.59120

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.45910 **LONGITUDE:** -77.49370

Pocoshock Creek from its headwaters to its mouth at Falling Creek Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Pocoshock Creek was assessed as not supporting the Aquatic Life Use based on a dissolved oxygen violation rate of 2/9 at 2-PSK000.23.

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: No Name Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-08

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.83 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.83

LATITUDE: 37.42060 **LONGITUDE:** -77.44110

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.43390 **LONGITUDE:** -77.42870

UT to James River (a.k.a. No Name Creek) mainstem and tribs

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as not supporting the Recreation Use based on the following fecal coliform violation rates:

2/2 at 2-XTC000.08
1/1 at 2-XUH000.01
2/2 at 2-XUI000.01

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: UT to James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G01R-09

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.35 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 0.35

LATITUDE: 37.42220 **LONGITUDE:** -77.42480

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.42230 **LONGITUDE:** -77.42080

Ditch to James River through National Battlefield Park

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The ditch is considered impaired of the Aquatic Life use due to monitoring by the USGS:

DO 2/4, pH 2/4 at 0203853010
DO 2/4, pH 2/4 at 0203853030

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Fourmile Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 30.99 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.69

LATITUDE: 37.48600 **LONGITUDE:** -77.34410

DOWNSTREAM LIMIT:

DESCRIPTION: James River

RIVER MILE: 0.00

LATITUDE: 37.40740 **LONGITUDE:** -77.30380

Fourmile Creek watershed from its headwaters to the mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, pH

Fourmile Creek and its tributaries were assessed not supporting of the Aquatic Life use support goal based on pH standard violations recorded at stations 2-FOM003.60, 2-FOM001.85, 2-DLK001.19, 2-LK001.84, 2-BAY000.42, 2-BAY002.42, 2-XPZ000.02 (1994), 2-FOM006.87, 2-FOM005.49, 2-SWE000.88, 2-SWE001.50, 2-XTU000.96, 2-XTV001.69, 2-XTW001.19, and 2-XTX000.65. The segment was initially listed in 1998; the TMDL is due in 2010. The segment was extended during the 2002 cycle due to pH violations at the special study stations in the watershed.

The segment was assessed as not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 6/26 at the Route 5 bridge (2-FOM003.60). The segment was initially considered threatened in 1998 and downgraded to impaired in 2002; the TMDL is due in 2014.

IMPAIRMENT SOURCE: Unknown, Natural Conditions

The source of the pH violations is attributed to runoff from pine forests in the headwaters of the watershed.

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Henrico

STREAM NAME: Roundabout Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.14 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Pond at river mile 2.04

RIVER MILE: 2.04

LATITUDE: 37.40550 **LONGITUDE:** -77.33690

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.40600 **LONGITUDE:** -77.31020

Mainstem of Roundabout Creek from the pond at approximately river mile 2.04 downstream to the mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Roundabout Creek was assessed as not supporting the Aquatic Life Use goals based on a pH violation rate of 2/3 at 2-ROT001.15

IMPAIRMENT SOURCE: Natural Conditions

Source is considered unknown, but is suspected to be related to runoff from pine forests.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Johnson Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.76 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.76

LATITUDE: 37.34700 **LONGITUDE:** -77.37260

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 0.00

LATITUDE: 37.32280 **LONGITUDE:** -77.29320

Johnson Creek from its headwaters to the mouth at the James River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, Dissolved Oxygen

Johnson Creek was assessed as not supporting the Aquatic Life Use goal based on a dissolved oxygen violation rate of 2/10 and a pH violation rate of 3/10 at Route 827 Allied Road (2-JOD001.19).

IMPAIRMENT SOURCE: Unknown

Source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Western Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.03 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.03

LATITUDE: 37.44450 **LONGITUDE:** -77.23440

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.41070 **LONGITUDE:** -77.23520

Western Run from its headwaters to its mouth at the confluence with Turkey Island Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

The segment was assessed as not supporting the Aquatic Life use goals based on pH violation rates of 2/4 and 1/4 at USGS stations 0203874275 and 0203874250, respectively.

IMPAIRMENT SOURCE: Natural Conditions

Source is considered unknown, but is suspected to be related to runoff from pine forests.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Crewes Channel

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G02R-05

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.31 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.31

LATITUDE: 37.42940 **LONGITUDE:** -77.25930

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.39000 **LONGITUDE:** -77.25130

Crewes Channel from its headwaters to its mouth at Turkey Island Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

The segment was assessed as not supporting the Aquatic Life Use goal based on pH violation rates of 4/4 and 3/4 at USGS stations 0203874770 and 0203874785, respectively.

IMPAIRMENT SOURCE: Natural Conditions

Source is considered unknown, but is suspected to be related to runoff from pine forests.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hopewell, Prince George

STREAM NAME: Bailey Bay, Bailey Creek (tidal), Cattail Creek (tida

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.29 - Sq. Mi.

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE: 1.00

LATITUDE: 37.27720 **LONGITUDE:** -77.27990

DOWNSTREAM LIMIT:

DESCRIPTION: James River confluence

RIVER MILE: 0.00

LATITUDE: 37.29650 **LONGITUDE:** -77.25040

Segment begins at Bailey Creek fall line and extends downstream to its mouth at the confluence with the James River. The segment includes the tidal portion of Cattail Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Fish Tissue - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform, e.Coli, Fish Tissue - PCBs

The segment was initially listed on the 1994 cycle 303(d) list because of excessive violations of the dissolved oxygen, fecal coliform, and ammonia standards.

For the 2004 303(d) list, the segment continues to be assessed as not supporting of the Recreation Use goal based on fecal coliform and e. Coli violations. The TMDLs are due in 2010.

The segment is assessed as not supporting the Aquatic Life use because of dissolved oxygen violations at 2-BLY000.65. The TMDL is due in 2010. In addition, pH violations were experienced at the Hopewell Region Monitoring and Assessment Project (HERMA) stations. The pH TMDL is due in 2016.

The segment has also had continuing problems with pesticides in sediment, excessive nutrients, and algal blooms. These are listed as non-impairing observed effects for the Aquatic Life Use. In addition, ammonia was removed from the list in the 1998 cycle because of the results of a mixing zone study. However, a violation of the acute ammonia standard was documented at the HERMA station BC-3. This station is within the chronic mixing zone area, not the allocated impact zone. Therefore ammonia is listed as an observed effect for both the Aquatic Life and Wildlife Uses.

The segment was assessed not supporting of the Fish Consumption Use beginning in 2002 because of PCBs in fish tissue during monitoring in 1997 and 2001. The PCB TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown, PS - Municipal/Industrial, NPS - Urban

Major point sources affecting water quality in this segment include the Hopewell Regional wastewater treatment facility (WWTF) and Honeywell's Hopewell Plant.

Fact Sheets for Category 5 Waters

A special study was initiated in 1997 to delineate the area affected by PCBs and PCBs in sediments and to determine a cause of the impairment. The mainstem James River from the fall line to Flowerdew Hundred is currently under a Fish Consumption Restriction for PCBs. Although Bailey Creek is not included in the restriction, a Toxics Source Assessment is currently underway which will attempt to identify PCB sources in the estuarine James basin.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Chesterfield, Henrico, Prince George, Richmond City, Surry

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03E-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 43.81 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE: 110.30

LATITUDE: 37.52810 **LONGITUDE:** -77.43500

DOWNSTREAM LIMIT:

DESCRIPTION: Chickahominy River

RIVER MILE: 48.40

LATITUDE: 37.22490 **LONGITUDE:** -76.88900

The mainstem tidal James River from the Fall line to the Chickahominy River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Nutrients/Eutrophication Biological Indicators (EPA Overlist), Chloride, Estuarine benthics

The James River from the Appomattox River to the Chickahominy River was originally listed on the 1998 list as fully supporting but threatened of the Aquatic Life Use goal based on chlorophyll a violations. During the 1998 cycle, EPA extended the segment upstream to the fall line and downgraded the river to not supporting the Aquatic Life Use, citing nutrient concerns.

The mainstem James River has acceptable dissolved oxygen levels. In addition the entire tidal freshwater portion (fall line to just above the Chickahominy River) has good benthic community based on the results from the Chesapeake Bay Benthic Index of Biological Community; therefore the James River from the fall line to the oligohaline boundary is considered impaired solely for Nutrients/Eutrophication Biological Indicators (EPA Overlist).

The oligohaline portion of the James River is impaired for benthics as determined by the Chesapeake Bay B-IBI study. Therefore, the segment is considered impaired for both benthics and the EPA overlist.

Nutrient screening criteria violations have continued to be reported in the area between the Appomattox and Queens Creek.
In addition, a chlorophyll a violation rate of 2/2 was recorded at the Henricus Park dock (2CJMS095.30), which is further upstream than the original threatened segment.

In the 2004 cycle, the James River from Brandon Point downstream to the Chickahominy River confluence was assessed as impaired of the Aquatic Life Use and Wildlife Uses due to chloride violations. The chloride TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown, Natural Conditions

The nutrient enrichment in the original segment is attributed to urban runoff and storm sewers. Upstream municipal and industrial point sources may be contributing sources.

The chloride violations are attributed to natural salinity.

The oligohaline benthic impairment is attributed to natural sediment conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Chesterfield, Hopewell, Prince George

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.31 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Appomattox River/Shand Creek

RIVER MILE: 77.84

LATITUDE: 37.32400 **LONGITUDE:** -77.27920

DOWNSTREAM LIMIT:

DESCRIPTION: Powell Creek

RIVER MILE: 70.00

LATITUDE: 37.30540 **LONGITUDE:** -77.15230

The mainstem tidal James River from the confluence of the Appomattox River downstream to river mile 74.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially listed as fully supporting but threatened of the Recreation Use during the 1998 cycle. During the 2002 cycle, the segment was downgraded to impaired. This cycle, the segment remains impaired based on a fecal coliform violation rate of 8/59 at 2-JMS075.04. The TMDL is due in 2014.
.

IMPAIRMENT SOURCE: NPS - Urban

The fecal coliform bacteria is attributed to urban runoff and storm sewers. Upstream municipal and industrial point sources may also be contributing sources. However, this has not been verified.

The source of the sediment contamination is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: Gunns Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 4.64 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.30

LATITUDE: 37.37990 **LONGITUDE:** -77.11140

DOWNSTREAM LIMIT:

DESCRIPTION: UT at river mile 3.64

RIVER MILE: 3.31

LATITUDE: 37.34050 **LONGITUDE:** -77.10080

Gunns Run from its headwaters to an unnamed tributary at river mile 3.64.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

In 1998, the entire mainstem of Gunns Run was assessed not supporting of the Aquatic Life use support goal based on pH violations recorded at the Route 618 bridge (2-GUN004.00). The pH TMDL is due in 2010.

In the 2002 cycle, a pH and DO violation rate of 0/3 at 2-GUN002.58 between 1994 and 1997 was used to assess the lower reach as fully supporting. However, dissolved oxygen was also identified as an impairing cause. This TMDL is due in 2014.

During the year 2004 cycle, the pH and DO violations at 2-GUN004.00 continued (16/21 and 4/21, respectively.)

IMPAIRMENT SOURCE: Natural Conditions

The source of the pH and dissolved oxygen violations is believed to be natural conditions in the stream.

Targeted monitoring and wetland delineation is recommended to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hopewell, Prince George

STREAM NAME: Bailey Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.54 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.80

LATITUDE: 37.22080 **LONGITUDE:** -77.34310

DOWNSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE: 1.00

LATITUDE: 37.27720 **LONGITUDE:** -77.27990

Segment begins at the headwaters of Bailey Creek and extends downstream to the fall line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, aldrin, Fecal Coliform

Bailey Creek was initially included on the 303(d) list in 1994 based on water quality monitoring performed at the Route 10 bridge (2-BLY000.65) and historical water quality problems in Bailey Bay. The causes of impairment were excessive DO and fecal coliform standard violations recorded at 2-BLY000.65.

A special study was performed in 1997 and 1998 to delineate the area of impact. The tidal station 2-BLY000.65 continues to show impairment, however the riverine stations in Bailey Creek did not show impairment for dissolved oxygen in the 2002 cycle, therefore dissolved oxygen was removed as an impairment. It continued to show fecal coliform impairment.

In addition, the non-tidal portion of Bailey Creek was assessed in the 2002 cycle as impaired of the Fish Consumption Use goal because of exceedances of the human health screening levels for PCBs and aldrin in fish studies at station 2-BLY005.72 in 1997. Heptachlor epoxide was found in one species, so is considered an "observed effect." The TMDLs for aldrin and PCBs in fish are due in 2014.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in Bailey Creek is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: West Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03R-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 1.67 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: East Run

RIVER MILE:

LATITUDE: 37.36720 **LONGITUDE:** -77.16460

DOWNSTREAM LIMIT:

DESCRIPTION: Harrison Lake

RIVER MILE:

LATITUDE: 37.34960 **LONGITUDE:** -77.17340

West Run from the confluence with East Run downstream to the backwater of Harrison Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

West Run was assessed as not supporting the Aquatic Life Use based on a pH violation rate of 5/10 at the Route 625 bridge (2-WER001.93.)

IMPAIRMENT SOURCE: Natural Conditions

The source of the pH violations is believed to be natural conditions in the stream, however this has not been confirmed.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Prince George

STREAM NAME: Powell Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G03R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.92 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: 37.16670 **LONGITUDE:** -77.17810

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE:

LATITUDE: 37.25170 **LONGITUDE:** -77.14910

Powell Creek from its headwaters downstream to its tidal limit.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Powell Creek was assessed as impaired of the Recreation Use based on a fecal coliform violation rate of 2/10 at the Route 10 bridge (2-PWL005.73).

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover

STREAM NAME: Chickahominy River, UT - Unnamed Tributary

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.49 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Tyson Plant discharge

RIVER MILE: 1.49

LATITUDE: 37.69840 **LONGITUDE:** -77.55020

DOWNSTREAM LIMIT:

DESCRIPTION: Chickahominy River confluence

RIVER MILE: 0.00

LATITUDE: 37.69010 **LONGITUDE:** -77.53520

Segment consists of the unnamed tributary of the Chickahominy River to which the Tyson Plant discharges.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring of the receiving stream identified a moderately impaired benthic community downstream of the Tyson Plant (VPDES Permit No. VA0004031) discharge when compared to the benthic community immediately upstream of the discharge. This resulted in this segment being assessed as impaired of the Clean Water Act's Aquatic Life Use Support Goal for the 1994 305(b) report. Continued monitoring resulted in a similar assessment for the 1996, 1998, 2002 and current reports.

IMPAIRMENT SOURCE: Industrial Point Source

The source of the impairment is attributed to excessive nutrient overenrichment. The source of the nutrients is suspected to be the Tysons Plant discharge or runoff from the Tysons plant parking lot. This is currently being verified.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico, Richmond City

STREAM NAME: Upham Brook Watershed

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G05R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 48.04 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 11.13

LATITUDE: 37.59720 **LONGITUDE:** -77.53850

DOWNSTREAM LIMIT:

DESCRIPTION: Chickahominy River confluence

RIVER MILE: 0.00

LATITUDE: 37.60810 **LONGITUDE:** -77.40550

Segment begins at the headwaters of Upham Brook and extends downstream to the confluence with the Chickahominy River, including all tributaries.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, e. Coli

The segment was assessed not supporting of the Swimming Use support goal based on an e.Coli violation rate of 4/14 at DEQ's Ambient Monitoring Station 2-UPM003.53, located at the Brook Road (Rt. 1) bridge over Upham Brook, as well as excessive fecal coliform violation rates at the Richmond Regional PDC special study stations.

The segment was extended in the year 2002 cycle to include the entire watershed.

IMPAIRMENT SOURCE: NPS - Urban

The impairment in Upham Brook is attributed to urban nonpoint source runoff and other nonpoint sources in the watershed.

Targeted monitoring is necessary to further delineate the extent of impairment and to better characterize its causes and sources. A special study to monitor fecal coliform bacteria and other parameters in this watershed was initiated in 1996.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover, Henrico

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G05R-04

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 14.98 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: 37.70150 **LONGITUDE:** -77.62680

DOWNSTREAM LIMIT:

DESCRIPTION: Stony Run

RIVER MILE:

LATITUDE: 37.60880 **LONGITUDE:** -77.40570

Chickahominy River from its headwaters to the confluence with Stony Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen

The segment was assessed as impaired of the Recreation Use because of fecal coliform violation rates of 6/35 and 2/10 at 2-CHK076.59 and 2-CHK079.23, respectively.

The segment was assessed as impaired of the Aquatic Life Use goal based on a dissolved oxygen violation rate of 5/38 at 2-CHK076.59.

IMPAIRMENT SOURCE: Unknown, Natural Conditions

The source of the fecal coliform violations is considered unknown.

The dissolved oxygen violations are attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover, Henrico

STREAM NAME: Stony Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G05R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.22 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Lickinghole Creek

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Stony Run from the confluence with Lickinghole Creek downstream to its mouth at the Chickahominy River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as impaired of the Recreation Use because of a fecal coliform violation rate of 2/9 at the Route 656 bridge (2-SNF000.04).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover, Henrico

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.3 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Route 360 bridge

RIVER MILE: 62.57

LATITUDE: 37.59530 **LONGITUDE:** -77.38250

DOWNSTREAM LIMIT:

DESCRIPTION: Route 156 bridge

RIVER MILE: 55.04

LATITUDE: 37.55190 **LONGITUDE:** -77.27140

Segment begins at the Route 360 bridge over the Chickahominy River, and extends downstream to the Route 156 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially considered fully supporting but threatened of the Recreation Use in the 1998 cycle. During the year 2002, the segment was downgraded to impaired. In the 2004 cycle, the fecal coliform violation rates were 7/47 at 2-CHK062.57 (Route 60) and 9/47 at 2-CHK055.04 (Route 156).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform standard violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover, Henrico

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 10.3 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Route 360 bridge

RIVER MILE: 62.57

LATITUDE: 37.59530 **LONGITUDE:** -77.38250

DOWNSTREAM LIMIT:

DESCRIPTION: Route 156 bridge

RIVER MILE: 55.04

LATITUDE: 37.55190 **LONGITUDE:** -77.27140

Segment begins at the Route 360 bridge over the Chickahominy River, and extends downstream to the Route 156 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The segment has been assessed as not supporting of the Aquatic Life use goal since 1996 based on dissolved oxygen and pH violations at the Route 360 bridge (2-CHK062.57) and at the Route 156 bridge (2-CHK055.04).

During the year 2004 cycle, the dissolved oxygen violation rates were 20/49 and 13/49, respectively. The pH violation rates were acceptable (4/49, 5/55), however, based on historical violations the impairment is still listed.

IMPAIRMENT SOURCE: Natural Conditions

The DO and pH violations are attributed to natural conditions in the watershed, but may be exacerbated by nonpoint source runoff.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize the causes and sources.

Targeted monitoring and wetland delineation is recommended to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: White Oak Swamp

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-03

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 6.51 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: White Oak Swamp Creek

RIVER MILE: 6.70

LATITUDE: 37.48450 **LONGITUDE:** -77.36890

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.49310 **LONGITUDE:** -77.18120

White Oak Swamp from White Oak Swamp Creek downstream to its mouth at the Chickahominy River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

White Oak Swamp was assessed not supporting of the Aquatic Life use support goal based on a pH standard violation rate of 17/65 recorded at the Route 156 bridge (2-WOS002.69).

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 15/54 recorded at 2-WOS002.69.

IMPAIRMENT SOURCE: Natural conditions, Unknown

The source of the fecal coliform standard violations is considered unknown.

The pH impairment is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Canal Swamp

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.94 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.94

LATITUDE: 37.49260 **LONGITUDE:** -77.24390

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.46750 **LONGITUDE:** -77.21810

Canal Swamp from its headwaters to its mouth at White Oak Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Canal Swamp was assessed as not supporting of the Aquatic Life Use in 2004 based on pH standard violations at USGS station 02042454 and DEQ station 2-CNS000.54 (Portugee Road).

IMPAIRMENT SOURCE: Unknown

The sources of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.05 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.05

LATITUDE: 37.63250 **LONGITUDE:** -77.29350

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.58890 **LONGITUDE:** -77.35990

Canal Swamp from its headwaters to its mouth at White Oak Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Beaverdam Creek is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 3/4 at USGS station 02042433.

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover

STREAM NAME: Boatswain Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.41 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.41

LATITUDE: 37.58780 **LONGITUDE:** -77.27760

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.55680 **LONGITUDE:** -77.27870

Boatswain Creek from its headwaters to its mouth at the Chickahominy River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Boatswain Creek is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 3/4 at USGS station 0204243830 and 2/4 at USGS station 02043790.

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: White Oak Swamp

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-08

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.47 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: 37.50940 **LONGITUDE:** -77.31260

DOWNSTREAM LIMIT:

DESCRIPTION: White Oak Swamp Creek

RIVER MILE: 6.70

LATITUDE: 37.48450 **LONGITUDE:** -77.26860

White Oak Swamp from its headwaters to the confluence with White Oak Swamp Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

White Oak Swamp is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 2/3 at 8-WOS008.15. This is a TMDL station to address the pH impairment further downstream.

IMPAIRMENT SOURCE: Natural conditions

The source of the pH violations is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: White Oak Swamp Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-09

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.9 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.90

LATITUDE: 37.49870 **LONGITUDE:** -77.31500

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.48450 **LONGITUDE:** -77.26850

White Oak Swamp Creek from its headwaters to the its mouth at White Oak Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

White Oak Swamp Creek is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 3/3 at 2-WSC002.00 and 2-WSC002.62. These are TMDL stations to address the pH impairment further downstream.

IMPAIRMENT SOURCE: Natural conditions

The source of the pH violations is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico

STREAM NAME: Deep Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-10

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.33 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.33

LATITUDE: 37.45940 **LONGITUDE:** -77.28360

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.47340 **LONGITUDE:** -77.25210

Deep Run from its headwaters to the its mouth at White Oak Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Deep Run is assessed as not supporting of the Aquatic Life Use based on a pH standard violation rate of 3/3 at 2-DER000.65. This is a TMDL station to address the pH impairment in White Oak Swamp.

IMPAIRMENT SOURCE: Unknown

The source of the pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Hanover

STREAM NAME: Bloody Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G06R-11

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.05 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.05

LATITUDE: 37.59190 **LONGITUDE:** -77.27980

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.59120 **LONGITUDE:** -77.29680

Bloody Run from its headwaters to the its mouth at Powhite Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, Dissolved Oxygen

Bloody Run is assessed as not supporting of the Aquatic Life Use based on pH violations at USGS stations 0204243610 and 0204243650 and dissolved oxygen violations at 0204243610.

IMPAIRMENT SOURCE: Unknown

The source of the violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, New Kent

STREAM NAME: Chickahominy Lake

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1500 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Extent of Backwater

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Dam

RIVER MILE: 24.00

LATITUDE: 37.40640 **LONGITUDE:** -76.92860

Chickahominy Lake

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Chickahominy Lake was included on EPA's 1998 list of "Waters Identified to Virginia for Listing Consideration During Development of Next List." No parameter of concern was listed.

Low dissolved oxygen in the lake's bottom waters at station 2-CHK025.15 cause the lake to be listed as not supporting the aquatic life use.

IMPAIRMENT SOURCE: Unknown, Nutrient Overenrichment, Unknown

The source of the dissolved oxygen violations is unknown but is believed to be exacerbated by nutrient overenrichment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: Collins Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.36 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.35

LATITUDE: 37.40070 **LONGITUDE:** -77.09160

DOWNSTREAM LIMIT:

DESCRIPTION: River mile 0.99

RIVER MILE: 0.99

LATITUDE: 37.41780 **LONGITUDE:** -77.03390

Collins Run from its headwaters to approximately river mile 0.99.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

The segment was assessed not supporting of the Recreation and Aquatic Life Uses because of fecal coliform and pH violations at two locations.

FC 5/12 at 2-CNR001.16;
FC 4/12 at 2-CNR001.54.

pH 2/12 at 2-CNR001.16;
pH 2/12 at 2-CNR001.54.

These stations are part of a confined animal feeding operation special study.

IMPAIRMENT SOURCE: Unknown

The source of the fecal and pH impairments is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: New Kent

STREAM NAME: Rumley Marsh

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 5.8 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.40

LATITUDE: 37.52960 **LONGITUDE:** -77.03240

DOWNSTREAM LIMIT:

DESCRIPTION: Old Forge Pond

RIVER MILE: 0.00

LATITUDE: 37.45900 **LONGITUDE:** -77.04470

Rumley Marsh from tits headwaters to Old Forge Pond. Below Old Forge Pond, the stream name is Jones Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Special studies conducted in Rumley Marsh and Jones Run in 1994 identified summertime DO violations in Rumley Marsh at station 2-RUM002.46.

The segment was threatened in 1998 and downgraded in 2002. More monitoring needs to be conducted to verify impairment.

IMPAIRMENT SOURCE: Natural Conditions

The summertime DO violations are attributed to natural swampwater conditions in Rumley Marsh.

Targeted monitoring and wetland delineation is recommended to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, New Kent

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.54 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Possum Run

RIVER MILE:

LATITUDE: 37.46290 **LONGITUDE:** -77.12260

DOWNSTREAM LIMIT:

DESCRIPTION: Chickahominy Lake

RIVER MILE:

LATITUDE: 37.42110 **LONGITUDE:** -77.02390

The Chickahominy River from the confluence with Possum Run downstream to the extent of backwater from Chickahominy Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as impaired of the Recreation Use goal based on a fecal coliform violation rate of 6/40 at 2-CHK032.77 (Route 155).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: Collins Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G07R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.99 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: River mile 0.99

RIVER MILE: 0.99

LATITUDE: 37.41780 **LONGITUDE:** -77.03390

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.42090 **LONGITUDE:** -77.02400

Collins Run from approximately river mile 0.99 downstream to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation Use because of fecal coliform at 2-CNR000.89.

This station is part of a confined animal feeding operation special study.

IMPAIRMENT SOURCE: Unknown

The source of the fecal impairments is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, James City, New Kent

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G08E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.31 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Walkers Dam

RIVER MILE: 24.00

LATITUDE: 37.40640 **LONGITUDE:** -76.93830

DOWNSTREAM LIMIT:

DESCRIPTION: Diascund Creek

RIVER MILE: 15.91

LATITUDE: 37.37920 **LONGITUDE:** -76.90360

The segment begins at Walkers Dam and extends downstream to the confluence with Diascund Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: pH, PCBs

The Chickahominy River was included on EPA's list of "Waters Identified to Virginia for Listing Consideration During Development of the Next List" in 1998. pH was listed as the parameter of concern. During the 2002 cycle, the segment was downgraded as impaired, therefore the TMDL is due in 2010. This cycle the pH violation rate was 6/51 at 2-CHK023.64.

In the 2004 cycle, the segment was assessed as not supporting the Fish Consumption Use because the DEQ screening value for PCBs was exceeded in 3 species during sampling in 2001. The PCB TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in this segment is currently considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, James City

STREAM NAME: Chickahominy River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G08E-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 5.47 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Diascund Creek

RIVER MILE: 15.91

LATITUDE: 37.37920 **LONGITUDE:** -76.90360

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.24320 **LONGITUDE:** -76.87720

The segment begins at Diascund Creek and extends downstream to the mouth at the James River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Chloride

The Chickahominy River was assessed as not supporting the Aquatic Life and Wildlife Uses because of chloride violations at 2-CHK002.17, 2-CHK006.14, and 2-CHK0014.33.

IMPAIRMENT SOURCE: Natural Conditions

The violations are attributed to natural salinity.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City

STREAM NAME: Morris Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.72 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 13.70

LATITUDE: 37.35670 **LONGITUDE:** -77.01820

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE: 6.00

LATITUDE: 37.31940 **LONGITUDE:** -76.93850

Morris Creek from its headwaters downstream to the tidal limit at river mile 5.97.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Morris Creek was assessed not supporting of the Aquatic Life use support (ALUS) goal based on water quality monitoring performed at the Route 623 bridge (2-MOC005.97). Relative to the ALUS assessment, there were 10 violations of the DO standard, and 13 violations of the pH standard, recorded in 22 samples collected. The segment initially listed in 1998, therefore the DO and pH TMDLs are due in 2010.

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 3/20 recorded at 2-MOC005.97. The segment was listed as threatened in 1998, and then downgraded to impaired during the 2002 cycle, therefore the TMDL is due in 2014.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in this stream segment is currently considered unknown.

Continued monitoring is recommended to increase the data set and make a confident assessment. Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G08R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.29 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: 37.40560 **LONGITUDE:** -76.81070

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal Limit

RIVER MILE:

LATITUDE: 37.39210 **LONGITUDE:** -76.88120

Mill Creek from its headwaters downstream to its tidal limit

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Mill Creek was assessed not supporting of the Aquatic Life use support (ALUS) goal based on water quality monitoring performed at the Route 603 bridge (2-MCR002.38). Relative to the ALUS assessment, there were 3 violations of the DO standard, and 2 violations of the pH standard, recorded in 10 samples collected.

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 3/10 recorded at 2-MCR002.38.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in this stream segment is currently considered unknown.

Continued monitoring is recommended to increase the data set and make a confident assessment. Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: New Kent

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.06 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.20

LATITUDE: 37.50320 **LONGITUDE:** -76.93210

DOWNSTREAM LIMIT:

DESCRIPTION: Diascund Reservoir

RIVER MILE: 0.00

LATITUDE: 37.46370 **LONGITUDE:** -76.90050

All of Beaverdam Creek tributary to Diascund Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Beaverdam Creek was assessed not supporting of the Aquatic Life use because of a dissolved oxygen standard violation rate of 6/19 at the Route 632 bridge (2-BDM004.12). The segment was initially considered fully supporting but threatened in the 1998 cycle, but was downgraded to impaired in the 2002 cycle. The DO TMDL is due in 2014.

In the 2004 cycle, the segment was also assessed as not supporting the Recreation Use goal based on a fecal coliform violation rate of 3/19 at 2-BDM004.12. The fecal coliform TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the dissolved oxygen violations in this segment is considered unknown, but may be attributable to high total phosphorus in the segment.

The source of the fecal coliform violation is considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: New Kent

STREAM NAME: Diascund Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAP-G09R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.89 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 16.93

LATITUDE: 37.52230 **LONGITUDE:** -77.00670

DOWNSTREAM LIMIT:

DESCRIPTION: Diascund Reservoir

RIVER MILE: 10.13

LATITUDE: 37.45590 **LONGITUDE:** -76.94440

All of Diascund Creek from its headwaters to the Diascund Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Public Water Supply Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Iron, Manganese

Diascund Creek was assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 4/19 at the Route 628 bridge (2-DSC012.67). The segment was initially listed in 2002, therefore the fecal coliform TMDL is due in 2014.

During the 2004 cycle, there were violations of the human health criteria for iron and manganese in public water supplies. The criteria are set to maintain acceptable taste, odor or aesthetic quality of drinking water. Therefore, the segment is considered impaired of the Public Water Supply use. The TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Continued monitoring is necessary to increase the data set and make a confident assessment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Cumberland, Fluvanna, Goochland, Powhatan

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H33R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 22.87 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Rivanna River

RIVER MILE: 166.61

LATITUDE: 37.75030 **LONGITUDE:** -78.16410

DOWNSTREAM LIMIT:

DESCRIPTION: Big Lickinghole Creek

RIVER MILE: 143.35

LATITUDE: 37.68930 **LONGITUDE:** -77.93090

Segment comprises the James River from the Rivanna River to Big Lickinghole Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment was assessed as not supporting of the Recreation Use based on a fecal coliform violation rate of 4/35 at the Route 45 bridge (2-JMS157.28).

IMPAIRMENT SOURCE: Unknown

The source of the impairments is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Powhatan

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H33R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.41 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Maxey Mill Creek confluence

RIVER MILE: 14.20

LATITUDE: 37.51330 **LONGITUDE:** -78.10900

DOWNSTREAM LIMIT:

DESCRIPTION: Route 684 bridge

RIVER MILE: 3.00

LATITUDE: 37.60420 **LONGITUDE:** -77.99970

Segment begins at the confluence of Deep Creek with Maxey Mill Creek, and extends downstream to the Route 684 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Segment assessed not supporting for Aquatic Life use support based on a dissolved oxygen violation rate of 2/9 at 2-DCR007.93. There were also DO violations at three 1994 special study stations along Deep Creek (2-DCR013.89, 2-DCR012.54, 2-DCR008.85.) The ambient station at 2-DCR003.00 has acceptable dissolved oxygen (1/22) this cycle.

This segment was shortened in 2002 to end at the Route 684 bridge (11.2 miles) because a downstream dam provides reaeration.

The segment was mistakenly listed for temperature during the year 2002 cycle based on citizen monitoring data. This data had been rejected because of poor QA/QC. Temperature should be removed as an impairing cause.

IMPAIRMENT SOURCE: Unknown

The source of the impairment in this stream segment is currently considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Powhatan

STREAM NAME: Stegers Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H33R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.58 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.58

LATITUDE: 37.55580 **LONGITUDE:** -77.94650

DOWNSTREAM LIMIT:

DESCRIPTION: Sallee Creek

RIVER MILE: 0.00

LATITUDE: 37.57780 **LONGITUDE:** -78.00570

Segment comprises Stegers Creek from its headwaters to the confluence with Sallee Creek, including upper and lower Powhatan Lakes.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

This segment was assessed as not supporting of the Aquatic Life Use goals in the 2002 cycle based on dissolved oxygen standard exceedances at three special study stations (2-STG002.00, 2-STG000.91, 2-STG000.21).

IMPAIRMENT SOURCE: Impoundment

The DO violations in this segment are attributed to natural conditions (swamps). Continued monitoring to increase the data set and make a confident assessment is recommended. Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Fluvanna, Goochland, Louisa

STREAM NAME: Byrd Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 25.97 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 25.97

LATITUDE: 37.95120 **LONGITUDE:** -78.16410

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.72380 **LONGITUDE:** -78.09460

Segment comprises all of Byrd Creek, from its headwaters to its mouth at the Little River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially considered fully supporting but threatened of the Recreation Use in 1998. It was later identified by EPA for listing consideration. In the 2002 cycle, the segment was downgraded to impaired of the Recreation use support goal based on fecal coliform standard violations recorded at the Route 603 bridge (2-BYR003.35); therefore the TMDL is due in 2010. During the 2004 cycle, the violation rate was 3/21.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Continued monitoring is recommended to increase the data set and make a confident assessment. Targeted monitoring may be necessary to further delineate the segment and characterize the causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland

STREAM NAME: Big Lickinghole Creek, Little Lickinghole Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H37R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 29.54 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 11.96

LATITUDE: 37.69440 **LONGITUDE:** -77.95910

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Big Lickinghole Creek

RIVER MILE: 0.00

LATITUDE: 37.68950 **LONGITUDE:** -77.93100

The mainstems of Big Lickinghole Creek and Little Lickinghole Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The creeks are considered impaired of the Recreation use support goals based on water quality monitoring performed at the confluence of Big Lickinghole Creek and Little Lickinghole Creek (2-BLG002.60). The fecal coliform violation rate was 6/20.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violation is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Powhatan

STREAM NAME: Fine Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H38R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.34 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 10.34

LATITUDE: 37.55630 **LONGITUDE:** -77.93560

DOWNSTREAM LIMIT:

DESCRIPTION: James River confluence

RIVER MILE: 0.00

LATITUDE: 37.60640 **LONGITUDE:** -77.81530

Segment comprises all of Fine Creek from its headwaters to the confluence with the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Fine Creek was assessed not supporting of the Recreation Use goal based on a fecal coliform violation rate of 5/31 at the Route 711 bridge (2-FIN000.81.)

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered to be unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland, Powhatan, Louisa

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H38R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.73 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.60

LATITUDE: 37.74520 **LONGITUDE:** -77.80300

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.63430 **LONGITUDE:** -77.82880

Segment comprises all of Beaverdam Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Beaverdam Creek is considered impaired of the Recreation Use goal based on a fecal coliform violation rate of 4/21 at the first bridge downstream of Route 6.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland, Powhatan

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H38R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.64 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Mohawk Creek

RIVER MILE:

LATITUDE: 37.66930 **LONGITUDE:** -77.89680

DOWNSTREAM LIMIT:

DESCRIPTION: River mile 137

RIVER MILE: 137

LATITUDE: 37.64100 **LONGITUDE:** -77.84200

The James River from the confluence of Mohawk Creek downstream to river mile 137.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment was assessed not supporting of the Recreation Use based on a violation rate of 2/10 at the Route 522 bridge (2-JMS140.00.)

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland

STREAM NAME: UT to UT to James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H38R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.42 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Four Seasons Laundry lagoon

RIVER MILE: 0.42

LATITUDE: 37.70060 **LONGITUDE:** -77.88990

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.68790 **LONGITUDE:** -77.89100

Segment comprises the unnamed tributary XVV from the Four Seasons laundry lagoon discharge to the mouth

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment was assessed not supporting of the Recreation Use based on fecal coliform violations (2/2) in the ditch below the lagoon.

IMPAIRMENT SOURCE: Point Source - Industrial

The source of fecal coliform is attributed to a point source discharge of laundry waste .

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Goochland, Hanover, Henrico

STREAM NAME: Tuckahoe Creek Watershed

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 52.67 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

The Tuckahoe Creek watershed

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Public Water Supply Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform, Sulfate

In 1998, Tuckahoe Creek from the Route 6 bridge to its mouth (4.74 miles) was considered impaired of the Aquatic Life and Recreation uses based on fecal coliform and dissolved oxygen violations at the Route 6 bridge (2-TKO004.69). Tuckahoe Creek upstream of the bridge and several tributaries were considered threatened. The TMDLs for this original segment are due by 2010.

In 2002, the portion of Tuckahoe Creek from the Route 6 bridge upstream to the confluence with Little Tuckahoe Creek was added to the impaired waters list. In addition, Little Tuckahoe Creek and the upper portion of Deep Run were added to the list for fecal coliform and dissolved oxygen. These TMDLs (13.75 total miles) are due by 2014.

Pre-TMDL monitoring in the watershed was conducted of the impaired and previously threatened segments during the year 2004 cycle. Additional tributaries were identified as impaired, with TMDLs due by 2016. The summary mileage of the impairments is as follows:

Aquatic Life Use
Dissolved Oxygen 44.28 miles
pH 4.74 miles

Recreation Use
Fecal Coliform 22.36 miles
e. Coli 9.74 miles

In addition, 9.99 miles of stream were considered impaired of the Public Water Supply Use due to an exceedance of the Sulfate standard. This TMDL is due by 2016.

IMPAIRMENT SOURCE: NPS - Urban, Unknown, Natural Conditions

The specific cause of the DO problem in Tuckahoe Creek is considered unknown, although organic enrichment and excessive nutrients from urban nonpoint source runoff and natural low flow conditions are suspected to be contributing to the problem.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Richmond City

STREAM NAME: Powhite Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.12 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.12

LATITUDE: 37.53210 **LONGITUDE:** -77.60010

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.53860 **LONGITUDE:** -77.50010

Powhite Creek from its headwaters to its mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use goals based on a fecal coliform standard violation rate of 6/28 at the Route 635 (Forest Hill Avenue) bridge (2-PWT000.57.)

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform bacteria is unknown, but is suspected to be urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Richmond City

STREAM NAME: Reedy Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.68 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.68

LATITUDE: 37.50910 **LONGITUDE:** -77.51680

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.52440 **LONGITUDE:** -77.46960

Segment comprises Reedy Creek from its headwaters to its mouth at the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially listed as threatened of the Recreation Use during the year 1998 cycle. The segment was downgraded to impaired in the year 2002 assessment.

In 2004, the segment was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 7/18 recorded on Riverside Drive in the City of Richmond (2-RDD000.19).

IMPAIRMENT SOURCE: NPS - Urban

The fecal coliform standard violations are attributed to urban runoff and storm sewers upstream in the watershed. However, additional monitoring is necessary to increase the data set and make a confident assessment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Richmond City

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-08

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.34 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: William's Island Dam

RIVER MILE: 116.30

LATITUDE: 37.55830 **LONGITUDE:** -77.52720

DOWNSTREAM LIMIT:

DESCRIPTION: Fall Line (Mayos Bridge)

RIVER MILE: 110.30

LATITUDE: 37.53040 **LONGITUDE:** -77.43400

Segment begins at the William's Island Dam at river mile 116.30 and extends downstream to the fall line of the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The James River was assessed not supporting of the Recreation use support goal based on the results of a summer special study in the fall zone. The special study was designed to monitor the effects of summertime rain and combined sewer overflow (CSO) events on water quality in the James River and to monitor the effects of Richmond's CSO abatement efforts. The special study data used representative conditions before completion of CSO abatement projects.

For the 2004 cycle, the segment was assessed as not supporting for the Recreation use support goal based on violations of the e. Coli and fecal coliform standards. The segment was extended upstream from the 1998 cycle during the 2002 assessment. The TMDL for the original portion (Boulevard Bridge to Fall Line) is due in 2010, but the TMDL for the upstream portion is not due until 2014.

IMPAIRMENT SOURCE: NPS - Urban, CSO

The source of the impairment in this section of the river is believed to be urban runoff from the tributary drainage basin and from combined sewer overflow events from the City of Richmond's combined sewer system.

The City is currently undertaking CSO abatement efforts. It is recommended that the ongoing CSO special study be continued to gauge the effects of CSO abatement efforts on water quality in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: City of Richmond

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-09

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.29 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Boulevard Bridge

RIVER MILE: 113.50

LATITUDE: 37.53150 **LONGITUDE:** -77.48440

DOWNSTREAM LIMIT:

DESCRIPTION: Fall Line (Mayos Bridge)

RIVER MILE: 110.30

LATITUDE: 37.53040 **LONGITUDE:** -77.43400

Segment begins at the Boulevard Bridge and extends downstream to the fall line of the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Dissolved Oxygen

The James River was assessed not supporting of the Aquatic Life use support goal based on the results of biological (benthic) monitoring at station 2-JMS110.34 and 2-JMS110.44, which indicated moderately impaired benthic communities when compared to the control station at 2-JMS115.29. Acanthamoeba (an amoebae that inhabits lesions in fish and has a remote chance of having human health effects) was detected in lesions in fish taken from the James River near Mayo Bridge in September 1997.

In addition, scattered stations within the segment had exceedances of the dissolved oxygen violation rate. The DO TMDL is due in 2014.

IMPAIRMENT SOURCE: NPS - Urban, CSO

The source of the impairment in this segment is believed to be urban runoff from the tributary drainage basin and from combined sewer overflow (CSO) events from the City of Richmond's combined sewer system.

The City of Richmond is currently undertaking CSO abatement efforts. The special monitoring study should be continued to gauge the effects of the CSO abatement efforts on monitored fecal coliform levels.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Powhatan

STREAM NAME: Bernards Creek

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-10

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.97 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.97

LATITUDE: 37.50450 **LONGITUDE:** -77.72120

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.56440 **LONGITUDE:** -77.66540

The mainstem of Bernards Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Bernards Creek was assessed as impaired of the Recreation Use based on a fecal coliform violation rate of 7/30 at the Route 711 bridge (2-BOR001.73).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Henrico, Powhatan, Richmond City

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-11

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.06 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tuckahoe Creek confluence

RIVER MILE:

LATITUDE: 37.56450 **LONGITUDE:** -77.65440

DOWNSTREAM LIMIT:

DESCRIPTION: William's Island dam

RIVER MILE: 116.30

LATITUDE: 37.55820 **LONGITUDE:** -77.52710

The mainstem of the James River between the confluence of Tuckahoe Creek and William's Island dam.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The James River is assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 6/46 at 2-JMS117.35 (Route 147/Huguenot Road bridge).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Powhatan

STREAM NAME: Skinquarter Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J07R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 7 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.67

LATITUDE: 37.47690 **LONGITUDE:** -77.80240

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.41820 **LONGITUDE:** -77.85520

Skinquarter Creek from its headwaters to its mouth at the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Skinquarter Creek was assessed not supporting of the Aquatic Life use support goal based on water quality monitoring performed at the Route 603 bridge (2-SQT001.54). There were 6 violations of the DO standard and 13 violations of the pH standard in 20 samples.

IMPAIRMENT SOURCE: Natural Conditions

The source of the DO and pH violations is attributed to natural conditions in the watershed.

Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia, Chesterfield

STREAM NAME: Flat Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.99 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Nibbs Creek Confluence

RIVER MILE: 4.10

LATITUDE: 37.40220 **LONGITUDE:** -77.93380

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River confluence

RIVER MILE: 0.00

LATITUDE: 37.39160 **LONGITUDE:** -77.87400

Flat Creek from Nibbs Creek to the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Flat Creek was assessed not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 11/28 recorded at the Route 604 bridge (2-FLA001.95).

IMPAIRMENT SOURCE: PS - Municipal, NPS - Agriculture

It is suspected that the Amelia Courthouse STP, which discharges to Nibbs Creek, may have been a contributing source. A new wastewater treatment plant was completed in 1994 as a control measure, and is expected to have a positive effect on water quality in the receiving stream. It is suspected that the problems may also be caused be nonpoint source runoff in the watershed, and continued monitoring is recommended to evaluate whether water quality is improving.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: Nibbs Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.43 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Amelia Courthouse STP

RIVER MILE: 6.45

LATITUDE: 37.36720 **LONGITUDE:** -77.99170

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Flat Creek

RIVER MILE: 0.00

LATITUDE: 37.40220 **LONGITUDE:** -77.93380

Nibbs Creek from Amelia Courthouse Sewage Treatment Plant to confluence with Flat Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Nibbs Creek was assessed in 1998 as fully supporting but threatened of the Recreation use goals based on sampling at the Route 609 bridge. The segment was identified to Virginia for listing consideration during the next cycle. The segment was subsequently listed as impaired during the 2002 cycle, therefore the TMDL is due in 2010.

This cycle, the segment was considered not supporting of the Recreation use goal based on widespread fecal coliform violations

Fecal coliform 13/28 at the Rt. 609 bridge (2-NBB003.65);
Hog farm special study stations:
Fecal coliform 12/16 at the Rt. 630 bridge (2-NBB002.92 and previously called PL-43A),
Fecal coliform 8/17 at the Rt. 636 bridge (2-NBB001.54 and previously called PL-43C).

In addition, during the year 2002 cycle, an UT to Nibbs Creek was considered impaired of the Recreation Use goal. The segment continues to be impaired: Fecal coliform 8/8 at the Rt. 609 bridge (2-XQK000.15 and previously called PL-43B). The TMDL for this segment is due in 2014.

IMPAIRMENT SOURCE: PS - Municipal

It was suspected that the Amelia Courthouse STP, which discharges to Nibbs Creek, may have been a contributing source, however a new wastewater treatment plant was completed in 1994. It is suspected that the problems may also be caused by nonpoint source runoff in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.41 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Spindlers Run

RIVER MILE: 9.1

LATITUDE: 37.24020 **LONGITUDE:** -77.94070

DOWNSTREAM LIMIT:

DESCRIPTION: Beaverpond Creek

RIVER MILE: 1.70

LATITUDE: 37.30340 **LONGITUDE:** -77.83390

Deep Creek from the confluence with Spindlers Run to the confluence of Beaverpond Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Deep Creek from Spindlers Run to the confluence with Beaverpond Creek was assessed as not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 6/27 recorded at 2-DPC005.20 (Route 153).

The segment was originally assessed as fully supporting but threatened during the 1998 cycle. During the year 2002 the segment was extended from the 1998 cycle, however the segment was returned to the original size in 2004 because of an acceptable monitoring rate at 2- DPC010.88.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform standard violations is considered unknown.

Targeted monitoring is necessary to further delineate the affected segment and to characterize the causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia, Nottoway

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J11R-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 16.54 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 29.50

LATITUDE: 37.20450 **LONGITUDE:** -78.16490

DOWNSTREAM LIMIT:

DESCRIPTION: Cellar Creek

RIVER MILE: 12.80

LATITUDE: 37.24020 **LONGITUDE:** -77.94070

Deep Creek from its headwaters to the confluence with Cellar Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Deep Creek from its headwaters to the confluence with Cellar Creek was assessed as not supporting of the Aquatic Life use support goal based on a dissolved oxygen standard violation rate of 8/20 recorded at the Route 611 bridge (2-DPC019.03). The segment was extended during the 2002 cycle because of a dissolved oxygen violation rate of 1/1 at the Route 614 bridge (2-DPC017.07) in 1994.

During the year 2004 cycle, the segment was assessed as impaired of the Recreation use support goal based on a fecal coliform violation rate of 3/20 at 2-DPC019.03. The bacteria TMDL is not due until 2016.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The DO violations in this segment are attributed to natural conditions (swamps). Continued monitoring to increase the data set and make a confident assessment is recommended. Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

The source of the fecal coliform is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: West Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J11R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.22 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Tanners Branch

RIVER MILE: 7.22

LATITUDE: 37.27170 **LONGITUDE:** -78.01040

DOWNSTREAM LIMIT:

DESCRIPTION: Deep Creek

RIVER MILE: 0.00

LATITUDE: 37.25690 **LONGITUDE:** -77.90750

West Creek from the confluence with Tanners Branch to the confluence with Deep Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as Not Supporting the Recreation Use support goals based on a fecal coliform violation rate of 8/20 at the Route 614 bridge (2-WET004.96).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: Winticomack Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.97 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Long Branch

RIVER MILE: 4.10

LATITUDE: 37.23840 **LONGITUDE:** -77.77170

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.26830 **LONGITUDE:** -77.74000

Winticomack Creek from Long Branch to its mouth at the Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Winticomack Creek is assessed as not supporting the aquatic life use goals based on a dissolved oxygen violation rate of 11/32 and a pH violation rate of 13/31 at the Route 622 bridge (2-WTK001.50), a DO violation rate of 4/13 and a pH violation rate of 4/12 at the Route 708 bridge (2-WPK003.92) and the results of a 1994 special study.

IMPAIRMENT SOURCE: Natural Conditions

The source of the DO and pH violations in this watershed is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia, Chesterfield, Dinwiddie

STREAM NAME: Winterpock Creek and tributaries

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 20.36 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Winterpock Creek headwaters

RIVER MILE: 10.50

LATITUDE: 37.31210 **LONGITUDE:** -77.76050

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River confluence

RIVER MILE: 0.00

LATITUDE: 37.29250 **LONGITUDE:** -77.67170

Segment consists of the entire Winterpock Creek mainstem and its tributaries, excluding Surline Branch and its tributaries.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The mainstem of Winterpock Creek was initially included on the 303(d) list in 1994 based on excessive DO and pH standard violations. This cycle Winterpock Creek was assessed not supporting of the Aquatic Life use support goal based on a DO standard violation rate of 14/46 and a pH standard violation rate of 13/46 recorded at the Route 602 bridge (2-WPK003.23). The violations were confirmed in a DEQ special study performed in 1994 and during pre-TMDL monitoring at multiple stations in the watershed during the year 2004 cycle. The TMDL is due in 2010.

The segment was extended in the year 2002 cycle to include tributaries because of a special study performed by the Richmond Regional PDC in 1997-1998. These impairments were confirmed during the pre-TMDL monitoring. The TMDL for the tributaries is due in 2014.

IMPAIRMENT SOURCE: Natural Conditions

The impairment of this stream segment is attributed to organic enrichment at the monitoring station. A pool at the monitoring station is always backwatered without velocity. However, this backwater is not from Lake Chesdin, as there is a 30-40 foot elevation difference between this location and the Lake Chesdin dam spillway. The source of organic enrichment is suspected to be forest decay product. Winterpock Creek is not considered representative of other tributaries of Lake Chesdin.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfiled

STREAM NAME: Winterpock Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.97 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Winterpock Creek headwaters

RIVER MILE: 10.50

LATITUDE: 37.31210 **LONGITUDE:** -77.76050

DOWNSTREAM LIMIT:

DESCRIPTION: Appomattox River confluence

RIVER MILE: 0.00

LATITUDE: 37.29250 **LONGITUDE:** -77.67170

Segment consists of the entire Winterpock Creek mainstem

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The mainstem of Winterpock Creek was assessed as not supporting the Recreation Use support goal based on a fecal coliform violation rate of 5/41 at the Route 602 bridge (2-WPK003.23).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: UT to Winticomack Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.69 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.68

LATITUDE: 37.21900 **LONGITUDE:** -77.74100

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Winticomack

RIVER MILE: 0.00

LATITUDE: 37.24990 **LONGITUDE:** -77.74570

Mainstem from its headwaters to its mouth at Winticomack Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The segment was assessed as not supporting of the Aquatic Life use support goal based on a dissolved oxygen and pH violation rate of 3/5 at the Route 708 bridge (2-XTZ000.89).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia

STREAM NAME: UT to Winticomack Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J12R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.81 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 0.81

LATITUDE: 37.22410 **LONGITUDE:** -77.84400

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Winticomack

RIVER MILE: 0.00

LATITUDE: 37.22050 **LONGITUDE:** -77.83010

Mainstem from its headwaters to its mouth at Winticomack Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

The segment was assessed as not supporting of the Aquatic Life use support goal based on a pH violation rate of 3/5 at the Route 606 bridge (2-XTY000.08).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amelia, Chesterfield, Dinwiddie

STREAM NAME: Lake Chesdin

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J14L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3196 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Extent of backwater

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Dam

RIVER MILE:

LATITUDE: **LONGITUDE:**

Lake Chesdin

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Dissolved oxygen violations in bottom waters during stratification. The Trophic State Index (TSI) was acceptable in the deeper areas, but exceeded 60 in the shallow backwaters. Therefore the reservoir is impaired.

IMPAIRMENT SOURCE: Unknown

Source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Colonial Heights, Hopewell, Petersburg, Prince George

STREAM NAME: Appomattox River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.68 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Fall line at Route 1/301 bridge

RIVER MILE: 10.40

LATITUDE: 37.23660 **LONGITUDE:** -77.40420

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.32080 **LONGITUDE:** -77.27520

Entire estuarine Appomattox River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, PCBs in fish tissue

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 7/56 at 2-APP001.53. The segment was initially listed in 1998, therefore the TMDL is due in 2010.

In addition, during the 2002 cycle the segment was initially listed as impaired of the fish consumption use because of PCBs in fish tissue in DEQ monitoring performed in 1997 and 2001. The PCB TMDL is due in 2014.

IMPAIRMENT SOURCE: NPS - Unknown

The sources of the fecal coliform standard violations is attributed to non-point source runoff.

The source of the PCBs is considered unknown. A Toxics Source Assessment is currently being performed for the estuarine James River to investigate the PCB source.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Colonial Heights, Dinwiddie, Petersburg

STREAM NAME: Appomattox River

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.44 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lake Chesdin dam

RIVER MILE: 17.80

LATITUDE: 37.22010 **LONGITUDE:** -77.52520

DOWNSTREAM LIMIT:

DESCRIPTION: Fall line at Route 1/301 bridge

RIVER MILE: 10.40

LATITUDE: 37.23660 **LONGITUDE:** -77.40420

Appomattox River from the Lake Chesdin dam downstream to the fall line at the Route 1/301 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 14/47 recorded at the Route 36 bridge (2-APP012.79).

IMPAIRMENT SOURCE: Unknown, NPS - Agriculture

The source of the fecal coliform standard violations is currently being investigated and is believed to be the result of agricultural non-point source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Colonial Heights

STREAM NAME: Oldtown Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.57 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Big Branch

RIVER MILE:

LATITUDE: 37.25390 **LONGITUDE:** -77.43660

DOWNSTREAM LIMIT:

DESCRIPTION: Fall line

RIVER MILE:

LATITUDE: 37.25970 **LONGITUDE:** -77.39080

Oldtown Creek from the confluence with Big Branch downstream to its tidal limit.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The segment was assessed not supporting of the Aquatic Life use support goal based on a dissolved oxygen violation rate of 5/9 recorded at the Conduit Road bridge (2-OTC001.54).

IMPAIRMENT SOURCE: Unknown

The source of the dissolved oxygen violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Petersburg, Prince George

STREAM NAME: Harrison Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.39 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.39

LATITUDE: 37.22300 **LONGITUDE:** -77.35790

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.24510 **LONGITUDE:** -77.37680

The mainstem of Harrison Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 2/3 at USGS station 02041758 and supported by a fecal coliform violation rate of 1/3 at 02041760.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Petersburg

STREAM NAME: Poor Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J15R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.13 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.13

LATITUDE: 37.20880 **LONGITUDE:** -77.38170

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Appomattox River

RIVER MILE: 0.00

LATITUDE: 37.23830 **LONGITUDE:** -77.38960

The mainstem of Poor Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 2/3 at USGS station 02041745.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Swift Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J16R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 1.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Turkey Creek

RIVER MILE: 36.20

LATITUDE: 37.46430 **LONGITUDE:** -77.71480

DOWNSTREAM LIMIT:

DESCRIPTION: Swift Creek Reservoir

RIVER MILE: 34.50

LATITUDE: 37.44540 **LONGITUDE:** -77.69390

Swift Creek from Turkey Creek downstream to the normal pool of Swift Creek Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

Swift Creek was initially listed in 1998 as partially supporting the Aquatic Life Use goal because of pH and dissolved oxygen violations. The segment was later listed of EPA's list of "Waters Identified to Virginia for Listing Consideration During Development of the Next List"; dissolved oxygen was listed as the parameter of concern. During the 2002 cycle, the segment continued to have pH violations, but the dissolved oxygen was acceptable and was delisted. In 2004, the pH violation rate at the Route 657 bridge (2-SFT036.00) was 6/20. The TMDL for pH is due in 2010.

In 1998 the segment was listed as fully supporting but threatened of the Recreation Use goal. During the 2002 cycle, the segment was downgraded to partially supporting. During the year 2004 cycle, the segment was assessed not supporting of the Recreation use goal based on a fecal coliform violation rate of 3/18 at the Route 657 bridge (2-SFT036.00). The fecal TMDL is due in 2014.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The pH violations recorded in this segment are attributed to upstream swamps and low flow conditions. Reclassification of the segment to wetlands is recommended. Continued monitoring is recommended to increase the data set and make a confident assessment. Targeted monitoring may be necessary to further delineate the extent of impairment and to characterize the causes and sources.

The origin of the fecal coliform violations is considered to be unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Blackman Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J16R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.45 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.45

LATITUDE: 37.39670 **LONGITUDE:** -77.77760

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Deep Creek

RIVER MILE: 0.00

LATITUDE: 37.42350 **LONGITUDE:** -77.72130

Mainstem from its headwaters to its mouth at the confluence of Deep Creek and Horsepen Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The segment is considered impaired of the Aquatic Life Use based on a dissolved oxygen violation rate of 6/9 and a pH violation rate of 2/9 at the Route 668 bridge (2-BCM000.79).

In addition, phosphorus was listed as an observed effect in the segment.

IMPAIRMENT SOURCE: Unknown

The source of the DO and pH violations is considered unknown, however nutrient overenrichment may be a contributing factor.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield

STREAM NAME: Swift Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.09 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Swift Creek Lake dam

RIVER MILE: 21.00

LATITUDE: 37.38440 **LONGITUDE:** -77.54170

DOWNSTREAM LIMIT:

DESCRIPTION: Licking Creek

RIVER MILE: 14.4

LATITUDE: 37.32630 **LONGITUDE:** -77.51000

Swift Creek from the Swift Creek Lake dam downstream to its confluence with Licking Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

In 1998, Swift Creek was assessed as threatened of the Aquatic Life Use due to dissolved oxygen violations.

In 2002, the segment was considered partially supporting of the Aquatic Life use support goal based on water quality monitoring performed at the Route 655 bridge (2-SFT019.15).

During the year 2004 cycle, the segment continued to show dissolved oxygen problems with a violation rate of 3/22.

IMPAIRMENT SOURCE: Impoundment

The source of the DO is suspected to be low flows released from dams in the summer and fall.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesterfield, Colonial Heights

STREAM NAME: Swift Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lakeview Reservoir Dam

RIVER MILE: 5.90

LATITUDE: 37.27140 **LONGITUDE:** -77.41900

DOWNSTREAM LIMIT:

DESCRIPTION: Timsbury Creek

RIVER MILE: 1.9

LATITUDE: 37.28670 **LONGITUDE:** -77.39110

Swift Creek from the Lakeview Reservoir Dam downstream to the confluence with Timsbury Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Swift Creek was assessed not supporting of the Recreation use support goal based on water quality monitoring performed at the Route 1 bridge (2-SFT004.92). The fecal coliform standard violation rate was 6/19 during the 2004 cycle.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform standard violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: Powhatan Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.26 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 31 bridge

RIVER MILE: 3.38

LATITUDE: 37.23333 **LONGITUDE:** -76.76667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Sandy Bay

RIVER MILE: 0.00

LATITUDE: 37.21667 **LONGITUDE:** -76.76667

Segment begins at the Route 31 Bridge crossing Powhatan Creek extends to confluence with Sandy Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004)

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria & Enterococci (2004) were recorded at DEQ's ambient water quality monitoring station on Powhatan Creek (2-POW000.60) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Powhatan Creek monitoring station is located at the Colonial National Historical Parkway bridge over the creek, in James City County. The watershed potentially receives inputs from marinas, residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the end of tidal influence.

RIVER MILE: 5.00

LATITUDE: 37.23160 **LONGITUDE:** -76.74480

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with James River at The Thoroughfare.

RIVER MILE: 0.00

LATITUDE: 37.21480 **LONGITUDE:** -76.74490

Segment begins at end of tidal influence and extends to the confluence with James R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004)

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria and Enterococci (2004) were recorded at DEQ's ambient water quality monitoring station on Mill Creek (2-MIC000.03) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Mill Creek monitoring station is located at the Colonial National Historical Parkway bridge over the creek, in James City County. The watershed potentially receives inputs from wetlands areas, upstream residential areas, and storm water runoff associated with the surrounding area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Hampton, Isle of Wight, James City, Newport News, Norfolk, Portsmouth, Prince Georg

STREAM NAME: James River (mainstem)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 128.33 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: All estuarine mainstem waters from start of G10E (Surry Co./Charles City Co. boundary junction).

RIVER MILE: 53.5

LATITUDE: 37.22330 **LONGITUDE:** -76.88390

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at downstream terminus of mainstem segment G15E (line across mouth of James R. at

RIVER MILE: 0.00

LATITUDE: 37.15380 **LONGITUDE:** -76.64190

All estuarine mainstem waters from start of G10E (Surry Co./Charles City Co. line) to end of G11E.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: EPA Overlisting (General Standards)

EPA 1998 303d OVERLISTING is the basis to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.

The cause of the nutrient designation is unknown.

DEQ's addition of turbidity as an impairment cause is based on the best scientific information available since the EPA overlisted this segment in 1999 for nonattainment of aquatic life use due to nutrients.

IMPAIRMENT SOURCE: Unknown

EPA OVERLISTING on 1998 303d. The source of the reduced benthic diversity exhibited in the BIBI rating is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Isle of Wight, James City, Newport News, Prince George, Surry

STREAM NAME: James River (Jamestown area)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 20.68 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins start G10E (Surry Co./Charles City Co. boundary junction) confluence Chippokes Cr

RIVER MILE: 53.5

LATITUDE: 37.22309 **LONGITUDE:** -76.88366

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at start G11E, confluence Skiffes Cr

RIVER MILE: 36.0

LATITUDE: 37.15374 **LONGITUDE:** -76.64185

Segment begins start G10E, confluence Chippokes Cr, extends downstream to start G11E, confluence Skiffes Cr.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Benthic BIBI probabilistic station surveys (VERSAR 2002) in the CBP segment JMSOHa are the basis to assess this segment as impaired of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report.

The cause of the lower benthic diversity designation is unknown.

IMPAIRMENT SOURCE: Unknown

The specific source of the low benthic diversity is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Charles City, Chesterfield, Henrico, Hopewell, James City, Prince George, Surry

STREAM NAME: Upper James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 2.82 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 4.45

LATITUDE: 37.16667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.16667 **LONGITUDE:** -76.75000

VDH-DSS shellfish harvesting condemnation number #69A, Upper James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Surry

STREAM NAME: College Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.35 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of College Run with Mill Farm Run.

RIVER MILE: 2.35

LATITUDE: 37.11730 **LONGITUDE:** -76.82150

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with James River, downstream 1.41 mi. from Rt. 634 crossing.

RIVER MILE: 0.00

LATITUDE: 37.14500 **LONGITUDE:** -76.73320

Segment begins at the confluence of College Run with Mill Farm Run and extends downstream to the confluence with the James River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: Powhatan Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G10R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.1 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence with Long Hill Swamp.

RIVER MILE: 3.10

LATITUDE: 37.31100 **LONGITUDE:** -76.76590

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the estuarine/riverine transition @ Rt 613.

RIVER MILE: 0.00

LATITUDE: 37.26030 **LONGITUDE:** -76.78370

Segment extends from the confluence with Long Hill Swamp downstream to the estuarine/riverine transition.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

Benthic biological monitoring at station 2-POW006.77 (located at State Route 613) indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria and Enterococci (2004) were recorded at the monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Newport News, Suffolk, Surry

STREAM NAME: James River (Mulberry Island area)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 95.28 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins start G11E (James City/Isle of Wight junction),confluence Skiffes Cr.

RIVER MILE: 36.0

LATITUDE: 37.15374 **LONGITUDE:** -76.64185

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at start G15E, @ Nansemond River confluence.

RIVER MILE: 9.0

LATITUDE: 36.93390 **LONGITUDE:** -76.42980

Segment begins start G11E (James City/Isle of Wight junction),confluence Skiffes Creek and ends at start G15E, @ Nansemond River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Benthic BIBI probabilistic station surveys (VERSAR 2002) in the CBP segment JMSMHa are the basis to assess this segment as impaired of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report.

The cause of the lower benthic diversity designation is unknown.

IMPAIRMENT SOURCE: Unknown

The specific source of the low benthic diversity is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City, Newport News

STREAM NAME: Skiffes Creek tributary to James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.41 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 3.9 miles upstream of the monitoring station (2-SFF000.17) at Skiffes Cr Reservior da

RIVER MILE: 4.08

LATITUDE: 37.19838 **LONGITUDE:** -76.58452

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with James River

RIVER MILE: 0.00

LATITUDE: 37.16688 **LONGITUDE:** -76.61209

Segment begins at Skiffes Creek Reservior (RM 4.08) and extends downstream to mouth (confluence with James River)

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Exceedance of fish tissue screening value for PCBs in fish samples (Shad, Croaker White Perch, Spot) collected in 2001 at station (2-SFF000.17) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (2-SFF000.17) is located north of the US Army Fort Eustis Military Reserve and south of a no longer discharging BASF plant. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.11 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Warwick Yacht Club.

RIVER MILE: 0.76

LATITUDE: 37.08333 **LONGITUDE:** -76.52272

DOWNSTREAM LIMIT:

DESCRIPTION: Segment extends to the confluence with the Warwick River.

RIVER MILE: 0.00

LATITUDE: 37.08139 **LONGITUDE:** -76.52597

Segment begins at the Warwick Yacht Club and extends downstream to the confluence with the Warwick R

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the monitoring station on Deep Creek (2-DEP000.26) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Deep Creek monitoring station (2-DEP000.26) is located in the City of Newport News. The land use in the watershed is primarily residential. The watershed potentially receives inputs from wetlands areas, an adjacent marina and/or boating activities, residential sewage treatment systems, and storm water runoff associated with the surrounding residential area/urban area.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Pagan River (Middle)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.3 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at Rt 258 & 10 junction southside Smithfield.

RIVER MILE: 4.90

LATITUDE: 37.01667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream of Town of Smithfield at Red Point.

RIVER MILE: 4.00

LATITUDE: 36.96667 **LONGITUDE:** -76.61667

Segment begins at Rt 258 & 10 junction southside Smithfield (RM 5.03) downstream to Red Point.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the standard for Fecal Coliform bacteria at a DEQ station on the Pagan River (2-PGN004.57) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The major historical source of Fecal Coliform bacteria into the Pagan River is believed to have been caused by the discharge of effluent from the Smithfield Foods WWTP in violation of VPDES permitted effluent limitations (outfall 001). The facility connected to central sewerage and ceased its discharge to the Pagan River July 1997. The watershed potentially receives inputs from residential sewage treatment systems, boating activities, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the FC bacteria is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Pagan River (Upper)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.75 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at end of tidal.

RIVER MILE: 9.25

LATITUDE: 37.01667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends adjacent to intersection Rt 258 & Rt 10 southside Town of Smithfield

RIVER MILE: 4.90

LATITUDE: 36.96667 **LONGITUDE:** -76.61667

Segment begins at end of tidal waters downstream to RM 5.03 (junction Rt 258 & 10 southside Smithfield).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen, Fish Tissue - PCBs

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at four monitoring stations on the Pagan River (2-PGN008.42, 2-PGN007.44, 2-PGN006.65, and 2-PGN005.46) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen were recorded at the above monitoring station is the basis to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. The cause of the dissolved oxygen criteria violation is unknown.Exceedance of criteria based fish tissue value for PCBs in fish samples (Gizzard Shad, Spot) collected in 2002 at station (2-PGN006.03) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

The major historical source of Fecal Coliform bacteria into the Pagan River is believed to have been caused by the discharge of effluent from the Smithfield Foods WWTP in violation of VPDES permitted Fecal Coliform effluent limitations (outfall 001). The facility connected to central sewerage and ceased its discharge to the Pagan River July 1997. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria and the source of the elevated oxygen demand resulting in dissolved oxygen standard violations is currently unknown. The cause of the elevated fish tissue levels of PCBs is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Jones Creek tributary to Pagan River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.32 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 4.6 miles upstream from the monitoring station (2-JOG000.62) at the headwaters

RIVER MILE: 5.17

LATITUDE: 36.94714 **LONGITUDE:** -76.58070

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with Pagan River

RIVER MILE: 0.00

LATITUDE: 36.99936 **LONGITUDE:** -76.57014

Segment begins 4.6 miles upstream of monitoring station @ RM 5.17 and extends downstream to the mouth (confluence with the Pagan River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Exceedance of fish tissue screening value for PCBs in fish samples (Shad, Croaker) collected in 2001 at station (2-JOG000.62) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (2-JOG000.62) is located in Jones Creek, a tributary to Pagan River. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The specific source of the elevated fish tissue PCBs concentration is currently unknown. Fish tissue PCBs impairment is also exhibited in the adjacent Pagan River. This may suggest movement of contaminated fish between the two watercourses.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Suffolk

STREAM NAME: Chuckatuck Creek tributary to James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.94 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 3.89 miles upstream from the monitoring station (2-CKT003.05) at the end of tidal water

RIVER MILE: 6.94

LATITUDE: 36.86706 **LONGITUDE:** -76.56821

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with James River

RIVER MILE: 0.00

LATITUDE: 36.92380 **LONGITUDE:** -76.49440

Segment begins 3.89 miles upstream of monitoring station at end of tidal waters and extends downstream to the mouth (confluence with the James River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Exceedance of fish tissue screening value for PCBs in fish samples (Shad, Spot) collected in 2001 at station (2-CKT003.05) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (2-CKT003.05) is located in Chuckatuck Creek. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: Warwick River (Upper)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-08

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.21 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at end of tidal waters.

RIVER MILE: 10.88

LATITUDE: 37.17210 **LONGITUDE:** -76.56470

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Lukas Creek.

RIVER MILE: 3.48

LATITUDE: 37.11420 **LONGITUDE:** -76.56530

Segment begins at the end of tidal waters (RM 10.88) extending downstream to the confluence with Lukas Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria was recorded (2-WWK003.98) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The monitoring station is effected by the ebb and flood tidal cycles associated with estuarine systems.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Warwick River monitoring station (2-WWK003.98) is located at the end of Rt 173 (Denbigh Blvd.) in the City of Newport News. The land use in the watershed is primarily residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, marina and/or boating activities, and storm water runoff associated with the surrounding residential area/urban area. The specific source of the elevated Fecal Coliform bacteria concentration is currently unknown.

Additional monitoring is necessary.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Newport News

STREAM NAME: James River

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-09

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.5 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of the monitoring station station.

RIVER MILE: 17.51

LATITUDE: 37.02170 **LONGITUDE:** -76.53370

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends one-half mile downstream of the monitoring station.

RIVER MILE: 16.51

LATITUDE: 37.01650 **LONGITUDE:** -76.52660

Segment begins 0.5 mile upstream of the monitoring station (2-JMS017.01) and extends 0.5 mile downstream.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Sufficient exceedance of fish tissue screening value for PCBs (1996 & 1994 by DEQ) @ station 2-JMS017.01 to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report.

The cause of the elevated fish tissue levels of PCBs are unknown.

IMPAIRMENT SOURCE: Unknown

The James River monitoring station for fish tissue (2-JMS017.01) is located in the Mulberry Island area on the border between Isle of Wight County and City of Newport News. The land use in the watershed is mixed agricultural, forested, and light residential. The watershed potentially receives inputs from storm water runoff associated with the surrounding forested / agricultural / residential area. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Pagan River and Jones Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 2.63 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 6

LATITUDE: 36.98333 **LONGITUDE:** -76.65000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.00833 **LONGITUDE:** -76.56667

VDH-DSS shellfish harvesting condemnation # 64, Pagan River and Jones Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City

STREAM NAME: James River - Grove Creek Area

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 1.85 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.10

LATITUDE: 37.16667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.16667 **LONGITUDE:** -76.75000

VDH-DSS shellfish harvesting condemnation #67-Upper James River-Grove Cr

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: James City, Newport News

STREAM NAME: James River - Opposite Fort Eustis & Skiffes Cree

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 1.76 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 4.1

LATITUDE: 37.19167 **LONGITUDE:** -76.62917

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.12917 **LONGITUDE:** -76.63333

VDH-DSS shellfish harvesting condemnation # 23, located in James River - Opposite Fort Eustis.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: James River: Swash Hole

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.4

LATITUDE: 37.10278 **LONGITUDE:** -76.60556

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.12500 **LONGITUDE:** -76.60000

VDH-DSS shellfish harvesting condemnation # 183, located in James River - Swash Hole.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Surry

STREAM NAME: Upper James River: Lawnes Cr

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.27 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.75

LATITUDE: 37.16667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.16667 **LONGITUDE:** -76.75000

VDH-DSS shellfish harvesting condemnation #69B-Upper James River-Lawnes Cr

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: Warwick and James Rivers

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 3.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 6.6

LATITUDE: 37.00417 **LONGITUDE:** -76.46667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.11667 **LONGITUDE:** -76.56667

VDH-DSS shellfish harvesting condemnation #34, located in Warwick and James Rivers.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Suffolk

STREAM NAME: Chuckatuck Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.61 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.3

LATITUDE: 36.90833 **LONGITUDE:** -76.51250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.87500 **LONGITUDE:** -76.56250

VDH-DSS shellfish harvesting condemnation number 80B, located in Chuckatuck Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Kings and Ballard Marsh Creeks

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-17

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3

LATITUDE: 36.97500 **LONGITUDE:** -76.52500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.96667 **LONGITUDE:** -76.53333

VDH-DSS shellfish harvesting condemnation # 164, located in Kings and Ballard Marsh Creeks.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Tylers Beach Boat Basin

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.001 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.50

LATITUDE: 37.08220 **LONGITUDE:** -76.66550

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.08230 **LONGITUDE:** -76.66540

VDH-DSS shellfish harvesting condemnation # 206, Tylers Beach Boat Basin

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Ragged Island Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.32 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.00

LATITUDE: 36.94944 **LONGITUDE:** -76.51056

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.93667 **LONGITUDE:** -76.49444

VDH-DSS shellfish harvesting condemnation # 80A Ragged Island Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News

STREAM NAME: Lee Hall (City Reservoir - West portion)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 30 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the northern C&O RR crossing.

RIVER MILE: 0.85

LATITUDE: 36.16915 **LONGITUDE:** -76.55005

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at I-64 crossing of southwest portion of reservoir near Jones Run.

RIVER MILE: 0.00

LATITUDE: 37.18838 **LONGITUDE:** -76.53099

Segment begins at the northern C&O RR crossing of the northwest portion and ends at the I-64 crossing of southwest portion of reservoir near Jones Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Copper, Dissolved Oxygen, Copper

Sufficient exceedances of the standard for Dissolved Oxygen and dissolved copper (acute criteria) at USGS stations in south portion of reservoir (204279230 & 204279240) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. Sufficient exceedances of the standard for dissolved copper (acute criteria) to assess this segment as not supporting of the Clean Water Act's Wildlife Use Support Goal for the 2004 305(b) report. The cause of the dissolved oxygen standard violation is unknown. The cause of the dissolved copper standard (acute) exceedances is believed due to the addition of copper biocides for algal control.

IMPAIRMENT SOURCE: Cu addition as algaecide, Unknown, Cu addition as algaecide

The source of the dissolved oxygen impairment is unknown. The source of the acute copper exceedances is suspected to be caused by the addition of copper biocides to prevent algicide excessive growth.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Newport News, York

STREAM NAME: Lee Hall (City Reservoir - East portion)

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11L-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 200 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins on the eastern side of the northern C&O RR crossing of the western lobe of the reservo

RIVER MILE: 0.95

LATITUDE: 37.17827 **LONGITUDE:** -76.56132

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the northeastern end of the reservoir, at the confluence with Beaverdam Creek.

RIVER MILE: 0.00

LATITUDE: 36.16915 **LONGITUDE:** -76.55005

Segment begins on the eastern side of the northern C&O RR crossing of the western lobe of the reservoir and ends at the northeastern end of the reservoir, at the confluence with Beaverdam Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Copper, Copper

Sufficient exceedances of the standard for dissolved copper (acute criteria) at USGS station (204279210) in the eastern portion of this reservoir to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. Sufficient exceedances of the standard for dissolved copper (acute criteria) to assess this segment as also not supporting of the Clean Water Act's Wildlife Use Support Goal for the 2004 305(b) report. The cause of the dissolved copper standard (acute) exceedances is believed due to the addition of copper biocides for algal control.

IMPAIRMENT SOURCE: Cu addition as algaecide, Cu addition as algaecide

The source of the acute copper exceedances is suspected to be caused by the addition of copper biocides to prevent algicide excessive growth.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: York

STREAM NAME: Baptist Run

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.7 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at outflow of pond upstream of station at Crawford Drive.

RIVER MILE: 1.70

LATITUDE: 37.21390 **LONGITUDE:** -76.54680

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence of Baptist Run with Great Run and Beaverdam Cr.

RIVER MILE: 0.00

LATITUDE: 37.21010 **LONGITUDE:** -76.51835

Segment begins at outflow of pond upstream of station at Crawford Drive extending downstream to confluence with Great Run and Beaverdam Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the monitoring station (2-BAP000.80 2/2) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Chuckatuck Creek

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.44 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of the unnamed tributary downstream of Rt 600.

RIVER MILE: 6.96

LATITUDE: 36.88860 **LONGITUDE:** -76.62660

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence of unnamed tributary downstream of Rt 602 (0.2 mi downstream of BIO sta

RIVER MILE: 5.52

LATITUDE: 36.88050 **LONGITUDE:** -76.60690

Segment begins at the confluence of the unnamed tributary downstream of Rt 600 and ends at confluence of the unnamed tributary downstream of Rt 602 (0.2 mi downstream of BIO station @ 2-CKT005.72)

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Benthic biological monitoring at station 2-CKT005.72 indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the stream's benthic community impairment is unknown.

IMPAIRMENT SOURCE: Unknown

The source of the impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Pagan River at Wrenns Millpond

HYDROLOGIC UNIT: 02080206

TMDL ID: VAT-G11R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.9 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at outflow of Wrenns Millpond.

RIVER MILE: 10.1

LATITUDE: 37.01667 **LONGITUDE:** -76.66667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends RM 9.2 @ confluence Lawson Cr.

RIVER MILE: 9.20

LATITUDE: 36.00929 **LONGITUDE:** -76.66140

Segment begins at outflow of Wrenns Millpond extending downstream to RM 9.20 at the confluence with Lawson Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria (2004) were recorded at station located at the outflow of Wrenns Pond (2-PGN010.07) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report.The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The monitoring station is located downstream of the outflow of Wrenns Pond (2-PGN010.07).This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight, Suffolk

STREAM NAME: Eley Swamp

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G12R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 4.4 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 2.40 mi. upstream of monitoring station (2-ELE003.40) at Rt 607 crossing.

RIVER MILE: 5.80

LATITUDE: 36.78190 **LONGITUDE:** -76.72340

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream 2.00 mi. from Rt. 607 crossing.

RIVER MILE: 1.40

LATITUDE: 36.77140 **LONGITUDE:** -76.66260

Segment begins 2.40 mi. upstream of monitoring station (2-ELE003.40) at Rt 607 crossing and ends 2.00 mi. downstream from Rt. 607 crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Sufficient exceedances of Virginia's water quality standard for pH was recorded at water quality monitoring stations on Eley Swamp (2-ELE003.40) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. All data was collected between 1993 - 1996. The segment is retained for the 2002 & 2004 305(b) reports lacking more recent data to alter the 1998 assessment of impairment. The cause of the standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is attributed to naturally occurring conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River (Upper)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.25 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 58 crossing

RIVER MILE: 15.5

LATITUDE: 36.76420 **LONGITUDE:** -76.56130

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Western Branch Reservoir

RIVER MILE: 12.25

LATITUDE: 36.78907 **LONGITUDE:** -76.56262

Segment begins at the Rt 58 crossing downstream to confluence with Western Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at a station on the Nansemond R. (02-NAN013.50) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Nansemond River monitoring station is located downstream of the Route 58/460 Bridge over the Nansemond River in the City of Suffolk. The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River (Lake Meade Dam)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.32 - Sq. Mi.

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Lake Meade Dam

RIVER MILE: 19.80

LATITUDE: 36.74740 **LONGITUDE:** -76.58900

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Shingle Creek

RIVER MILE: 18.60

LATITUDE: 36.76420 **LONGITUDE:** -76.56130

Segment begins at the Lake Meade Dam and extends downstream to the Rt 58 crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004), Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria & Enterococci (2004) were recorded at a station on the Nansemond R. (02-NAN019.14) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard violation is the presence of enteric bacteria. Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen were recorded at the above station to assess segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the low D.O. is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Nansemond River monitoring station is located at the Route 460 Bridge over the Nansemond River in the City of Suffolk. The Nansemond River BIBI monitoring stations are randomly located within the Nansemond River, in the City of Suffolk. The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the Fecal Coliform Bacteria & Enterococci bacteria and DO standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Bennet Creek (Lower)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.52 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.5 mi upstream of Rt 17 crossing.

RIVER MILE: 1.92

LATITUDE: 36.85900 **LONGITUDE:** -76.48346

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluece with the Nansemond River.

RIVER MILE: 0.00

LATITUDE: 36.87754 **LONGITUDE:** -76.48282

Segment begins 0.5 mi upstream of the Rt 17 crossing and ends at the confluece with the Nansemond River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Fish Tissue - PCBs

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at a station on the Nansemond R. (02-BEN001.42) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. Exceedance of criteria based fish tissue value for PCBs in fish samples (Gizzard Shad, Croaker) collected in 2002 at station (2-BEN001.42) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Bennett Creek monitoring station is located downstream of the Route 17 Bridge in the City of Suffolk.The watershed receives inputs from storm water runoff associated with the surrounding residential / wetlands area. The source of the elevated fish tissue levels of PCBs is unknown. The source of the elevated Fecal Coliform levels is unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Star Creek tributary to Nansemond River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of monitoring station @ RM 0.28 (confluence of UT).

RIVER MILE: 0.78

LATITUDE: 36.80876 **LONGITUDE:** -76.53922

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with Oyster House Creek.

RIVER MILE: 0.00

LATITUDE: 36.80933 **LONGITUDE:** -76.54756

Segment begins one-half mile upstream of monitoring station @ RM 0.28 (confluence of UT) and ends at the mouth, confluence with Oyster House Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Sufficient exceedances of fish tissue screening value for PCBs in fish samples (Croaker, Shad, Mummichog, Turtle, Perch) collected in 2002 at station (2-STR000.28) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The Star Creek monitoring station (2-STR000.28) is located south of the Naval Transmitter site at Driver . The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. In proximity to the monitoring site is the Naval Transmitter site at Driver. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Shingle Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of Shingle Creek

RIVER MILE: 1.90

LATITUDE: 36.73280 **LONGITUDE:** -76.55530

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Nansemond River

RIVER MILE: 0.00

LATITUDE: 36.74370 **LONGITUDE:** -76.57350

Segment begins at the headwaters of Shingle Cr. extends to confluence with Nansemond R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen, pH

Sufficient exceedances of standard for Fecal Coliform Bacteria recorded at station on Shingle Creek (2-SGL001.00, 2-SGL001.50) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. Violation of standards for pH and dissolved oxygen recorded at above two station to assess this segment as not supporting and not supporting, respectively, of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. Cause of the D.O. and pH standard exceedances may be due to naturally occurring conditions from waters flowing from the dismal swamp area.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

The Shingle Creek monitoring station is located at the Route 642 (Wilroy Road) Bridge over Shingle Creek in the City of Suffolk. The watershed potentially receives inputs from residential sewage treatment systems and storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. Connection with canals in the dismal swamp area is suspected as the potential source of low D.O and pH measurements.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River: Bleakhorn Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.8

LATITUDE: 36.90833 **LONGITUDE:** -76.47500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.90833 **LONGITUDE:** -76.48333

VDH-DSS shellfish harvesting condemnation # 182, located in Nansemond River - Bleakhorn Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River: Knotts Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.14 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.5

LATITUDE: 36.88333 **LONGITUDE:** -76.45556

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.85833 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 77, located in Nansemond River: Knotts Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River: Bennett Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.46 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.4

LATITUDE: 36.88333 **LONGITUDE:** -76.48333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.85833 **LONGITUDE:** -76.48333

VDH-DSS shellfish harvesting condemnation #46, located in Nansemond River: Bennett Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Nansemond River & tributaries

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 3.28 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Lake Meade Dam

RIVER MILE: 8.8

LATITUDE: 36.88333 **LONGITUDE:** -76.45556

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at a line from Nansemond Point to Sleepy Hole.

RIVER MILE: 0.00

LATITUDE: 36.85833 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 8 Nansemond River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Suffolk

STREAM NAME: Shingle Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G13E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3.0

LATITUDE: 36.88333 **LONGITUDE:** -76.45556

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.85833 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 8 (portion of), Shingle Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Isle of Wight

STREAM NAME: Carbell Swamp (Upper)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.57 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters.

RIVER MILE: 6.60

LATITUDE: 36.89100 **LONGITUDE:** -76.63580

DOWNSTREAM LIMIT:

DESCRIPTION: Segment extends to the start of unnamed pond.

RIVER MILE: 4.03

LATITUDE: 36.90833 **LONGITUDE:** -76.51250

Segment begins at the headwaters and extends to start of Unnamed pond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH, General Standard (Benthic)

Sufficient exceedances of Virginia's water quality standard for pH was recorded at water quality monitoring station on Carbell Swamp (2-CRL004.04) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Minimal data was collected 3/5 to assess. Benthic biological monitoring at station 2-CRL004.04 indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the General Standard exceedances is unknown. The cause of the pH standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The land use in the watershed is mixed agricultural, forested, and swamps. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding area. The source of the depressed pH concentration is believed to be natural conditions for a swamp.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Portsmouth

STREAM NAME: Southern Br, Elizabeth R @ Paradise Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.85 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Naval Ammunition Depot (RM 4.00).

RIVER MILE: 4.00

LATITUDE: 36.78850 **LONGITUDE:** -76.30420

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Jordan Bridge [RM 2.30].

RIVER MILE: 2.30

LATITUDE: 36.80839 **LONGITUDE:** -76.29037

Segment begins at the Naval Ammunition Depot (RM 4.00) and ends at the Jordan Bridge [RM 2.30].

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of standard for dissolved oxygen were recorded at station (2-SBE002.88,) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the depressed dissolved oxygen concentrations is unknown, exceedances occur during summer months.

IMPAIRMENT SOURCE: Unknown

The subject Southern Branch monitoring station is located near the confluence of Paradise Creek in Portsmouth. The land use in the watershed is primarily industrial shipping/shipbuilding with dense urban/residential. The watershed potentially receives inputs from storm water runoff associated with the surrounding residential area/urban area. The specific source of the depressed oxygen concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Norfolk, Portsmouth

STREAM NAME: Southern Branch, Elizabeth River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.15 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Jordan Bridge.

RIVER MILE: 2.30

LATITUDE: 36.80833 **LONGITUDE:** -76.29029

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth.

RIVER MILE: 0.00

LATITUDE: 36.84003 **LONGITUDE:** -76.29318

Segment begins at the Jordan Bridge and ends at mouth (confluence with mainstem Elizabeth River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station on the Southern Branch (2-SBE001.53 & 2-SBE002.30) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The subject Southern Branch monitoring stations are located near the Norfolk Naval Shipyard in Portsmouth. The land use in the watershed is primarily industrial shipping/shipbuilding with moderate urban/residential. The watershed potentially receives inputs from wetlands areas and storm water runoff associated with the surrounding residential area/urban area. The specific source of the elevated bacteria concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Norfolk, Portsmouth, Virginia Beach

STREAM NAME: Elizabeth River & All branches (mainstems)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 23.3 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters (of all branches).

RIVER MILE: 19.20

LATITUDE: 36.72391 **LONGITUDE:** -76.24927

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at downstream terminus of Elizabeth River, confluence with Hampton Roads Harbor.

RIVER MILE: 0.00

LATITUDE: 36.92480 **LONGITUDE:** -76.34169

Segment begins at headwaters (of all branches) and extends to the mouth of the Elizabeth R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: EPA Overlisting (General Standards), General Standard (Benthic)

EPA 1998 303d OVERLISTING is the basis to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.The cause of the nutrient designation is unknown.DEQ's addition of turbidity as an impairment cause is based on the best scientific information available since the EPA overlisted this segment in 1999 for nonattainment of aquatic life use due to nutrients. Benthic biological assessment (VERSAR 2002) of randomly located stations (segments SBEMHa, EBEMHa, WBEMHa, ELIPHa, & ELIMHa) indicated benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the General Standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

Source of nutrient impairment is unknown. CBP B-IBI random station monitoring for B-IBI, source of impairment is unknown. The land use in the watershed is primarily industrial shipping/shipbuilding with moderate urban/residential. Extensive sediment contamination is present and frequent dredging occurrs.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Norfolk, Portsmouth

STREAM NAME: Southern Branch, Elizabeth River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.74 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the I-64 crossing of the Southern Branch Elizabeth (near Deep Cr).

RIVER MILE: 6.50

LATITUDE: 36.75800 **LONGITUDE:** -76.29680

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with mainstem Elizabeth R.

RIVER MILE: 0.00

LATITUDE: 36.83900 **LONGITUDE:** -76.29310

Segment begins at the I-64 crossing downstream to confluence with mainstem Elizabeth R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Tributyltin

Sufficient exceedances of Virginia's chronic water quality standard for Tributyltin (frequency of 100%) were recorded at DEQ's monitoring stations on the Southern Branch Elizabeth River (2-SBE006.26, 2-SBE004.61, 2-SBE002.88 and 02-SBE001.53) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.

The cause of the Tributyltin standard exceedances is the presence of Tributyltin compounds in excess of the chronic standard (0.001ug/l) in 100% of observations.

IMPAIRMENT SOURCE: Commercial port activities

The Southern Branch Elizabeth River monitoring stations are located throughout the mainstem from the area of the I-64 crossing (Deep Creek confluence) to the mouth. This segment supports considerable commercial vessel traffic with tributyltin hull coatings. Ship repair facilities bordering this segment may service vessels with tributyltin hull coatings, per provisions contained in their VPDES permits.

The specific source of the tributyltin standard violations is believed to be commercial port activities.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake

STREAM NAME: Deep Cr. tributary to Southern Branch Elizabeth Ri

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.5 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of monitoring station @ RM 1.04.

RIVER MILE: 1.04

LATITUDE: 36.75140 **LONGITUDE:** -76.33280

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with Southern Br. Elizabeth R.

RIVER MILE: 0.00

LATITUDE: 36.75710 **LONGITUDE:** -76.29860

Segment begins one-half mile upstream of monitoring station and extends to mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Exceedance of fish tissue screening value for PCBs in seven fish species collected in 1998 & 2000 at station (2-DEC000.54) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report. Cause of the elevated fish tissue levels of PCBs is unknown, but may be related to sediment PCB contamination at the same site. Cause of the sediment PCB contamination is also unknown.

IMPAIRMENT SOURCE: Unknown

The Deep Creek monitoring station (2-DEP000.54) is located near the confluence with the Southern Branch Elizabeth R. The land use in the watershed is primarily industrial shipping/shipbuilding with moderate urban/residential. The watershed potentially receives inputs from wetlands areas and storm water runoff associated with the surrounding residential area/urban area. In proximity to the monitoring site is a coal powered power plant (VPDES VA0004081: Chesapeake Energy Center) and roadway runoff. The specific source of the elevated sediment and fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake

STREAM NAME: Southern Br, Elizabeth R @ VA Power

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.45 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the I-64 crossing, near Deep Creek.

RIVER MILE: 6.86

LATITUDE: 36.75792 **LONGITUDE:** -76.29697

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Gillmerton Bridge.

RIVER MILE: 5.48

LATITUDE: 36.77508 **LONGITUDE:** -76.29540

Segment begins at the I-64 crossing (near Deep Creek) and ends at the Gillmerton Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of standard for dissolved oxygen were recorded at station (2-SBE006.26,) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the depressed dissolved oxygen concentrations is unknown, exceedances occur during summer months.

IMPAIRMENT SOURCE: Unknown

The subject Southern Branch monitoring station is located adjacent to the Virginia Power Plant in Portsmouth. The land use in the watershed is primarily industrial shipping/shipbuilding with dense urban/residential. The watershed potentially receives inputs from storm water runoff associated with the surrounding residential area/urban area. The specific source of the depressed oxygen concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake

STREAM NAME: St.Julian Creek, tributary to Southern Branch Eliza

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-01-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 1.10 miles upstream from station 2-STJ000.81.

RIVER MILE: 1.91

LATITUDE: 36.78924 **LONGITUDE:** -76.33726

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with the Southern Branch Elizabeth River

RIVER MILE: 0.00

LATITUDE: 36.77950 **LONGITUDE:** -76.31025

Segment begins 1.10 miles upstream of monitoring station @ RM 1.91 and extends downstream to the mouth (confluence with the Southern Branch Elizabeth River).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PBCs

Sufficient exceedances of fish tissue screening value for PCBs in fish samples (Shad, Striped Bass) collected in 2001 at station (2-STJ000.81) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (2-STJ000.81) is located south of the US Naval Ammunition Depot. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The specific source of the elevated fish tissue PCBs concentration is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Norfolk

STREAM NAME: Eastern Branch (Lower), Elizabeth River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-02-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.58 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at confluence of Broad Creek with Eastern Branch.

RIVER MILE: 4.00

LATITUDE: 36.83920 **LONGITUDE:** -76.22680

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with mainstem Elizabeth R.

RIVER MILE: 0.0

LATITUDE: 36.84115 **LONGITUDE:** -76.28748

Segment begins at confluence of Broad Creek downstream to mainstem.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Tributyltin, Fish Tissue - PCBs

Sufficient exceedances of the standard for Fecal Coliform Bacteria were recorded at DEQ's station on the Eastern Branch (2-EBE002.98) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. EPA also required listing of this segment for Fecal Coliform due to 1998 303d Consent Decree & 10.3% violation rate at (2-EBE000.40). The cause of the elevated Fecal Coliform bacteria concentrations is unknown.Sufficient exceedances of Virginia's chronic water quality standard for Tributyltin were recorded at monitoring stations on the Eastern Branch Elizabeth River (2-EBE000.40, 2-EBE001.64) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.
The cause of the Tributyltin standard exceedances is the presence of water column Tributyltin compounds in excess of the chronic standard (0.001ug/l) in 100% of observations.Exceedance of criteria based fish tissue value for PCBs in fish samples (Croaker,Gizzard Shad, Spot) collected in 2002 at station (2-EBE001.20) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Commercial port activities, Unknown

This Eastern Branch Elizabeth River segment supports considerable commercial vessel traffic with tributyltin hull coatings. Ship repair facilities bordering this segment may service vessels with tributyltin hull coatings, per provisions contained in their VPDES permits. This segment also supports considerable commercial vessel traffic with tributyltin hull coatings.The specific source of the tributyltin standard violations is believed to be commercial port activities. The watershed potentially receives inputs from storm water runoff associated with the surrounding residential/urban area. The specific source of the elevated PCBs concentrations in fish tissue is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk

STREAM NAME: Broad Creek

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-02-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of Route 58 Bridge.

RIVER MILE: 3.25

LATITUDE: 36.86965 **LONGITUDE:** -76.21363

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with the Eastern Branch Elizabeth River.

RIVER MILE: 0.00

LATITUDE: 36.84176 **LONGITUDE:** -76.22645

Segment begins one-half mile upstream of Route 58 Bridge downstream to the mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004), Dissolved Oxygen, Fish Tissue - PCBs

Sufficient exceedances of the standard for Fecal Coliform & Enterococci (2004) bacteria were recorded at station on Broad Creek (02-BRO001.35) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. Sufficient exceedances of standard for dissolved oxygen were recorded at two stations on Broad Cr. (2-BRO001.35, 2-BRO002.95) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform & Enterococci (2004) bacteria standard violation is the presence of enteric bacteria. The cause of the depressed dissolved oxygen concentrations is unknown. Exceedance of criteria based fish tissue value for PCBs in fish samples (Croaker,Gizzard Shad, Spot, Striped Bass) collected in 2002 at station (2-BRO001.35) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR. The source of the enteric bacteria and depressed dissolved oxygen causing the standard violations is currently unknown. The source of the elevated fish tissue levels of PCBs is unknown.
Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake

STREAM NAME: Indian River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-02-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters.

RIVER MILE: 2.70

LATITUDE: 36.80880 **LONGITUDE:** -76.24000

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with the Eastern Branch Elizabeth River.

RIVER MILE: 0.00

LATITUDE: 36.83450 **LONGITUDE:** -76.24220

Segment begins at the headwaters and extends to the mouth, confluence with the Eastern Branch Elizabeth River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station on Indian Creek (02-IND000.98) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk, Portsmouth

STREAM NAME: Elizabeth River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-03-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the start of the mainstem Elizabeth River.

RIVER MILE: 7.80

LATITUDE: 36.84080 **LONGITUDE:** -76.29130

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends parallel with the downstream northeast corner of the Craney Island Containment Facility.

RIVER MILE: 0.20

LATITUDE: 36.89300 **LONGITUDE:** -76.32940

Segment begins at the origin of the main stem Elizabeth River (confluence of the Eastern and Southern Branches) and extends downstream to parallel with the downstream northeast corner of the Craney Island Containment Facility

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Tributyltin

Sufficient exceedances of the chronic water quality standard (at 100% frequency) for Tributyltin were recorded at monitoring stations on the main stem Elizabeth River (02-ELI002.00, 02-ELI003.17, and 02-ELI006.33) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the Tributyltin chronic standard exceedances is the presence of Tributyltin compounds in excess of the standard (0.001ug/l).

IMPAIRMENT SOURCE: Commercial port activities

The main stem Elizabeth River monitoring stations are located at the entrance to the Scott Creek channel (02-ELI002.00), at the Lamberts Point coal piers (02-ELI003.17), and at Buoy #18 at Tanner Point (02-ELI006.33). This segment supports considerable commercial vessel traffic with tributyltin hull coatings. Ship repair facilities bordering this segment may service vessels with tributyltin hull coatings, per provisions contained in their VPDES permits. This watershed is ranked high priority for potential NPS pollution by DCR.

The specific source of the tributyltin standard violations is believed to be commercial port activities.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Portsmouth

STREAM NAME: Western Branch, Elizabeth R (Upper)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-04-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.71 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters.

RIVER MILE: 8.50

LATITUDE: 36.78998 **LONGITUDE:** -76.40943

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with Sterns Creek.

RIVER MILE: 3.50

LATITUDE: 36.83784 **LONGITUDE:** -76.38322

Segment begins at headwaters and ends at confluence with Sterns Creek..

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform & Enterococci Bacteria were recorded at DEQ's ambient water quality monitoring station on the Western Branch (2-WBE004.44) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The land use in the watershed is primarily high density urban/residential. The watershed potentially receives inputs from wetlands areas and storm water runoff associated with the surrounding residential area/urban area. The specific source of the elevated bacteria concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Chesapeake, Portsmouth

STREAM NAME: Western Branch, Elizabeth R

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-04-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.81 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters.

RIVER MILE: 8.50

LATITUDE: 36.78998 **LONGITUDE:** -76.40943

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth (confluence with Elizabeth River).

RIVER MILE: 0.00

LATITUDE: 36.85798 **LONGITUDE:** -76.33853

Segment begins at headwaters and ends at confluence with Sterns Creek..

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Sufficient exceedance of criterion based fish tissue value for PCBs at the following monitoring stations (2-WBE002.11 & 2-WBE006.18) to evaluate this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report (segment expanded in 2004 upstream using station @ RM 6.18).The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The land use in the watershed is primarily high density urban/residential. The watershed potentially receives inputs from wetlands areas and storm water runoff associated with the surrounding residential area/urban area. The source of the elevated fish tissue levels of PCBs is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk

STREAM NAME: Lafayette River

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-05-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.57 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters, upstream of Tidewater Drive.

RIVER MILE: 7.50

LATITUDE: 36.86493 **LONGITUDE:** -76.25891

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at downstream terminus, confluence with Elizabeth River.

RIVER MILE: 0.00

LATITUDE: 36.90293 **LONGITUDE:** -76.31833

Segment begins at headwaters, upstream of Tidewater Drive and ends at downstream terminus, confluence with Elizabeth River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Benthic biological monitoring at randomly located stations (segment LAFMHa) indicated benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the General Standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown

CBP B-IBI random station monitoring for B-IBI, source of impairment is unknown. The land use in the watershed is primarily urban/residential. Extensive sedimentation is present and frequent dredging occurrs.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk

STREAM NAME: Lafayette River & Tributaries (Upper)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-05-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.78 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 460 Bridge.

RIVER MILE: 4.1

LATITUDE: 36.88866 **LONGITUDE:** -76.28715

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Rt 337 (Hampton Blvd) bridge

RIVER MILE: 1.72

LATITUDE: 36.90541 **LONGITUDE:** -76.30527

Segment begins at the Rt 460 Bridge and ends at the Rt 337 (Hampton Blvd) bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004), Fish Tissue - PCBs

Sufficient exceedances of the standard for Fecal Coliform & Enterococci (2004) bacteria were recorded at station (02-LAF003.83) in main stem Lafayette R. to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform & Enterococci (2004) bacteria standard violation is the presence of enteric bacteria. Exceedance of criteria based fish tissue value for PCBs in fish samples (Croaker,Gizzard Shad, Spot,Striped Bass) collected in 2002 at station (2-LAF003.00) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2004 305(b) report. The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. The cause of the elevated fish tissue levels of PCBs is unknown. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Norfolk

STREAM NAME: Lafayette River (Mouth)

HYDROLOGIC UNIT: 02080208

TMDL ID: VAT-G15E-05-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.62 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 337 (Hampton Blvd. bridge).

RIVER MILE: 1.72

LATITUDE: 36.90541 **LONGITUDE:** -76.30527

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth, confluence with mainstem Elizabeth River.

RIVER MILE: 0.00

LATITUDE: 36.90620 **LONGITUDE:** -76.31635

Segment begins at the Rt 337 (Hampton Blvd. bridge) ends at the mouth, confluence with mainstem Elizabeth River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Tributyltin

Sufficient exceedances of Virginia's chronic water quality standard for Tributyltin were recorded at monitoring station (2-LAFE001.15) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report.
The cause of the Tributyltin standard exceedances is the presence of water column Tributyltin compounds in excess of the chronic standard (0.001ug/l) in 100% of observations.

IMPAIRMENT SOURCE: Commercial port activities

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Nelson

STREAM NAME: Montebello Spring Branch

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.02 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Montello Fish Cultural Station

RIVER MILE: 0.02

LATITUDE: 37.85028 **LONGITUDE:** -79.13028

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Mill Creek

RIVER MILE: 0.00

LATITUDE: 37.85000 **LONGITUDE:** -79.13000

Segment begins at the Montebello State Trout Cultural Station discharge and continues downstream to the confluence with Mill Creek .

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting 1998, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) 1998, pH

2-XXM000.01 - 2 pH values were below the minimum standard out of 3 samples during the 2004 assessment cycle

A benthic survey in the Spring of 1995 indicated severely impaired waters below the Montebello State Trout Hatchery discharge. As a result the 0.02 miles of the stream below the discharge was assessed as not-supporting the Clean Water Act's Aquatic Life Use Support goal for the 1998 305(b) report. The cause of the impairment is organic enrichment and solids deposition. A TMDL has been completed and approved by EPA for this parameter.

IMPAIRMENT SOURCE: PS - Trout Farm - Montebello 1998, Unknown

The source of the pH violations is not known.

The source of the severe benthic impairment is the Trout Cultural Station.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Nelson

STREAM NAME: Hat Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H09R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.61 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.61

LATITUDE: 37.85122 **LONGITUDE:** -78.91001

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Tye River confluence

RIVER MILE: 0.00

LATITUDE: 37.74884 **LONGITUDE:** -78.97883

Segment begins at the headwaters and ends at the Tye River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-HAT000.14 - 4 fecal coliform violations out of 12 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be from NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Amherst, Nelson

STREAM NAME: Piney River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.04 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.40

LATITUDE: 37.79056 **LONGITUDE:** -79.11806

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Rt 151 Bridge.

RIVER MILE: 0.00

LATITUDE: 37.70250 **LONGITUDE:** -79.02806

Segment begins at the headwaters and ends at the Rt 151 Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-PNY005.29 - 6 fecal coliform violations out of 59 samples during the 2002 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Nelson

STREAM NAME: Rucker Run

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 18.39 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 18.39

LATITUDE: 37.78865 **LONGITUDE:** -78.92314

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Tye River confluence

RIVER MILE: 0.00

LATITUDE: 37.64484 **LONGITUDE:** -78.83730

Segment begins at the headwaters and ends at the Tye River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RKR000.02 - 2 fecal coliform violations out of 13 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham, Nelson

STREAM NAME: Tye River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.49 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Buffalo River confluence

RIVER MILE: 7.49

LATITUDE: 37.62299 **LONGITUDE:** -78.89655

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.62310 **LONGITUDE:** -78.80520

Segment begins at the Buffalo River confluence and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-TYE000.30 - 6 fecal coliform violations out of 42 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Nelson

STREAM NAME: South Fork Rockfish River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.41 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.41

LATITUDE: 37.91434 **LONGITUDE:** -78.95952

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the North Fork Rockfish River confluence

RIVER MILE: 0.00

LATITUDE: 37.90399 **LONGITUDE:** -78.83310

Segment begins at the headwaters and ends at the North Fork Rockfish River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RFS001.00 - 5 fecal coliform violations out of 18 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Totier Creek Reservoir

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 66 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

2-TOT001.01 - 2 DO violations out of 3 samples above the thermocline.

IMPAIRMENT SOURCE: Nutrient enrichment from NPS

The source is nutrient enrichment from non-point sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Totier Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.29 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.29

LATITUDE: 37.82222 **LONGITUDE:** -78.53194

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.78417 **LONGITUDE:** -78.49889

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-TOT002.61 - 13 fecal coliform violations out of 49 samples during the 2002 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Little Georgia Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.03 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 6.03

LATITUDE: 37.82222 **LONGITUDE:** -78.53194

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.78417 **LONGITUDE:** -78.49889

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-LTD000.96 - 5 fecal coliform violations out of 19 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Buckingham

STREAM NAME: Ballinger Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.82 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.82

LATITUDE: 37.83585 **LONGITUDE:** -78.62861

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.76263 **LONGITUDE:** -78.63855

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-BLR003.00 - 3 fecal coliform violations out of 13 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buckingham

STREAM NAME: Rock Island Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H17R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.84 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.84

LATITUDE: 37.67481 **LONGITUDE:** -78.59370

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.76244 **LONGITUDE:** -78.54014

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RKI003.40 - 3 fecal coliform violations out of 19 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: North Fork Hardware River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.42 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 10.42

LATITUDE: 38.00014 **LONGITUDE:** -78.62790

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the South Fork Hardware River confluence

RIVER MILE: 0.00

LATITUDE: 37.91744 **LONGITUDE:** -78.55120

Segment begins at the headwaters and ends at the South Fork Hardware River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RKI003.40 - 3 fecal coliform violations out of 19 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is believed to be Non-Point Source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Fluvanna

STREAM NAME: Hardware River

HYDROLOGIC UNIT: 02080203

TMDL ID: VAV-H19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 23.03 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 23.03

LATITUDE: 37.91750 **LONGITUDE:** -78.55111

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.73750 **LONGITUDE:** -78.40222

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-HRD011.57 - 8 fecal coliform violations out of 49 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source of the fecal coliform is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Lake Albemarle

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H23L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 40 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

2-SIN000.44 - 31 DO violations out of 38 samples below the thermocline. 2-SIN000.44 - 2 pH violations out of 7 samples above the thermocline.

IMPAIRMENT SOURCE: Thermal stratification and nutrient enrichment from NPS, Unknown

The source of the DO impairment is natural thermal stratification exacerbated by nutrient enrichment from non-point sources. The source of the pH impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Broad Axe Creek

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H23R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.94 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 1.94

LATITUDE: 38.02444 **LONGITUDE:** -78.63844

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Mechums River confluence

RIVER MILE:

LATITUDE: 38.03441 **LONGITUDE:** -78.66606

Segment begins at the headwaters and ends at the Little Ivy Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-BRX000.66 - Moderately Impaired Benthic assessment during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: Beaver Creek

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H23R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.26 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 9.91

LATITUDE: 38.09300 **LONGITUDE:** -78.71896

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Public Water Supply Reservoir

RIVER MILE: 2.65

LATITUDE: 38.07084 **LONGITUDE:** -78.65207

Segment begins at the headwaters and ends at the Public Water Supply Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-BVR005.70 -2 fecal coliform violations out of 16 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Nelson

STREAM NAME: Mechums River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H23R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.06 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 24.50

LATITUDE: 37.97718 **LONGITUDE:** -78.80871

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Lickinghole Creek confluence

RIVER MILE: 10.44

LATITUDE: 38.06272 **LONGITUDE:** -78.64712

Segment begins at the headwaters and ends at the Lickinghole Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-MCM018.92 - Had a Moderately Impaired Benthic assessment during the 2004 assessment cycle. The exact cause of the impairment is not know.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: North Fork Moormans River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H24R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.52 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 12.52

LATITUDE: 38.21825 **LONGITUDE:** -78.71893

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the South Fork Moormans River confluence.

RIVER MILE: 0.00

LATITUDE: 38.13819 **LONGITUDE:** -78.74795

Segment begins at the headwaters and ends at the South Fork Moormans River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

USGS 0203143670 - 2 Dissolved Oxygen values were below the minimum Dissolved Oxygen standard during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle

STREAM NAME: N.F. Rivanna River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H27R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.38 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Preddy Creek

RIVER MILE: 10.38

LATITUDE: 38.13000 **LONGITUDE:** -78.40000

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of NF & SF Rivanna R.

RIVER MILE: 0.00

LATITUDE: 38.07417 **LONGITUDE:** -78.44028

Segment begins at the N.F. Rivanna River's confluence with Preddy Creek and continues downstream to its confluence with the S.F. Rivanna River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

DEQ's biological monitoring station at river mile 2.64 indicated moderate impairment. As a result 6.35 stream miles were assessed as not supporting the Clean Water Act's Aquatic Life Use Support goal for the 1998 305(b) report. The exact cause of the moderately impaired rating is unknown. The stream was not sampled during the 2002 or 2004 assessment periods.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Charlottesville

STREAM NAME: Rivanna River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H28R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.42 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 42.33

LATITUDE: 38.07278 **LONGITUDE:** -78.43944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Buck Island Creek

RIVER MILE: 28.91

LATITUDE: 37.96000 **LONGITUDE:** -78.37000

Segment begins at the confluence of the North & South Rivanna Rivers and continues downstream to the Rivanna Rivers confluence with Buck Island Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting - 1998

IMPAIRMENT CAUSE: General Standard (Benthic) 1998

DEQ's biological monitoring station at river mile 35.91 indicated moderate impairment. Therefore 13.42 miles of this stream was assessed as not supporting the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. This stream was not sampled during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Urban 1998

The source of the benthic impairment is believed to be NPS urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Charlottesville

STREAM NAME: Meadow Creek

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H28R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.62 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.62

LATITUDE: 38.05528 **LONGITUDE:** -78.49611

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Rivanna River confluence

RIVER MILE: 0.00

LATITUDE: 38.04528 **LONGITUDE:** -78.45444

Segment begins at the headwaters and ends at the Rivanna River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-MWC000.60 - 7 fecal coliform violations out of 18 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Urban

The source is believed to be NPS Urban Runoff.

The source of the benthic ratings is not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Charlottesville

STREAM NAME: Moores Creek X-Trib

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H28R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.57 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 1.57

LATITUDE: 38.02777 **LONGITUDE:** -78.51240

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Moores Creek confluence

RIVER MILE: 0.00

LATITUDE: 38.01538 **LONGITUDE:** -78.49270

Segment begins at the headwaters and ends at the Moores Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-XRC001.15- Moderately Impaired Benthic assessment during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS - Urban

The source is believed to be NPS Urban Runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Albemarle, Fluvanna

STREAM NAME: Rivanna River

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H29R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.21 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Moores Creek confluence

RIVER MILE: 39.48

LATITUDE: 38.07278 **LONGITUDE:** -78.43944

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Mechunk Creek

RIVER MILE: 26.27

LATITUDE: 37.96000 **LONGITUDE:** -78.37000

Segment begins at the confluence of Moores Creek and continues downstream to the confluence with Mechunk Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-RVN033.65 - 6 fecal coliform violations out of 51 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS - Urban

The source of the fecal coliform is believed to be NPS urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Fluvanna

STREAM NAME: Middle Fork Cunningham Creek

HYDROLOGIC UNIT: 02080204

TMDL ID: VAV-H32R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.47 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 5.54

LATITUDE: 37.87503 **LONGITUDE:** -78.41500

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with unnamed tributary 0.5 miles downstream of the Rt 688 bridge.

RIVER MILE: 3.07

LATITUDE: 37.85955 **LONGITUDE:** -78.33318

Segment begins at the headwaters and continues downstream to the confluence with an unnamed tributary 0.5 miles dowstream of the Rt 688 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-CNM003.82 - Moderately Impaired Benthic assessment during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Natural

The source is Natural.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bath

STREAM NAME: Jackson River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAV-I01R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 11.21 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the confluence with Muddy Run

RIVER MILE: 68.02

LATITUDE: 38.11463 **LONGITUDE:** -79.79360

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Back Creek at Lake Moomau

RIVER MILE: 56.81

LATITUDE: 38.02857 **LONGITUDE:** -79.90065

Begins at the confluence with Muddy Run and continues downstream to the confluence with Back Creek at Lake Moomau.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, 1

IMPAIRMENT CAUSE: Temperature

2-JKS058.60 - Had 13 Temperature values exceed the standard out of 51 samples during the 2004 assessment cycle.

2-JKS067.00 - Had 2 Temperature values exceed the standard out of 18 samples during the 2004 assessment cycle

IMPAIRMENT SOURCE: Natural

The source is natural.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bath

STREAM NAME: Cowpasture River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAV-I14R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 26.49 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Bullpasture River confluence

RIVER MILE: 64.88

LATITUDE: 38.18924 **LONGITUDE:** -79.56375

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Stuart Run confluence

RIVER MILE: 38.39

LATITUDE: 37.99491 **LONGITUDE:** -79.63193

Segment begins at the confluence with the Bullpasture River and continues downstream to the confluence with Stuart Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-CWP050.66 - 2 fecal coliform violations out of 16 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt, Rockbridge

STREAM NAME: Cedar Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAV-I28R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.52 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 11.52

LATITUDE: 37.62972 **LONGITUDE:** -79.63778

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the James River confluence

RIVER MILE: 0.00

LATITUDE: 37.60750 **LONGITUDE:** -79.54250

Segment begins at the headwaters and ends at the James River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-CEC000.04 - 2 fecal coliform violations out of 14 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Augusta

STREAM NAME: Calfpasture River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I29R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 12.76 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 39.34

LATITUDE: 38.34042 **LONGITUDE:** -79.28957

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the confluence with Tizzle Branch.

RIVER MILE: 26.58

LATITUDE: 38.20026 **LONGITUDE:** -79.37670

Segment begins at the headwaters and ends at the confluence with Tizzle Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

2-CFP029.18 - 4 pH violations out of 9 samples and 2-CFP036.20 - 4 pH violations out of 22 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: Natural Conditions

The source is natural due to an improper standard.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Rockbridge

STREAM NAME: Little Calfpasture River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I32R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.83 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Lake Merriweather Dam

RIVER MILE: 0.83

LATITUDE: 37.96028 **LONGITUDE:** -79.45861

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Calfpasture River

RIVER MILE: 0.00

LATITUDE: 37.94944 **LONGITUDE:** -79.45972

Segment begins at the Lake Merriweather Dam and continues downstream to the confluence with the Calfpasture River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

2-LCF000.76 had a severely impaired benthic rating and 2-LCF000.02 had a moderately impaired benthic rating during the 2004 assessment period. The exact cause of the impaired ratings is not known but is believed to be due to excessive solids.

IMPAIRMENT SOURCE: Dam Maintenance

The source of the silt is from the annual maintenance activities performed on the dam.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Augusta

STREAM NAME: Little Calfpasture River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I32R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.46 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwater

RIVER MILE: 18.1

LATITUDE: 38.14687 **LONGITUDE:** -79.27785

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Smith Creek

RIVER MILE: 7.64

LATITUDE: 38.04932 **LONGITUDE:** -79.39245

Segment begins at the headwaters and continues downstream to the confluence with Smith Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-LCF013.93 - 2 fecal coliform violations out of 12 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Rockbridge

STREAM NAME: Cedar Grove Branch

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I33R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.66 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 4.66

LATITUDE: 37.91549 **LONGITUDE:** -79.32986

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Maury River

RIVER MILE: 0.00

LATITUDE: 37.88241 **LONGITUDE:** -79.38585

Segment begins at the headwaters of Cedar Grove Branch and continues downstream to the confluence with the Maury River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-CGB001.80 - 7 fecal coliform violations out of 27 samples during the 2004 assessment period.

IMPAIRMENT SOURCE: NPS

The source is NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Augusta, Rockbridge

STREAM NAME: Hays/Moffatts Creeks

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 18.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 18.61

LATITUDE: 38.02927 **LONGITUDE:** -79.26195

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Maury River

RIVER MILE: 0.00

LATITUDE: 37.89806 **LONGITUDE:** -79.40694

Segment begins at the headwaters of Hays & Moffatts Creeks and continues downstream to the confluence with the Maury River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (2004)

2-HYS001.41 - 8 fecal coliform violations out of 27 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: NPS

The source is of the fecal impairment is believed to be NPS runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Lexington, Rockbridge

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I35R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 8.6 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 8.60

LATITUDE: 37.86667 **LONGITUDE:** -79.32167

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with the Maury River

RIVER MILE: 0.00

LATITUDE: 37.78972 **LONGITUDE:** -79.41611

Segment begins at the headwaters and continues downstream to the confluence with the Maury River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

2-MIS000.04 - 6 temperature violations out of 27 samples during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Natural

Natural

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Augusta

STREAM NAME: Saint Marys River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I36R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.44 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Begins at the headwaters

RIVER MILE: 7.31

LATITUDE: 37.93139 **LONGITUDE:** -79.04750

DOWNSTREAM LIMIT:

DESCRIPTION: 5.44 miles downstream of the headwaters

RIVER MILE: 1.87

LATITUDE: 37.92472 **LONGITUDE:** -79.13111

The segment begins at the headwaters and continues downstream for 5.44 miles.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

USFS - 5095 - Had a severely impaired benthic rating during the 2002 assessment period. This station was not surveyed during the 2004 assessment cycle.

IMPAIRMENT SOURCE: Atmospheric Deposition

The source is believed to be atmospheric deposition.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buena Vista, Rockbridge

STREAM NAME: Maury River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I37R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.57 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence with Indian Gap Run

RIVER MILE: 11.50

LATITUDE: 37.72778 **LONGITUDE:** -79.36250

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Buffalo Creek

RIVER MILE: 4.93

LATITUDE: 37.67639 **LONGITUDE:** -79.42528

The segment begins at the confluence with Indian Gap Run and continues downstream to the confluence with Buffalo Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Attachment B

IMPAIRMENT CAUSE: General Standard (Benthic)

2-MRY005.58 - Benthic Monitoring during the 1988 assessment cycle indicated the Aquatic Life Use was fully supporting. However, EPA allowed this segemnt to be added to Attachment B of the Consent Decree. Follow up sampling was not done therefore the segment must be listed on the 2002 303(d) list.

IMPAIRMENT SOURCE: None

There is no real impairment so there is no source.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Buena Vista, Rockbridge

STREAM NAME: Maury River

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I37R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.48 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence with South River

RIVER MILE: 15.98

LATITUDE: 37.76749 **LONGITUDE:** -79.38483

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Indian Gap Run

RIVER MILE: 11.50

LATITUDE: 37.67639 **LONGITUDE:** -79.42528

The segment begins at the confluence with Indian South River and continues downstream to the confluence with Indian Gap Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: PCBs

2-MRY011.23 - PCBs in three species of fish in 2001.

IMPAIRMENT SOURCE: Unknown

Unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Rockbridge

STREAM NAME: Buffalo Creek

HYDROLOGIC UNIT: 02080202

TMDL ID: VAV-I38R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.33 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Begins at the Rt 610 bridge

RIVER MILE: 9.33

LATITUDE: 37.72056 **LONGITUDE:** -79.60083

DOWNSTREAM LIMIT:

DESCRIPTION: Ends at the Rt 608 bridge

RIVER MILE: 1.00

LATITUDE: 37.68611 **LONGITUDE:** -79.42547

Segment begins at the Rt 610 bridge over Buffalo Creek and continues downstream to the Rt 608 bridge

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

2-BLD001.00 - 2 fecal coliform violations out of 16 samples

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

The primary source of the fecal coliform bacteria is from NPS agricultural and wildlife runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bedford

STREAM NAME: Reed Creek

HYDROLOGIC UNIT: 02080203

TMDL ID: VAW-H01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.27 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters in Jefferson National Forest.

RIVER MILE: 12.27

LATITUDE: 37.49806 **LONGITUDE:** -79.44470

DOWNSTREAM LIMIT:

DESCRIPTION: Reed Creek mouth on James R. below Big Island.

RIVER MILE: 0.00

LATITUDE: 37.52444 **LONGITUDE:** -79.35011

The upper limit is the headwaters in the Jefferson National Forest on the Sedalia Quad. The segment ends at the mouth of Reed Creek on the James River below Big Island, Virginia. The segment spans the Snowden, Sedalia and Big Island Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The Reed Creek Total Maximum Daily Load (TMDL) Bacteria Load Duration Analysis Study is underway with an anticipated completion in 2004. Three stations are located in the impaired segment. 2-RED000.16 (Off Route 501), the original listing station, and two additional stations 2-RED005.36 (Route 637 Bridge) and 2-RED008.32 (Route 122 Bridge). Escherichia coli (E. coli) data from each station is currently insufficient to assess.

Fecal coliform bacteria in the waters cause nonsupport of the recreational use at 2-RED000.16. Eight of 19 samples exceed the instantaneous criterion of 400 cfu/100 ml. The range of exceeding values is 500 to 3600 cfu/100 ml. The segment remains listed as in 1998.

Station 2-RED005.36 finds three of three fecal coliform bacteria samples exceed the instantaneous criterion. The exceeding values range from 490 to 1700 cfu/100 ml. Station 2-RED008.32 records one of three samples exceeding the criterion at greater than 800 cfu/100 ml, although insufficient to assess.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The impairment source is believed to be due to agricultural / wildlife nonpoint source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany, Botetourt, Covington

STREAM NAME: Jackson River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 25.45 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Just downstream of the Covington water intake.

RIVER MILE: 25.45

LATITUDE: 37.81639 **LONGITUDE:** -79.98904

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of the Jackson and Cowpasture Rivers.

RIVER MILE: 0.00

LATITUDE: 37.78417 **LONGITUDE:** -79.77614

The segment's upstream limit is on the Jackson River just below the Covington City Water Treatment Plant coursing downstream to the confluence of the Jackson and Cowpasture Rivers.

Note: The original 1998 VAW-I04R and VAW-I09R listed segments were combined into one segment in 2002. The Recreational use fecal coliform bacteria impairment was extended upstream 1.24 miles in VAW-I04R in 2002.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria - 3.38 mi., General Standard (Benthic) - 24.21 mi., Dissolved Oxygen - 11.21 mi.

The original 1998 VAW-I04R and VAW-I09R listed segments were combined into one segment in 2002. The recreational use fecal coliform bacteria impairment was extended upstream by 1.24 miles in the 2002 cycle in VAW-I04R.

2004 Assessment station locations are:
2-JKS000.38 - Rt. 727 Bridge - near Iron Gate (I09R)
2-JKS006.67 - Low Water Bridge - near Dabney Lancaster CC (I09R)
2-JKS011.92 - Island Ford Bridge, Rt. 1101 - (I09R) SS
2-JKS013.29 - Off Rt. 696 above Lowmoor (I09R)
2-JKS013.45 - Island Ford Cave above Lowmoor - (I09R) SS
2-JKS015.80 - Between I-64 & CSX Railroad N/Mallow - (I09R) SS
2-JKS017.03 - Byrd's Farm #2 - (I09R) SS
2-JKS017.30 - Byrd's Farm East of Covington - (I09R) SS
2-JKS018.68 - Rt. 18 Bridge at Covington (I09R - 1999 Federal Consent Decree Attachment B station for FC)
2-JKS018.68 - Rt. 18 Bridge at Covington - (I09R) SS Benthic
2-JKS021.06 - S. Rayon Dr. Bridge, Covington - (I09R) SS
2-JKS022.15 - Industrial Park behind Wal-Mart - (I09R) SS
2-JKS022.78 - Fudge's Bridge, Rt. 154, Covington - (I09R) SS
2-JKS023.32 - Swinging Bridge (I09R)
2-JKS023.61 - City Park - Covington at gage (I09R)
2-JKS023.61 - City Park - Covington at gage - (I09R) SS Benthic

Fact Sheets for Category 5 Waters

2-JKS024.20 - Rt. 60 Bridge, Covington - SS (I09R - Also coded 2-JKS024.14)
2-JKS026.01 - Covington Water Filtration Plant (I04R) - SS
2-JKS030.65 - Rt. 687 Bridge - Clearwater Park (I04R)

Recreational Use
No exceedances of the fecal coliform bacteria instantaneous criterion of 400 n/100 ml are recorded at 2-JKS030.65 (I04R) in 58 samples. Exceedances of the criterion occur at 2-JKS023.61 (I09R) in 13 of 60 samples over the 2004 five year period. Nonsupport extends from river mile 25.45 (I04R- 1.71 miles) to 22.07 (I09R- 1.67 miles), a total distance of 3.38 miles. WQS require that once a minimum of 12 Escherichia coli (E. coli) data points are collected the bacterial indicator of preference will be E. coli. A discussion of the listing follows.

2-JKS018.68 records only one of 58 samples exceeding the instantaneous criterion meeting the recreational use. Station 2-JKS018.68 is a 1999 Federal Consent Decree Attachment B station for fecal coliform bacteria and was not 2002 303(d) Listed. Past 305(b) reporting cycles in 1994 and 1996 note nonsupport downstream of 2-JKS018.68. 2002 Assessment data at 2-JKS006.67 and 2-JKS000.38 each find two exceedances in 58 samples. All the aforementioned stations support the recreational use.

Mead/Westvaco Corporation performs confirmed phase testing for determining the presence of fecal coliform bacteria. Klebsiella pneumoniae can give false positive results for fecal coliform bacteria in the confirmed phase of testing. The company has extended testing to the completed phase. The completed test is performed on all positive confirmed phase samples. The results of the completed phase test provides more specific data for the presence of true fecal coliform bacteria. Effluent data reported show the majority of confirmed phase positive fecal coliform bacteria counts found are Klebsiella pneumoniae. The company began bacterial water quality monitoring in both the effluent and two downstream sites in 2002.

Past sewage pump station overflows, as well as some overflows at manholes, have been noted both upstream in VAW-I04R and in VAW-I09R. In 1988 Covington City became subject to a consent decree requiring elimination of combined sewer overflows; this work was completed in 1995 and the decree canceled. The City of Covington was subject to a consent order and penalty for an overflow in 1997.

Capital improvements have been made (1995 to 1999) to the collection and storm water systems. These improvements include Parrish Court (1995 & 1998; removal of storm water connections), Parklin Heights (1996), Dry Run (1998), Magazine Street (1998) and downtown sections of the City correcting I&I problems. Roof drains and sump pumps have been disconnected from the sewer system. In 1999 work on manholes in the downtown area was completed.

More recent capital improvements have been completed by Alleghany County for the Clearwater / Interval portion served by Covington. Installation of pump stations at Clearwater Park and Interval are complete as well as construction of an equalization basin and pump station ahead of the Covington Dry Run pump station. Initiation of operations began February 5, 2001. February 6, 2002 Alleghany County provided Submittal of Performance Certification (equipment performance standards verified).

Station 2-JKS023.61 reports no exceedances from 15 observations for Escherichia coli (E. coli- 235 cfu/100 ml WQS instantaneous criterion); these waters are 1998 303(d) listed for fecal coliform bacteria. WQS require the use of E. coli for assessments with 12 observations making this segment a candidate for bacterial 303(d) delisting.

However E. coli monthly collections were made in the period Feb 2000 thru June 2001 during the 4 year drought from 1999-2002. Fecal coliform bacteria observations exceed the 400 cfu/100 ml instantaneous criterion in 13 of 60 samples spanning the Assessemnt data window of Januray 1998 through December 2002. Maximum fecal coliform values are in excess of 8000 cfu/100 ml. Numerous overflows from the collector system in the Covington urban area have been recorded with most occurances during storm events. The lack of E. coli data collections under more average conditions, the magnitude of fecal coliform criterion excursions and reported collector system overflows indicate the impaired status should remain for the 3.38 mile segment. An additional cycle of E. coli data collection will aid in the subsequent continued bacterial listing or de-listing action in 2006.

Aquatic Life Use
General Standard (Benthic): An aquatic life use nonsupport portion extends 2.14 miles on the Jackson from river mile 24.21 (I04R- 0.47 miles) (37°48'01.31" / 079°59'33.79") to 22.07 (I09R- 1.67 miles) due to severe impacts to the benthic community as measured at 2-JKS023.61. Rapid Biological Protocol II (RBP II) surveys report the invertebrate community is dominated by taxa that are tolerant of environments with low dissolved oxygen and high levels of solids (e.g.. Tubificidae, Planariidae, Chironomidae, and Simulidae).

Nonsupport continues 9.07 miles downstream from river mile 22.07 to 13.00 as measured at 2-JKS018.68 (10 RBP II surveys). 2-JKS018.68 shows some improvement relative to the City Park station. However, the benthic community is still dominated by pollution tolerant taxa.

Nonsupport is found at 2-JKS013.29 river miles 13.00 to 5.19 (nine surveys). The Lowmoor station has consistently had lower assessment scores and higher numbers of pollution tolerant organisms. Over the five-year period there is no difference in scores.

And further downstream nonsupport is exhibited at 2-JKS0006.67 (nine surveys) from 5.19 on downstream to the Jackson River confluence with the Cowpasture River. Results from fall surveys may indicate a more stressed benthic community when stream flow is naturally lower and pollution effects more evident.

Impairments to the benthic community are believed due to nutrient and organic enrichment (deposition) for 24.21 miles. Based on ambient station solids data, the nutrients and organics are mainly dissolved.

Dissolved Oxygen: Diurnal swings in dissolved oxygen cause nonsupport of the aquatic life use for a total of 11.21 miles extending from river mile 24.21 (I04R- 0.47 miles) to 13.00 (I09R- 10.74 miles) (37°46'49.59 / 079°55'40.00"). Although there are only six excursions of the

minimum 4.0 mg/l dissolved oxygen (DO) standard in the ambient data for the 2004 Assessment data window multiple excursions are found in dissolved oxygen recorder data.

Ambient and intensive data indicate a diurnal affect. Intensive survey recorder data confirm late summer and early fall diurnal excursions of the minimum DO. A YSI 6000 recorder found 222 exceedances of the minimum from 481 measurements over approximately four days, September 16 through 21 in 1998. The minimum found is 1.22 mg/l on 09/21 at 8:15 AM and the maximum the same day at 12:00 noon 9.64 mg/l. Measurements at 2-JKS023.61 collected outside the monthly sampling program found six of 25 exceedances.

Total phosphorus and sediment screening value results cause all or portions of the Jackson River 303(d) Listed segment to be 'Waters of Concern'. The narrative below provides the reasons for concern.

Total phosphorus: Elevated total phosphorus concentrations are believed one of the causes for dissolved oxygen diurnal depressions. Elevated concentrations are found in the entire 24.21 mile segment. Total phosphorus threshold exceedances extend to the mouth of the Jackson River as measured at 2-JKS000.38 where 25 of 58 total phosphorus samples exceed the 0.20 mg/l screening value. 2-JKS023.61 found 27 of 58, 2-JKS018.68; 9 of 40, 2-JKS013.29; 6 of 10 and 2-JKS006.67, 15 of 49 exceedances of the SV.

Each of the five ambient station arithmetic average total phosphorus concentrations are above the 0.20 mg/l threshold. Concentrations range from 0.24 mg/l at 2-JKS000.38 to 0.29 at 2-JKS023.61 in the 2004 five year data window. Examination of the 2004 maxima show a increase in magnitude from 0.70 to 1.41 mg/l where 2002 maxima show a decrease in magnitude from 0.70 mg/l to 1.20 mg/l versus 2000 Cycle maxima of 2.10 to 3.40 mg/l at the aforementioned stations. In contrast an upstream station 2-JKS030.65 (I04R) reports concentrations below 0.20 mg/l for the five year period. Ambient station solids data indicate the nutrients and organics are mainly dissolved. No total phosphorus SV exceedances were found in tributary data from Dunlap Creek 2-DNP001.98 (I07R) 16 samples, Potts Creek 2-POT000.12 (I11R) 32 samples, or at Wilson Creek 2-WLN010.35 (I09R) 15 samples.

Sediment: The Jackson River from the US 60/220 crossing (37°48'33.81" / 079°50'36.65") downstream to the Jackson and Cowpasture River confluence. A distance of 5.19 miles finds exceedance of the Consensus Based Probable Effects Concentration (PEC, MacDonald et al. 2000) screening value (SV) from a 2000 sediment collection for nickel (Ni, SV= 48.6 ppm, at 49.1 ppm.). 1998 and 2000 sediment collections find exceedances for nickel (Ni, PEC SV of 48.6 ppm at 65.6 and 49.3 ppm. Each of the excursions result in 'Observed Effects' causing these waters to be a 'Water of Concern'.

IMPAIRMENT SOURCE: NPS - Urban, PS - Ind. & Mun. / NPS - Urban, PS - Ind. & Mun. / NPS - Urban

Recreational Use
Previous assessments surmised urban nonpoint source runoff, primarily pump station overflows in watershed I04R, are believed the source for failure to meet the recreational use for previous listings. Additional E. coli bacteria monitoring will aid in deciding the status (eg. list or de-list) of the bacteria impairment in 2006.

Aquatic Life Use
The source of the biological impairment is believed organic deposition due to elevated total phosphorus. The dissolved oxygen impairment is believed due to elevated total phosphorus concentrations causing diurnal depressions. Point source (PS) discharges and urban runoff are believed contributing to the elevated total phosphorus concentrations in the Jackson River.

The source(s) of the sediment metal, nickel (Ni) exceedances are not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany, Bath

STREAM NAME: Cedar Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I05R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.37 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Cedar Creek from an unnamed tributary located 3.43 miles above its mouth.

RIVER MILE: 3.37

LATITUDE: 37.97889 **LONGITUDE:** -79.91073

DOWNSTREAM LIMIT:

DESCRIPTION: Cedar Creek mouth on Jackson River.

RIVER MILE: 0.00

LATITUDE: 37.94306 **LONGITUDE:** -79.94514

Cedar Creek mainstem from its mouth on the Jackson River upstream 3.43 miles. The entire segment is on the Falling Spring Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Exceedances of the 20 °C temperature WQS Class VI criterion are found at station 2-CRE002.37, Rt. 605 Bridge in Bath County. Ten of 43 samples exceed the criterion in these natural trout waters causing nonsupport of the aquatic life use. Exceedances ranged from 20.2 °C in May 1998 to 24 °C in June,15 2000. Exceedances occur primarily in the summer months of June through August.

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The water temperature exceedances are believed to be due to natural conditions. There are no known sources of heat to cause exceedance of the temperature criterion other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany

STREAM NAME: Sweet Springs Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I06R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.69 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Sweet Spring Cr. headwaters at the VA/WVA State Line

RIVER MILE: 2.69

LATITUDE: 37.63778 **LONGITUDE:** -80.24002

DOWNSTREAM LIMIT:

DESCRIPTION: Sweet Springs Cr. mouth on Dunlap Cr.

RIVER MILE: 0.00

LATITUDE: 37.67028 **LONGITUDE:** -80.24094

Sweet Springs Creek mainstem from its confluence with Dunlap Creek to its headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Station 2-SSC000.25 (Route 603 Bridge at Earlehurst) records temperature exceedances of the WQS 21°C criterion for stockable trout waters in three of 18 observations, believed naturally occuring. The maximum exceedance occurs on 7/6/99 at 24 °C. The remaining two exceedances occur on 8/8/00 at 23 °C and 8/05/02 at 23 °C. Each year experienced low stream flow or drought conditions.

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The water temperature exceedances are believed due to natural conditions. There are no known sources of heat to cause exceedance of the temperature criterion other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany

STREAM NAME: Smith Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Above the I-64 Crossing of Smith Creek.

RIVER MILE: 1.19

LATITUDE: 37.82929 **LONGITUDE:** -79.82893

DOWNSTREAM LIMIT:

DESCRIPTION: Smith Creek mouth on the Jackson R.

RIVER MILE: 0.00

LATITUDE: 37.81424 **LONGITUDE:** -79.82458

The impaired waters extend from just above the I-64 crossing of Smith Creek downstream to the Smith Creek mouth on the Jackson River. The entire segment is on the Clifton Forge Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bacteria excursions of the 400 cfu/100 ml instantaneous criterion are found in five of 13 observations at 2-SMH000.08. Fecal coliform values range from less than 100 to 1500 cfu/100 ml. Station 2-SMH000.08 is located on Ridgeway Street in Clifton Forge.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The believed source is urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Bath

STREAM NAME: Wilson Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I09R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 6.6 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Wilson Cr. Headwaters.

RIVER MILE: 15.1

LATITUDE: 37.97556 **LONGITUDE:** -79.81078

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Douthat Lake.

RIVER MILE: 8.50

LATITUDE: 37.90894 **LONGITUDE:** -79.79689

The upper limit of the segment is the headwaters of Wilson Creek extending downstream to the backwaters of Douthat Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Temperature exceeds the WQS natural trout water 20°C criterion in two of 18 observations at 2-WLN010.35. Excursions of the WQS are 21°C each on 6/27/2000 and 8/09/2000. Station 2-WLN010.35 is located at Rt. 629 above the confluence of Dry Run.

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The water temperature exceedances are believed to be due to natural conditions. There are no known sources of heat to cause the exceedances other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Alleghany, Craig

STREAM NAME: Potts Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I10R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 9.51 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Potts Creek from the confluence of Paint Bank Branch.

RIVER MILE: 38.61

LATITUDE: 37.56998 **LONGITUDE:** -80.26173

DOWNSTREAM LIMIT:

DESCRIPTION: Potts Creek at the mouth of Hamilton Branch.

RIVER MILE: 29.10

LATITUDE: 37.64413 **LONGITUDE:** -80.15441

Potts Creek from the confluence of Paint Bank Branch downstream to the mouth of Hamilton Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Aquatic Life Use
Two (9.1 and 9.2 Standard Units) of four pH measurements exceed the alkaline 9.0 SU WQS criterion at 2-POT030.66 (Above the Route 18 Bridge near campsite).

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The exact source(s) of the pH alkaline exceedances are not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: James River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 15.36 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence of the Jackson & Cowpasture Rivers.

RIVER MILE: 346.49

LATITUDE: 37.78417 **LONGITUDE:** -79.77611

DOWNSTREAM LIMIT:

DESCRIPTION: Just above confluence of Craig Creek on the James at river mile 331.55.

RIVER MILE: 331.13

LATITUDE: 37.64583 **LONGITUDE:** -79.81306

The upper limit is the confluence of the Jackson and Cowpasture Rivers at river mile 346.49 near Iron Gate, Va. (Clifton Forge Quad). The lower limit is the mouth of Craig Creek on the James River at river mile 331.55 (Eagle Rock Quad near Gala, Virginia.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Aquatic Life Use
Originally listed in 1998 the segment continues to be impaired based on current Rapid Bioassment Protocol II (RBP II) survey data (seven surveys). The segment brackets biological station 2-JMS345.73 (Rt. 220 Bridge near Gage). This station shows the first discernible sign of improvement in water quality from upstream Jackson River RBP II stations. The station is moderately impaired because Tubificid worms are the dominant organism.

Additional study is required to determine the exact pollutant(s) or pollution causing the impairment. However ambient data from headwater tributary stations indicate the benthic impairment may be the result of nutrient and organic enrichment / solids deposition. Total phosphorus and solids data from 2-JKS000.38 (Rt. 727 Bridge near Iron Gate - VAW-I09R) are sampled monthly. Total phosphorus data from 2-JKS000.38 finds exceedances of the 0.20 mg/l screening value in 25 of 58 samples. These results cause the waters to be a 'Water of Concern'; recorded as an Observed Effect. The data range from <0.01 to 0.70 mg/l. Five of the 58 samples are reported below 0.10 mg/l.

Previous assessments have noted similar exceedance rates at 2-JKS000.38 with much lower excursion rates on tributary streams. The 2002 Assessment found 2-JKS000.38 dissolved solids are nearly 80% greater than 2-CWP002.58. Additionally, quarterly total phosphorus data from 2-JMS326.30 downstream in I24R find two of 16 samples exceeding the total phosphorus screening value of 0.20 mg/l.

Tributaries to the segment are also monitored for phosphorus. Mill (2-MIV000.39-16 samples) and Craig (2-CRG001.20- 25 samples) Creeks report no total phosphorus exceedances. These data in combination suggest the presence of elevated total phosphorus concentrations and that organic solids deposition may be contributing to the benthic impairment in VAW-I18R.

IMPAIRMENT SOURCE: PS - Ind. & Mun. / NPS - Urban

Fact Sheets for Category 5 Waters

Aquatic Life Use
The impairment source is believed due to nutrient and organic deposition attributable to upstream point source (PS) discharges in the Covington/Clifton Forge area as well as contributory urban nonpoint source (NPS) runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I18R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.93 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Just above Rebecca Furnace

RIVER MILE: 4.93

LATITUDE: 37.68099 **LONGITUDE:** -79.74690

DOWNSTREAM LIMIT:

DESCRIPTION: Mill Creek mouth on the James R.

RIVER MILE: 0.00

LATITUDE: 37.68896 **LONGITUDE:** -79.81384

The upper limit of the segment is located just above Rebecca Furnace downstream of Allen Creek extending on downstream to the Mill Creek mouth on the James River at Gala.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Three excursions of the WQS instantaneous crterion of 400 cfu/100 ml are found in 17 samples at 2-MIV000.39 (Route 694 Bridge, Gala). The maximum exceedance is 1300 cfu/100 ml. The remaining two exceedances are 500 cfu/100 ml each.

IMPAIRMENT SOURCE: NPS

Recreational Use
The exact source of the fecal coliform bacteria is not known but is believed to be non-point source related.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Craig Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.78 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Turnpike Cr. mouth on Craig Cr.

RIVER MILE: 65.27

LATITUDE: 37.39533 **LONGITUDE:** -80.21536

DOWNSTREAM LIMIT:

DESCRIPTION: Rt. 311 crossing downstream of Abbott

RIVER MILE: 57.49

LATITUDE: 37.42866 **LONGITUDE:** -80.12924

The upper limit of the segment is at the mouth of Turnpike Creek extending downstream to the Rt. 311 crossing located downstream of the Abbott community.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 2-CRG062.29 (Route 621 Bridge) finds three of 27 fecal coliform bacteria exceedances cause these waters to not meet the WQS instantaneous criterion of 400 cfu/100 ml. The maximum FC found is 1100 cfu/100 ml with the remaining values at 900 and 500.

IMPAIRMENT SOURCE: NPS

Recreational Use
Contributing sources to the impairment could include agriculture, residential and wildlife. The exact contribution of each is not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Meadow Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.53 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream of the Rt. 42 crossing.

RIVER MILE: 2.53

LATITUDE: 37.48082 **LONGITUDE:** -80.13953

DOWNSTREAM LIMIT:

DESCRIPTION: Meadow Cr. mouth on Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.49073 **LONGITUDE:** -80.10206

The upstream extent of the segment is just above the Rt. 42 crossing of Meadow Creek downstream to the Meadow Creek confluence with Craig Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bacteria exceeds the instantaneous WQS criterion of 400 cfu/100 ml in two of 18 samples. 1300 cfu/100 ml is the maximum found in the dataset with the second at 900 cfu/100 ml.

IMPAIRMENT SOURCE: NPS

Recreational Use
The exact source of the fecal coliform bacteria is not known. Two possible contributors could be residential/urban or wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Johns Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Johns Cr. upstream of New Castle near Lovers Leap.

RIVER MILE: 2.19

LATITUDE: 37.50922 **LONGITUDE:** -80.13484

DOWNSTREAM LIMIT:

DESCRIPTION: Johns Cr. mouth on Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.50306 **LONGITUDE:** -80.10270

The upstream end of the segment is near Lovers Leap upstream of New Castle and extends downstream to Johns Creek mouth on Craig Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bactera exceedances are found at 2-JOB000.39 (Rt. 615 Bridge in New Castle) in two of 18 samples. The maximum exceeding value is 1300 cfu/100 ml and the second at 600. Both values are in excess of the WQS instantaneous criterion of 400 cfu/100 ml. The waters do not support the recreational use.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The believed source is urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Barbours Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I22R-01

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 7.07 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Valley Branch mouth on Barbours Cr.

RIVER MILE: 7.07

LATITUDE: 37.54667 **LONGITUDE:** -80.12235

DOWNSTREAM LIMIT:

DESCRIPTION: Barbours Cr. mouth on Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.53000 **LONGITUDE:** -80.03708

Barbours Creek from just downstream of the Rt. 617 and 611 junction at the mouth of Valley Branch on downstream to its mouth on Craig Creek. The entire segment is on the New Castle Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreational Use - Not Supporting, Aquatic Life Use - Not Supported

IMPAIRMENT CAUSE: Bacteria (2004), Temperature (2002)

Recreational Use
The maximum fecal coliform of 1100 cfu/100 ml and a second at 500 both exceed the WQS instantaneous criterion of 400 cfu/100 ml from 18 samples. The fecal coliform impairment is a 2004 addition (Category 5A) to the original 2002 listing for temperature described below.

Aquatic Life Use
Originally listed for temperature in 2002 (Category 5C). The segment remains impaired due to temperature exceedances. Three of eighteen measurements at 2-BAR000.60 (Rt. 614 Bridge) exceed the 20 °C temperature criterion for this natural trout water (WQS Class VI). All exceedances occur in the month of July in the years 1998, 1999 and 2000. The maximum exceedance of 22.3 °C occurs in July 2000.

IMPAIRMENT SOURCE: NPS, Unknown

Recreational Use
Nonpoint source runoff is the believed source although the exact sources are not known.

Aquatic Life Use
The source of the temperature exceedance is believed to be due to solar radiation. There are no known heat sources in the segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Craig

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080101

TMDL ID: VAW-I22R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: The headwaters of Mill Cr.

RIVER MILE: 6.00

LATITUDE: 37.61128 **LONGITUDE:** -80.03243

DOWNSTREAM LIMIT:

DESCRIPTION: Mill Cr. confluence with Craig Cr.

RIVER MILE: 0.00

LATITUDE: 37.56260 **LONGITUDE:** -80.03081

Mill Creek headwaters downstream to its confluence with Craig Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Aquatic Life Use
A US Forest Service site 6515 located approximately 2.90 miles from the Mill Creek mouth on Craig Creek finds the benthic community moderately impaired. A single 1998 MAIS survey score is 10; rating Poor/Fair or moderately impaired.

Additional collections made at 6516 and 6514 downstream of 6515 are outside the 2004 data window. However each of the MAIS surveys found moderate impairment. Based on these results the 2002 assessment noted these waters as 'Water of Concern'. A DEQ cursory site visit agrees with USFS MAIS surveys. Therefore Mill Creek is assessed impaired for the aquatic life use.

IMPAIRMENT SOURCE: Mine Tailings, Inactive Mining Site

Aquatic Life Use
The benthic impairment is believed to be related to legacy mining activity in the headwaters of Mill Creek.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Little Patterson Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I22R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.65 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Little Patterson Cr. just upstream of the Rt. 684 crossing.

RIVER MILE: 3.65

LATITUDE: 37.60162 **LONGITUDE:** -79.87411

DOWNSTREAM LIMIT:

DESCRIPTION: Little Patterson Cr. confluence with Patterson Cr.

RIVER MILE: 0.00

LATITUDE: 37.64190 **LONGITUDE:** -79.86213

Little Patterson Creek from just upstream of the Rt. 684 (Sugar Tree Hollow Rd.) crossing downstream to its confluence with Patterson Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 2-LIP001.00 finds two fecal colifrom samples exceeding the 400 cfu/100 ml WQS instantaneous criterion from 9 samples. The two exceedances are 2800 and 2100 cfu/100 ml. This causes the waters to not support the recreational use.

IMPAIRMENT SOURCE: NPS

Recreational Use
The exact source of the bacteria impairment is not known but is believed nonpoint source related.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: James River

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I24R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.99 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Craig Cr. mouth on James R.

RIVER MILE: 331.13

LATITUDE: 37.64554 **LONGITUDE:** -79.81348

DOWNSTREAM LIMIT:

DESCRIPTION: Upstream of Catawba Cr. mouth on the James R.

RIVER MILE: 326.14

LATITUDE: 37.60623 **LONGITUDE:** -79.78490

The upper limit is the confluence of Craig Creek (Eagle Rock Quad) on the James River near Gala, Virginia. The lower limit of the segment is just above the mouth of Catawba Creek on the James River (Salisbury Quad) just west of Rt. 726 in Botetourt County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic1998)

Aquatic Life Use
This segment of the James River remains 303(d) listed due to insufficient data for de-listing the General Standard (Benthic) impairment of the original 1998 303(d) segment. The 1998 303(d) List reports the segment impaired for the aquatic life use due to contravention of the General Standard where moderate impairment is reported at 2-JMS326.30 (James R. at Salisbury). The impairment cause in 1998 was believed due to organic deposition as a result of upstream elevated total phosphorus concentrations.

The 2002 Assessment reported improved conditions in the segment at the same site. Benthic RBPII surveys demonstrate improved conditions from spring 1999- slightly (SI) and fall 2000- no impairment (NI). Additional data are required in order to assess the segment as fully supporting the General Standard.

These waters are also a 'Water of Concern' due to screening value exceedances of total phosphorus and sediment nickel.

Total Phosphorus: Two total phosphorus values exceed the screening value (SV) threshold of 0.20 mg/l from 16 samples at 2-JKS326.30 (at Salisbury). The two exceeding values are 0.26 mg/l in August 2000 and 0.35 in February 2001 resulting in an 'Observed Effect'.

Upstream total phosphorus concentrations are believed to contribute to the excursions where exceedances are found at station 2-JKS000.38 (I09R). The 2004 Assessment finds 25 of 58 total phosphorus samples exceed the SV at 2-JKS000.38. Station 2-JKS000.38 maximum remain at 0.70 mg/l as in 2002 where the 2000 maximum was 2.10 mg/l. The apparent reductions in magnitude lend evidence of improving conditions and the positive response found in the RBP II surveys.

The waters are a 'Water of Concern' based on exceedances of the Consensus Based Probable Effects Concentration (PEC) [MacDonald et al., 2000] screening values (SV) for nickel (Ni, SV= 48.6 parts per million). 1999 and 2000 sediment collections report values of 54.2 and 63.3 ppm respectively at station 2-JMS326.30.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: PS - Ind. & Mun. / NPS - Urban

Aquatic Life Use
1998 303(d) Listing General Standard (Benthic). These data are older than five years.

The source of the total phosphorus exceedance is believed to be from upstream point source discharges and nonpoint source runoff.

The source of the sediment metals are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Catawba Creek

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I25R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 24.27 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Little Catawba Cr. mouth on Catawba Cr.

RIVER MILE: 24.27

LATITUDE: 37.45620 **LONGITUDE:** -80.00956

DOWNSTREAM LIMIT:

DESCRIPTION: Catawba Cr. mouth on the James R.

RIVER MILE: 0.00

LATITUDE: 37.60623 **LONGITUDE:** -79.78490

The segment begins at the mouth of Little Catawba Creek on Catawba Creek and extends downstream to the Catawba Creek confluence on the James River. The original 2002 impaired segment has been extended with the 2004 assessment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

The 2004 segment extension is the result of the data described below.

The original 2002 listed segment began just downstream of the Roanoke Cement Co. water intake on Catawba Creek, river mile 23.16 (37°28'12"/80°00'18"). The 2002 segment ended just above the Town Branch mouth on Catawba Creek at river mile 11.84 (37°31'01"/79°52'45"). Additional data cause the extension of the 2002 segment.

Recreational Use
Three Catawba Creek stations find nonsupporting fecal coliform bacteria results. Fecal coliform bacteria at 2-CAT000.34 (Bridge near Salisbury Furnace) find two of nine observations exceed the WQS 400 cfu/100 ml instantaneous criterion. Values exceeding WQS are >8000 and 1100 cfu/100 ml. Seven of 27 samples at 2-CAT014.63 (Rt. 606 Bridge, Botetourt Co.) exceed ranging from 500 to a maximum of 2000 cfu/100 ml. And station 2-CAT023.83 (Rt. 779 Bridge near Gage) reports three of nine observations in excess of the WQS instantaneous criterion. The maximum exceedance is 1900 cfu/100 ml and the remaining two at 500 each.

IMPAIRMENT SOURCE: NPS - Grazing / Wildlife

Recreational Use
Fecal coliform exceedances are believed due to nonpoint source runoff, some grazing and possible wildlife contributions. The exact contributors are not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: James River Basin

CITY/COUNTY: Botetourt

STREAM NAME: Looney Creek Drainage

HYDROLOGIC UNIT: 02080201

TMDL ID: VAW-I26R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.37 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Looney Creek and portions of Mill Cr. and Ellis Run.

RIVER MILE: 12.37

LATITUDE: 37.45490 **LONGITUDE:** -79.82708

DOWNSTREAM LIMIT:

DESCRIPTION: Looney Cr. mouth on the James River.

RIVER MILE: 0.00

LATITUDE: 37.51806 **LONGITUDE:** -79.70235

The Looney Creek portion of the overall impaired segment begins at the confluence of Mill and Back Creek (37.498181 / -79.727131) on Looney Creek northeast of Lithia, Virginia, (Montvale Quad) at river mile 2.48. The original 1998 segment ends at the mouth of Looney Creek on the James River. 2004 total impaired miles are 12.37 with the addition of Mill Creek and Ellis Run.

Note: Bacteria collections on Mill Creek and Ellis Run cause the original listed segment to be expanded to include portions of the aforementioned creeks. The TMDL Study through the development of bacteria allocations will encompass these drainages.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The Looney and Mill Creek Total Maximum Daily Load (TMDL) Bacteria Load Duration Analysis Study is underway with anticipated completion in 2004. Fecal coliform bacteria exceedances cause the original 1998 2.48 mile recreational use impairment in Looney Creek. Two of 18 samples exceed the fecal coliform bacteria WQS instantaneous criterion of 400 cfu/100 ml. Exceedances are 500 and 1600 cfu/100 ml. The segment brackets station 2-LMC000.40 (Rt. 625 Bridge).

The original 1998 Looney Creek Listing of 2.48 miles is increased with the 2004 addition of the following stream segments:

Mill Creek - 2004 Addition. Impaired Miles: 8.29
Start: Downstream of the Rt. 11 crossing. (RM 8.29)
Lat: 37.454769 Long: -79.827152
End: Mill Creek confluence with Back Creek. (RM 0.00)
Lat: 37.498180 Long: -79.727830

Station 2-MIA000.79 located at the junction of Rts. 11 and 772 finds fecal coliform bacteria exceeds the WQS 400 cfu/100 ml instantaneous criterion in four of six observations. The exceeding values range from 460 cfu/100 ml to 1600. Two of six Escherichia coli (E. coli) samples exceed the WQS 235 cfu/100 ml instantaneous criterion at 470 and 700 cfu/100 ml.

Ellis Run - 2004 Addition. Impaired Miles: 1.60

Fact Sheets for Category 5 Waters

Start: Rt. 645 crossing. (RM 1.60)
Lat: 37.467844 Long: -79.734450
End: Ellis Run confluence on Back Creek. (RM 0.00)
Lat: 37.492480 Long: -79.736602

The station located on the Rt. 643 Bridge, 2-ELS000.08 also finds fecal coliform bacteria exceeding in five of six samples. Values exceeding the WQS 400 cfu/100 ml instantaneous criterion range from 700 to 9200 cfu/100 ml. Five of six E. coli samples also exceed the WQS instantaneous criterion of 235 cfu/100 ml ranging from 350 to >800 cfu/100 ml. However E. coli can not be assessed for impairment as per [9 VAC 25-260-170.A.1. Bacteria; other waters] because there are not 12 samples. This results in an 'Observed Effect' for the E. coli in the segment. One temperature exceedance of the Stockable Trout water criterion (21°C) is found in five measurements at 22°C on 6/12/2002 also reported as an 'Observed Effect'.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban

Recreational Use
The sources are believed to be primarily agricultural nonpoint source pollution. Urban (residential) nonpoint source pollution potential exists.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Mecklenburg, Lunenburg

STREAM NAME: Middle Meherrin River

HYDROLOGIC UNIT: 03010204

TMDL ID: VAC-K01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.14 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Crupper Run

RIVER MILE: 7.14

LATITUDE: 36.90240 **LONGITUDE:** -78.37960

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.85030 **LONGITUDE:** -78.33830

Middle Meherrin River from Crupper Run to the Mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of the Middle Meherrin River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/19 samples taken at 5AMMR000.69.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Lunenburg

STREAM NAME: North Meherrin River

HYDROLOGIC UNIT: 03010204

TMDL ID: VAC-K02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.58 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Couches Creek

RIVER MILE: 15.67

LATITUDE: 36.95970 **LONGITUDE:** -78.32080

DOWNSTREAM LIMIT:

DESCRIPTION: Reedy Creek

RIVER MILE: 8.09

LATITUDE: 36.88190 **LONGITUDE:** -78.30340

North Meherrin River from Couches Creek downstream to Reedy Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Segment assessed not supporting of the recreation use support goal based on a fecal coliform standard violation rate of 6/28 recorded at the Route 49 bridge (5ANMR013.95).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations in this segment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Lunenburg

STREAM NAME: Flat Rock Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAC-K03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.72 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Confluence downstream of Rte 647 bridge

RIVER MILE: 9.72

LATITUDE: 36.89700 **LONGITUDE:** -78.12990

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.79970 **LONGITUDE:** -78.10960

Flat Rock Creek from the first confluence downstream of the Route 647 bridge to its mouth at the Meherrin River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Segment assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 7/27 recorded at the Route 612 bridge (5AFRC002.98).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Lunenburg, Nottoway

STREAM NAME: Nottoway Falls Lake

HYDROLOGIC UNIT: 03010201

TMDL ID: VAC-K14L-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 32.07 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Extent of backwater

RIVER MILE: 143.69

LATITUDE: 37.05200 **LONGITUDE:** -78.16240

DOWNSTREAM LIMIT:

DESCRIPTION: Dam

RIVER MILE: 143.06

LATITUDE: 37.04630 **LONGITUDE:** -78.15000

Nottoway Falls Lake

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Trophic State Index

Nottoway Falls Lake was assessed not supporting of the Aquatic Life Use based on low dissolved oxygen below the thermocline at 5ANTW143.06. Nottoway Falls Lake is stratified May - Septemeber. Trophic State Indices were calculated for the following parameters: Chlorophyll a - 59.037, Total Phosphorous - 58.244 and Secchi Depth - 63.833.

Nottoway Fall lake is considered to be eutrophic and impaired based on these calculations.

IMPAIRMENT SOURCE: Unknown, Unknown

The low DO is caused by stratification of the lake.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Lunenburg, Nottoway, Prince Edward

STREAM NAME: Nottoway River

HYDROLOGIC UNIT: 03010201

TMDL ID: VAC-K14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 17.76 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 161.0

LATITUDE: 37.11140 **LONGITUDE:** -78.26610

DOWNSTREAM LIMIT:

DESCRIPTION: Nottoway Falls Lake

RIVER MILE: 145.74

LATITUDE: 37.06080 **LONGITUDE:** -78.16960

Nottoway River from its headwaters to the headwaters of Nottoway Falls Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was evaluated during the 1998 cycle as fully supporting but threatened of the Swimmable use support goal based on fecal coliform violations at the Route 625 bridge (5ANTW155.06). There has been no additional monitoring since 1997. There are no data points in the 2004 assessment cycle.

However, in 1999 EPA included this station on Attachment B of the Consent Decree ("Waters to be identified to Virginia for Listing Consideration during Development of the Next List.") Since no additional monitoring has been performed, DEQ is required to downgrade the segment to Not Supporting of the Swimmable Use goal.

The segment has been shortened so that it now ends at the extent of backwater of Nottoway Falls Lake, instead of at The Falls.

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations in this segment is considered unknown.

Continued monitoring is necessary to increase the data set and make a confident assessment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Lunenburg

STREAM NAME: Big Hounds Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAC-K14R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.35 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 10.35

LATITUDE: 36.99350 **LONGITUDE:** -78.21070

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.02140 **LONGITUDE:** -78.09510

Big Hounds Creek from its headwaters to its mouth at the Nottoway River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Segment was assessed not supporting of the recreation use support goal based on a fecal coliform violation rate of 5/28 recorded at the Route 653 bridge (5ABHC003.73).

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Nottoway

STREAM NAME: Little Nottoway River

HYDROLOGIC UNIT: 03010201

TMDL ID: VAC-K15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.85 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Lazaretto Creek

RIVER MILE: 9.85

LATITUDE: 37.11980 **LONGITUDE:** -78.08440

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.02220 **LONGITUDE:** -78.00500

Little Nottoway River from Lazaretto Creek downstream to its mouth at the Nottoway River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Segment assessed not supporting of the recreation use support goal based on a fecal coliform violation rate of 12/28 recorded at the Route 626 bridge (5ALNT004.68).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick, Nottoway

STREAM NAME: Fort Pickett Reservoir

HYDROLOGIC UNIT: 03010201

TMDL ID: VAC-K16L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 198.43 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Extent of backwaters

RIVER MILE: 128.67

LATITUDE: 37.02310 **LONGITUDE:** -77.99890

DOWNSTREAM LIMIT:

DESCRIPTION: Dam

RIVER MILE: 127.14

LATITUDE: 36.98950 **LONGITUDE:** -77.96340

Fort Pickett Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Trophic State Index

Fort Pickett Reservoir was assessed not supporting of the Aquatic Life Use based on low dissolved oxygen below the thermocline at 5ANTW143.06. Fort Pickett Reservoir is stratified May - August. Trophic State Indices were calculated at the following stations:
5ACDR000.30 (Cedar Creek Arm)- Chlorophyll a - 60.12, Total Phosphorous - 59.59 and Secchi Depth - 65.15.
5ANTW127.14 (At the dam)- Chlorophyll a - 59.369, Total Phosphorous - 60.59 and Secchi Depth - 68.19.
5ANTW128.67 (Nottoway River Backwaters)- Chlorophyll a - 56.85, Total Phosphorous - 65.44 and Secchi Depth - 65.15.
Fort Pickett Reservoir is considered eutrophic and impaired based on these calculations.

IMPAIRMENT SOURCE: Unknown

The source of the DO violations is considered to be one or more pollutants from anthropogenic sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Nottoway

STREAM NAME: Hurricane Branch, UT - Unnamed Tributary

HYDROLOGIC UNIT: 03010201

TMDL ID: VAC-K16R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.12 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Town of Blackstone STP discharge

RIVER MILE: 1.12

LATITUDE: 37.04080 **LONGITUDE:** -77.95450

DOWNSTREAM LIMIT:

DESCRIPTION: Hurricane Branch confluence

RIVER MILE: 0.00

LATITUDE: 37.02760 **LONGITUDE:** -77.96040

Segment begins at the Blackstone Municipal Sewage Treatment Plant discharge, and extends downstream

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

This segment was initially listed on the 1994 303(d) list based on benthic monitoring results. Benthic monitoring in the Fall and Spring of 2002 performed at the DEQ biological monitoring station 0.4 mile downstream of the STP discharge indicated that the benthic community was moderately impaired. As a result, the stream segment was assessed not supporting of the Clean Water Act's Aquatic Life Use support goal for the 2004 305(b) report.

IMPAIRMENT SOURCE: Unknown

The impairment of this stream segment is attributed to erosion and sedimentation problems and the Town of Blackstone Municipal STP discharge.

A consent order for upgrade of the facility was approved by the SWCB March 21, 1996. The facility is currently under a schedule of compliance which will end 6/30/2002 for upgrade to meet ammonia limits. The plant upgrade was completed in late 2000 and the plant has been in substantial compliance with the permit's ammonia nitrogen limits since then.

The facility is currently on EPA's 304(l) list for copper, lead and zinc. A metals translator study showed that the metals concentrations in the effluent were below water quality standards. However, the 1998 permit reissuance resulted in the limits for copper, lead and zinc being replaced with a minimum hardness limit; above this level, copper, lead and zinc do not show toxicity at the levels historically reported from this discharge. Although the facility is on the 304(l) list, no further action is required for these metals.

Town is currently subject to all of the final limits contained in the 1998 permit reissuance.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick, Dinwiddie

STREAM NAME: Beaverpond Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAC-K16R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.17 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.17

LATITUDE: 37.06050 **LONGITUDE:** -77.83340

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.98370 **LONGITUDE:** -77.79900

Beaverpond Creek from its headwaters to its mouth at the Nottoway River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, E. coli (2004)

The segment was evaluated not supporting of the recreation use support goal based on a fecal coliform violation rate of 9/19 and a E. coli violation rate of 4/7 at the Route 612 bridge (5ABPC000.12).

Both the Fecal Coliform standard (400cfu/100mL or 200cfu/100mL for two or more samples over a calendar month) and the E. coli standard (235cfu/100mL or 126cfu/100mL for two or more samples over a calendar month) apply during the transition betweeen the Fecal Coliform standard and the recently approved E coli standard. Once a dataset of 12 or more samples are collected for E coli or after June 30, 2008 whichever comes first, only the new standard will apply.

IMPAIRMENT SOURCE: Unknown, Unknown

The source is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Nottoway

STREAM NAME: Hurricane Branch

HYDROLOGIC UNIT: 03010201

TMDL ID: VAC-K16R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.94 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Gettysburg Road crossing

RIVER MILE: 1.91

LATITUDE: 37.00440 **LONGITUDE:** -77.93970

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Nottoway River

RIVER MILE: 0.00

LATITUDE: 36.98620 **LONGITUDE:** -77.91810

Hurricane Branch from the Gettysburg Road crossing to its confluence with Nottoway River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

This segment of Hurricane Branch is not supporting of the Aquatic Life use goal due to a dissolved oxygen violation rate of 2/6 recorded at the Gettysburg Road crossing (5AHUR001.91).

IMPAIRMENT SOURCE: Unknown

The source of the DO violation is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Henrico, Goochland, Powhatan

STREAM NAME: James River

HYDROLOGIC UNIT: 02080205

TMDL ID: VAP-H39R-12

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.34 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: River mile 128.14

RIVER MILE: 128.14

LATITUDE: 37.58820 **LONGITUDE:** -77.72430

DOWNSTREAM LIMIT:

DESCRIPTION: Tuckahoe Creek

RIVER MILE:

LATITUDE: 37.56410 **LONGITUDE:** -77.65430

The James River from river mile 128.14 downstream to the confluence with Tuckahoe Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, pH

The James River is assessed not supporting of the Recreation and Aquatic Life Use support goals because of violation rates of 2/10 for fecal coliform and pH, respectively at station 2-JMS127.50, which is located at Watkins Landing at the end of Route 652.

IMPAIRMENT SOURCE: Unknown, Unknown

The source(s) of the fecal coliform and pH violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Powhatan

STREAM NAME: Rocky Ford Creek

HYDROLOGIC UNIT: 02080207

TMDL ID: VAP-J07R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.53 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.53

LATITUDE: 37.52150 **LONGITUDE:** -77.82710

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Fighting Creek

RIVER MILE: 0.00

LATITUDE: 37.48190 **LONGITUDE:** -77.89770

Rocky Ford Creek from it headwaters downstream to the confluence with Fighting Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Rocky Ford Creek was assessed not supporting of the Recreation use goal based on a fecal coliform violation rate of 7/29 at the Rt. 603 bridge (2-RFD002.58).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Lunenburg, Mecklenburg

STREAM NAME: Stony Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.78 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 13.78

LATITUDE: 36.92240 **LONGITUDE:** -78.08670

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 38.78280 **LONGITUDE:** -78.04350

Stony Creek from its headwaters to it mouth

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 3/19 at the Rt. 602 bridge (5ASNY000.65).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick

STREAM NAME: Meherrin River

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K05R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 26.08 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Taylors Creek

RIVER MILE: 89.06

LATITUDE: 36.75320 **LONGITUDE:** -77.99600

DOWNSTREAM LIMIT:

DESCRIPTION: Reedy Creek

RIVER MILE: 62.14

LATITUDE: 36.71340 **LONGITUDE:** -77.68050

Meherrin River from Taylors Creek downstream to Reedy Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The Meherrin River from Taylors Creek to Reedy Creek was assessed not supporting of the Recreation use support goal based on fecal coliform violation rates of 5/30 at 5AMHN068.30, 2/13 at 5AMHN073.98, and 17/46 at 5AMHN082.13.

The segment was originally considered fully supporting but threatened during the year 1998 cycle, but was downgraded during the 2002 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick

STREAM NAME: Briery Branch

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K05R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.0

LATITUDE: 36.79530 **LONGITUDE:** -77.95590

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.0

LATITUDE: 36.74530 **LONGITUDE:** -77.95430

The mainstem of Briery Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as not supporting of the Recreation use support goal based on a fecal coliform violation rate of 4/12 at 5A-PL-GR-B, a Confined Animal Feeding Operation special study station.

IMPAIRMENT SOURCE: Unknown, Confined Animal Feeding Operation

Source is unknown, but a CAFO is suspected to be a contributing cause..

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Lunenburg

STREAM NAME: Great Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.78 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 19.70

LATITUDE: 36.91550 **LONGITUDE:** -78.03630

DOWNSTREAM LIMIT:

DESCRIPTION: Dixon Millpond

RIVER MILE: 11.70

LATITUDE: 36.88660 **LONGITUDE:** -78.02340

Great Creek upstream of Dixon Millpond, including the pond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Dissolved Oxygen, Fecal Coliform

The segment was assessed in 2002 as not supporting of the Aquatic Life Use based on pH violations at 5AGTC025.70 (previously called PL-18A), and at 5AXEA000.04 (previously called PL-18B). In 2004, the segment continues to be impaired due to pH violations of 11/17 and 4/17, respectively. The pH TMDL is due in 2014.

In addition, the segment had a DO violation rate of 2/17 at 5AGTC0025.70 and a fecal coliform violation rate of 3/19 at 5AXEA000.04. The DO and fecal coliform TMDLs will not be due until 2016.

These stations are confined animal feeding operation (CAFO) special study stations.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

There is currently not enough data to identify the CAFO as a contributor to the impairment in this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick

STREAM NAME: Great Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K06R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.06 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Route 1 bridge

RIVER MILE: 14.37

LATITUDE: 36.83130 **LONGITUDE:** -77.92680

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream tributary

RIVER MILE: 11.06

LATITUDE: 36.75790 **LONGITUDE:** -77.87260

Great Creek from the Route 1 bridge downstream to the tributary below Price Mill.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Assessed not supporting of the Recreation Use goal based on a fecal coliform violation rate of 4/12 at PL-GR-A.

PL-GR-A is a confined animal feeding operation (CAFO) special study station located at the Route 1 bridge crossing.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

There is currently not enough data to identify the CAFO as a contributor to the impairment in this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick

STREAM NAME: Great Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K06R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.6 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Great Creek Reservoir dam

RIVER MILE: 7.6

LATITUDE: 36.75790 **LONGITUDE:** -77.87260

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.71560 **LONGITUDE:** -77.79360

Great Creek from the Great Creek Reservoir dam downstream to its mouth at the Meherrin River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Assessed not supporting of the Recreation Use goal based on a fecal coliform violation rate of 11/28 at 5AGTC005.40, located at the Route 713 bridge.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

There is currently not enough data to identify the CAFO as a contributor to the impairment in this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick

STREAM NAME: Roses Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K07R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.85 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Town of Alberta STP discharge

RIVER MILE: 9.83

LATITUDE: 36.84060 **LONGITUDE:** -77.09110

DOWNSTREAM LIMIT:

DESCRIPTION: Great Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.74360 **LONGITUDE:** -77.83600

From the Alberta Sewage Treatment Plant discharge to the mouth at Great Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Roses Creek from the Alberta STP discharge downstream to its mouth at Great Creek was evaluated not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 13/26 at the Route 678 bridge (5ARSE001.22).

IMPAIRMENT SOURCE: Unknown, PS - Municipal

The impairment in this segment is potentially the result of operational problems at the Alberta STP. However, because fecal coliform monitoring performed on the Meherrin River resulted in impaired designations in adjacent watersheds, additional monitoring and source identification is necessary to identify the true source of the violations.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Emporia, Greensville, Southampton

STREAM NAME: Meherrin River

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.72 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Emporia Reservoir Dam

RIVER MILE: 53.44

LATITUDE: 36.69580 **LONGITUDE:** -77.55720

DOWNSTREAM LIMIT:

DESCRIPTION: Caney Branch

RIVER MILE: 47.70

LATITUDE: 36.67130 **LONGITUDE:** -77.49250

The Meherrin River from the Emporia Reservoir Dam to a point about 5 miles downstream.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fish Tissue - PCBs & Benzo(k) fluoranthene

The Meherrin River is subject to dissolved oxygen violations during summer months below the Emporia Reservoir dam as measured at the Route 302 bridge (5AMHN052.34) and verified during a special study conducted in July 1994. The segment was initially listed during the 1998 cycle as fully supporting but threatened of the Aquatic Life use support goal and was downgraded to impaired during the 2004 cycle due to a dissolved oxygen violation rate of 7/49. The DO TMDL is due 2016.

Beginning in the year 2002 cycle, the segment was assessed partially supporting of the fish consumption use based on 1996 fish tissue screening value exceedances for benzo(k)fluoranthene in two species. Arsenic was listed as an observed effect. During the year 2004 cycle, PCBs in fish tissue was added as an impairing cause and Mercury in fish tissue was added as an observed effect. The benzo(k)fluoranthene TMDL is due in 2014 and the PCB TMDL is due in 2016.

IMPAIRMENT SOURCE: Hypolimnetic Release, Unknown

Hypolimnetic waters releases through the Emporia Reservoir Dam.

The source(s) of the fish tissue contaminants are considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick, Greensville

STREAM NAME: Rattlesnake Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.92 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Edwards Creek

RIVER MILE: 8.92

LATITUDE: 36.61010 **LONGITUDE:** -77.84270

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.57470 **LONGITUDE:** -77.73350

From Edwards Creek downstream to its mouth at Fontaine Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

The segment was assessed not supporting of both the Recreation and Aquatic Life Uses based on sampling at the Route 672 bridge (5ARSK003.08) (pH 4/20; fecal coliform 3/20).

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Greensville

STREAM NAME: Fontaine Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K10R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.04 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Rattlesnake Creek

RIVER MILE:

LATITUDE: 36.57470 **LONGITUDE:** -77.73350

DOWNSTREAM LIMIT:

DESCRIPTION: Rocky Run confluence

RIVER MILE:

LATITUDE: **LONGITUDE:**

Fontaine Creek from the confluence of Rattlesnake Creek to the confluence of Rocky Run.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation use support goal based on a fecal coliform violation rate of 2/9 at the Route 603 bridge (5AFON037.89).

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Greensville

STREAM NAME: Fontaine Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.89 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Rte 633 bridge

RIVER MILE: 31.33

LATITUDE: 36.63310 **LONGITUDE:** -77.64540

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream tributary.

RIVER MILE: 24.06

LATITUDE: 36.64090 **LONGITUDE:** -77.58770

From the Route 633 bridge to the tributary between Routes 627 and 639.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen

The segment is assessed not supporting of the Recreation and Aquatic Life use goals based on the following violation rates:

Fecal coliform 4/24 at the Rt. 639 bridge (5AFON025.64)
Fecal coliform 3/18 at the Rt. 627 bridge (5AFON027.33)
Dissolved oxygen 3/16 at 5AFON027.33

This station is a confined animal feeding operation (CAFO) special study station.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

There is currently not enough data to identify the CAFO as a contributor to the impairment in this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Greensville

STREAM NAME: Fontaine Creek and all its tributaries in VAP-K12R.

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K11R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 46.33 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Beaverpond Creek

RIVER MILE: 15.61

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Meherrin River

RIVER MILE: 0.00

LATITUDE: 36.55400 **LONGITUDE:** -77.37500

From Beaverpond Creek in VAP-K11R to mouth at Meherrin River in watershed VAP-K12R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

In 1998, Fontaine Creek from Beaverdam Creek to its mouth at the Meherrin River was assessed not supporting of the Aquatic Life use support goal because of dissolved oxygen violations. All tributaries entering this segment were considered fully supporting but threatened. The DO TMDL for the mainstem is due in 2010.

During the year 2002 cycle, pH was added as an impairing cause and the tributaries were added to the segment. The TMDL is due in 2014.

In the year 2004 cycle, the segments are still considered impaired based on dissolved oxygen and pH violation rates of 5/20 at 5AFON006.07 (K12R), a dissolved oxygen violation rate of 8/10 at 5ACNY001.08, and the results of the 1994 special study.

1994 special study violations:
DO 2/4 at 5AFON014.38;
DO 2/3 at 5AFON001.46;
DO 2/2, pH 2/2 at 5ACNY001.08;
DO 2/3 at 5AMLS000.77;
DO 2/2, pH 2/2 at 5AMLS005.42;
DO 2/2 at 5AMLS007.96.

IMPAIRMENT SOURCE: Natural Conditions

Violations suspected to be caused by swampwater conditions throughout watershed.

Bottom water DO violations in two samples taken during 1994 special study at 5AFON014.38.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Greensville

STREAM NAME: Cattail Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K11R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.42 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.38

LATITUDE: 36.59060 **LONGITUDE:** -77.66750

DOWNSTREAM LIMIT:

DESCRIPTION: Collier Branch

RIVER MILE: 2.03

LATITUDE: 36.57360 **LONGITUDE:** -77.58720

Cattail Creek upstream of Collier Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

The segment was assessed as not supporting the Aquatic Life Use because of violations at two locations. The TMDLs are due in 2014.
pH 4/16 at the Rt. 633 bridge (5ACTT005.89/PL-15A);
DO 3/16, pH 4/16 at the Route 632 bridge (5ACTT002.73/PL-15B)

Beginning in the 2004 cycle, the segment was also assessed as not supporting of the Recreation Use goal based on a fecal coliform violation rate of 3/17 and 5/17 at 5ACTT005.89 and 5ACTT002.73, respectively. The TMDL is due in 2016.

These stations are confined animal feeding operation (CAFO) special study stations.

IMPAIRMENT SOURCE: Unknown, Unknown

Source is unknown.

There is currently not enough data to identify the CAFO as a contributor to the impairment in this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Greensville

STREAM NAME: Fontaine Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K11R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.38 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: First confluence upstream of Mitchell

RIVER MILE:

LATITUDE: 36.61050 **LONGITUDE:** -77.57510

DOWNSTREAM LIMIT:

DESCRIPTION: Beaverpond Creek

RIVER MILE:

LATITUDE: 36.55710 **LONGITUDE:** -77.56560

Fontaine Creek from the first confluence upstream of Mitchell to Beaverpond Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, pH

In the 2004 cycle, the segment was assessed as not supporting the Recreation Use and Aquatic Life use support goals based on fecal coliform and pH violation rates of 2/14 at 5AFON022.04, located at the Route 629 bridge.

IMPAIRMENT SOURCE: Unknown, Unknown

Source is unknown.

There is currently not enough data to identify the CAFO as a contributor to the impairment in this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Greensville

STREAM NAME: Fontaine Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAP-K12R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.42 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Mill Swamp

RIVER MILE: 6.42

LATITUDE: 36.56970 **LONGITUDE:** -77.44150

DOWNSTREAM LIMIT:

DESCRIPTION: Meherrin River

RIVER MILE: 0.00

LATITUDE: 36.55400 **LONGITUDE:** -77.37500

From Mill Creek to its mouth at the Meherrin River. Nested within segment VAP-K11R-03.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 3/20 at the Route 625 bridge (5AFON006.07)

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick, Lunenburg

STREAM NAME: Waqua Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.18 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 17.45

LATITUDE: 36.91840 **LONGITUDE:** -78.01250

DOWNSTREAM LIMIT:

DESCRIPTION: Route 46 bridge

RIVER MILE: 15.35

LATITUDE: 36.92480 **LONGITUDE:** -77.98330

Waqua Creek upstream of the Route 46 bridge

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

The segment was assessed not supporting of the Aquatic Life Use and Recreation Use goals based on the following violations:
pH 7/17 at 5AWAQ020.52 (Route 617);
DO 2/11, pH 10/11 at 5AWAQ022.17;

Fecal coliform 5/19 at 5AWAQ020.52 and 2/10 at 5AWAQ022.17.

These stations are confined animal feeding operation (CAFO) special study stations.

IMPAIRMENT SOURCE: Unknown

Source is unknown. Suspected to be caused by natural conditions.

Source is unknown.

There is currently not enough data to identify the CAFO as a contributor to the impairment in this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick, Dinwiddie

STREAM NAME: Nottoway River

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K17R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.7 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Beaverpond Creek

RIVER MILE:

LATITUDE: 36.98390 **LONGITUDE:** -77.79850

DOWNSTREAM LIMIT:

DESCRIPTION: Sturgeon Creek

RIVER MILE:

LATITUDE: 36.91030 **LONGITUDE:** -77.67390

The Nottoway River from the confluence with Beaverpond Creek downstream to the confluence with Sturgeon Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 14/45 at the Route 1 bridge (5ANTW109.02.)

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Brunswick

STREAM NAME: Sturgeon Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.06 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Lloyds Run

RIVER MILE: 8.06

LATITUDE: 36.86230 **LONGITUDE:** -77.76930

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Nottoway River

RIVER MILE: 0.00

LATITUDE: 36.90140 **LONGITUDE:** -77.67370

Sturgeon Creek from Lloyds Run to the mouth at the Nottoway River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Sturgeon Creek was included on EPA's 1998 list of "Waters Identified to Virginia for Listing Consideration During Development of Next List." Dissolved oxygen at 5ASTG005.96 (Route 712 bridge) was listed as the parameter of concern. During the 2002 assessment cycle, the dissolved oxygen violation rate was acceptable, therefore the segment was considered fully supporting the aquatic life use goal.

During the year 2004 cycle, the DO remained acceptable, however the segment had a pH violation rate of 2/19. The segment is assessed not supporting of the Aquatic Life use goal. The TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

The source of the pH impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Dinwiddie

STREAM NAME: Buckskin Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K19R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.86 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 12.16

LATITUDE: 36.99860 **LONGITUDE:** -77.71400

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.88740 **LONGITUDE:** -77.63140

Buckskin Creek from its headwaters to its mouth at the Nottoway River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as not supporting the Recreation Use goal based on a fecal coliform violation rate of 3/9 at 5ABSK004.32.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Greensville, Sussex

STREAM NAME: Nottoway River

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K19R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.54 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Harris Swamp

RIVER MILE:

LATITUDE: 38.86110 **LONGITUDE:** -77.47540

DOWNSTREAM LIMIT:

DESCRIPTION: Stony Creek

RIVER MILE:

LATITUDE: 36.94710 **LONGITUDE:** -77.38050

The Nottoway River from Harris Swamp to Stony Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as not supporting the Recreation Use goal based on a fecal coliform violation rate of 6/49 at the Route 301 bridge (5ANTW078.20).

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Dinwiddie, Nottoway

STREAM NAME: Butterwood Creek, White Oak Swamp, Rocky Run

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K20R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 46.43 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 16.10

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: **LONGITUDE:**

Butterwood Creek and the following tributaries:
White Oak Swamp, Reedy Creek, Rocky Run Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The mainstems of White Oak Swamp and Butterwood Swamp were initially listed as fully supporting but threatened for dissolved oxygen in the 1998 cycle. Station 5ABTR002.80 (Route 646 bridge) was identified to Virginia for listing consideration because of dissolved oxygen.

During the year 2003 cycle, the segment was assessed partially supporting of the Aquatic Use because of pH violations (5ABTR002.80). The DO violation rate at this station was acceptable (3/38), but due to DO violations throughout the watershed (see below) the segment was extended to include Reedy Creek and Rocky Run Creek. The entire segment was listed for both pH and dissolved oxygen. The DO TMDL is due in 2010, the pH TMDL is due in 2014.

In the 2004 cycle, the segment continues to be impaired of the Aquatic Life Use because of the following:

DO 4/36, pH 5/35 at 5ABTR002.80;
DO 4/17 at 5AWOK000.54; and the results of the 1994 study indicating widespread DO violations.

IMPAIRMENT SOURCE: Natural Conditions

The DO and pH violations in this segment are attributed to natural conditions.

Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Sussex

STREAM NAME: Stony Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.62 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Snake Branch

RIVER MILE: 5.62

LATITUDE: 37.96200 **LONGITUDE:** -77.43950

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.94730 **LONGITUDE:** -77.38070

The mainstem of Stoney Creek from Snake Branch downstream to its mouth. The start location did not change; only the tributary name was updated.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, pH

The segment was assessed not supporting of the Recreation and Aquatic Life Uses based on a fecal coliform violation rate of 4/30 and a pH violation rate of 5/30 at the Route 301 South bridge (5ASTO001.20).

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Dinwiddie, Sussex

STREAM NAME: Sappony Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K22R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 20.19 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 25.70

LATITUDE: 37.01750 **LONGITUDE:** -77.72130

DOWNSTREAM LIMIT:

DESCRIPTION: Spiers Pond

RIVER MILE: 4.70

LATITUDE: 36.93360 **LONGITUDE:** -77.49050

Sappony Creek from its headwaters downstream to Spiers Pond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The segment was listed in 1998 as fully supporting but threatened. It was later identified to Virginia for listing consideration. The segment was downgraded and extended during the 2002 assessment cycle (see below). During the year 2004 cycle, the dissolved oxygen violation rate was 3/19 at the Route 619 bridge (5ASAP013.69).

The segment length was based on the results of a 1994 special study:
DO 1/1 at 5ASAP021.69 (Rt. 1 bridge);
DO 1/1 at 5ASAP018.57 (Rt. 709 bridge);
DO 1/1 at 5ASAP007.77 (Rt. 665 bridge);
DO 1/1 at 5ASAP005.54 (Rt. 40 bridge).

IMPAIRMENT SOURCE: Natural Conditions

The DO violations in this segment are attributed to natural conditions.

Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Dinwiddie, Prince George, Sussex

STREAM NAME: Rowanty Creek and tribs; Gosee Swamp and tribs

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K23R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 191.03 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 13.80

LATITUDE: 37.09370 **LONGITUDE:** -77.47360

DOWNSTREAM LIMIT:

DESCRIPTION: Nottoway River

RIVER MILE: 0.00

LATITUDE: 36.97070 **LONGITUDE:** -77.34670

The entire Rowanty Creek and Gosee Swamp watersheds.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

The Rowanty Creek watershed was assessed not supporting of the Aquatic Life use support goal based on a DO violation rate of 4/10 and a pH violation rate of 3/9 at 5AHRA010.94, a pH violation rate of 9/20 at 5AROW013.14, a pH violation rate of 3/10 at 5AROW002.41 and DO, pH violations in 1994 at 5APCT001.23, 5AGRV006.00. 5AGRV004.35, 5AHRA010.94, 5AHRA003.42, 5AHRA002.92, 5AATH003.28, 5ALCC000.54, 5AROW008.64, and 5AROW004.72.

The Gosee Swamp watershed was assessed not supporting of the Aquatic Life use because of a DO violation rate of 2/2 and a pH 2/2 at 5AGSE001.35 during the 1998 cycle.

Segment expanded during the 2002 cycle to incorporate the tributaries.

IMPAIRMENT SOURCE: Natural Conditions

The DO and pH violations in this segment are attributed to natural conditions.

Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Dinwiddie

STREAM NAME: Rowanty Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K23R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.11 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Gravelly Run

RIVER MILE: 13.80

LATITUDE: 37.09420 **LONGITUDE:** -77.47410

DOWNSTREAM LIMIT:

DESCRIPTION: Little Cattail Creek

RIVER MILE: 12.70

LATITUDE: 37.08240 **LONGITUDE:** -77.46690

Rowanty Creek from Gravelly Run to Little Cattail Creek. Nested in segment VAP-K23R-01.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Rowanty Creek is considered not supporting the Recreation Use based on a fecal coliform violation rate of 6/20 at the Route 605 bridge (5AROW013.14).

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Prince George, Sussex

STREAM NAME: Nebletts Mill Run and all its tributaries

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K23R-03

ASSESSMENT CATEGORY: 5C, 5A

SEGMENT SIZE: 42.14 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 14.20

LATITUDE: 37.02780 **LONGITUDE:** -77.22860

DOWNSTREAM LIMIT:

DESCRIPTION: Nottoway River

RIVER MILE: 0.00

LATITUDE: 36.96220 **LONGITUDE:** -77.21030

The entire Nebletts Mill Run watershed.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform (2004)

The Nebletts Mill Run watershed was assessed not supporting of the Aquatic Life Use based on the following results:
DO 11/28 at the Route 35 bridge (5ANBT001.26);
DO 1/1 at 5ADBS001.86 (1994 station);
DO 1/1, pH 1/1 at 5AJOE007.38 (1994 station)

DO 2/17 at 5AXDV000.46 (previously called PL-7D),a confined animal feeding operation (CAFO) special study station.

This segment was expanded in 2002 to include the entire watershed. The TMDL for Nebletts Mill Run downstream of the Millpond is due in 2010, the TMDL for the tributaries is due in 2014.

In addition, Nebletts Run from the Millpond downstream to the mouth and Tributary XDV are both considered not supporting of the Recreation Use. Nebletts Run violated the geometric mean for fecal coliform in 2 months where 2 samples were taken. Tributary XDV had a fecal coliform instantaneous violation rate of 5/10. The fecal coliform TMDLs are not due until 2016.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The DO and pH violations in this watershed are attributed to natural swampwater conditions.

Target monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

The source of the fecal coliform in Nebletts Run is considered unknown. The fecal coliform in the unnamed tributary XDV is suspected to be of agricultural origin from an upstream CAFO.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Dinwiddie

STREAM NAME: Hatcher Run

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K23R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.38 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE:

LATITUDE: 37.16750 **LONGITUDE:** -77.67540

DOWNSTREAM LIMIT:

DESCRIPTION: Pond below Rt. 627

RIVER MILE:

LATITUDE: 37.15510 **LONGITUDE:** -77.61620

Hatcher Run from its headwaters to the pond below Rt. 627

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Hatcher Run is considered not supporting the Recreation Use based on a fecal coliform violation rate of 2/3 at the USGS monitoring station at the Route 627 bridge (02046265).

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Sussex

STREAM NAME: Hunting Quarter Swamp

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K24R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 15.93 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 15.7

LATITUDE: 36.87520 **LONGITUDE:** -77.38910

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.86200 **LONGITUDE:** -77.19160

Hunting Quarter Swamp from its headwaters to its mouth at the Nottoway River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Hunting Quarter Swamp has been assessed as fully supporting but threatened of the Aquatic Life Use since the 1998 cycle based on best professional judgement. Because of its hydrological characteristics, Hunting Quarter Swamp is believed to be subject to the same dissolved oxygen and pH characteristics as other swampwaters assessed as less than fully supporting of its use support goal.

Sampling in the 2004 cycle confirmed the pH violations (2/2), therefore the segment was downgraded to impaired. Although the DO violation rate was acceptable (0/2), the samples were taken in the winter months and therefore dissolved oxygen was still added as an impairing cause based on BPJ.

IMPAIRMENT SOURCE: Natural Conditions

The DO and pH violations are attributed to natural swampwater conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton, Sussex

STREAM NAME: Nottoway River

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K24R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 18.53 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Nebletts Mill Run

RIVER MILE:

LATITUDE: 36.96160 **LONGITUDE:** -77.21030

DOWNSTREAM LIMIT:

DESCRIPTION: Three Creek

RIVER MILE:

LATITUDE: 36.78050 **LONGITUDE:** -77.16410

The Nottoway River from Nebletts Mill Run downstream to Three Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The Nottoway River was assessed not supporting of the Recreation Use goal based on a fecal coliform violation rate of 5/38 at the Rt. 631 bridge (5ANTW045.45.)

IMPAIRMENT SOURCE: Unknown

The source of the violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton, Sussex

STREAM NAME: Raccoon Creek, Spring Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K25R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 35.54 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 19.30

LATITUDE: 36.84850 **LONGITUDE:** -77.42010

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.79410 **LONGITUDE:** -77.16130

The entire mainstems of Raccoon Creek and Spring Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

In 1998 Raccoon Creek was assessed as impaired (Part V) of the Aquatic Life Use based on sampling at the Route 608 bridge (5ARCN003.36) and the results of a 1994 special study (See below). Spring Creek was considered fully supporting but threatened. EPA overlisted both segments for DO and pH.

During the year 2004 cycle, the segments are considered not supporting of the Aquatic Life use support goal based on a dissolved oxygen violation rate of 8/30 and a pH violation rate of 28/30 at 5ARCN003.36.

1994 special study results:
DO 2/3, pH 2/3 at 5ARCN008.86 (Rt. 631 bridge)
DO 2/3, pH 4/4 at 5ASGC004.15 (Rt. 735 bridge).

IMPAIRMENT SOURCE: Natural Conditions

The DO and pH violations in this watershed are attributed to natural swampwater conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton, Sussex

STREAM NAME: Raccoon Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K25R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 19.3 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 19.30

LATITUDE: 36.81600 **LONGITUDE:** -77.44430

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.80560 **LONGITUDE:** -77.24000

The entire mainstem of Raccoon Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was initially listed as fully supporting but threatened of the Recreation use goal during the 1998 303(d) cycle. It was then identified to Virginia for listing consideration. During the 2002 303(d) cycle the segment was downgraded to impaired, therefore the TMDL is due in 2010. During the year 2004 cycle, the segment remained not supporting of the Recreation goal based on a fecal coliform violation rate of 6/29 at the Route 608 bridge (5ARCN003.36).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Emporia, Greensville, Southampton, Sussex

STREAM NAME: Otterdam Swamp, Three Creek

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K26R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 19.16 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Hickory Swamp

RIVER MILE: 4.80

LATITUDE: 36.74480 **LONGITUDE:** -77.53030

DOWNSTREAM LIMIT:

DESCRIPTION: Browns Branch

RIVER MILE: 20.5

LATITUDE: 36.69740 **LONGITUDE:** -77.38250

Otterdam Swamp from Hickory Swamp to its mouth, and Three Creek from the Slagles Lake Dam downstream to Browns Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Otterdam Swamp from Hickory Swamp to its mouth, and Three Creek from Otterdam Swamp to Browns Branch were assessed not supporting of the Aquatic Life use support goal based on a dissolved oxygen violation rate of 5/20 and a pH violation rate of 4/20 at 5ATRE026.75 (Route 611 bridge), as well as the results of a 1994 special study:

DO 1/1 at 5AOTD008.23 (Route 610 bridge);
DO 2/2 at 5AOTD004.31 (Route 609 bridge).

Three Creek from Slagles Lake Dam downstream to Otterdam Swamp was assessed as fully supporting with observed effects based on monitoring at 5ATRE032.25 (0/2) and the same 1994 special study:
DO 1/2 at 5ATRE031.85 (Route 616 bridge)
DO 1/2 at 5ATRE033.87 (Route 617 bridge).

Note: The pH impairment was added in 2002, therefore the TMDL is not due until 2014.

IMPAIRMENT SOURCE: Hypolimnetic Waters, Natural Conditions

During summertime low flow conditions, when there is no flow over Slagles Lake dam, hypolimnetic waters seepage occurs under the dam. Additional flow from downstream sources is suspected to further depress DO levels upstream of the Route 616 bridge. The Three Creek STP discharges upstream at the Route 616 bridge, and is predicted to have an impact on DO levels in Three Creek below the discharge.

The DO violations recorded at the Route 611 bridge monitoring station are attributed to natural conditions.

Targeted monitoring during low flow conditions is recommended to determine the extent of DO depletion when there is no water being

released over Slagles Lake dam. Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton, Sussex

STREAM NAME: Assamoosick, Seacorrie, German, Pigeon Swamp

HYDROLOGIC UNIT: 03010201

TMDL ID: VAP-K29R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 37.72 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 23.80

LATITUDE: 37.02990 **LONGITUDE:** -77.14110

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Assamoosick Swamp

RIVER MILE: 0.00

LATITUDE: 36.83940 **LONGITUDE:** -77.11700

Assamoosick Swamp, Seacorrie Swamp, German Swamp, Pigeon Swamp, Black Swamp, and UT to Assamoosick Swamp XDW and UT to Seacorrie Swamp XDX.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform, Ammonia

Assamoosick Swamp, Seacorrie Swamp, German Swamp, and Pigeon Swamp were originally listed as impaired of the Aquatic Life Use in 1998 based on pH and DO violations throughout the watershed. Station 5AASM008.12 was later mistakenly listed on EPA's "Waters Identified to Virginia for Listing Consideration During Development of the Next List" for pH even though the segment was already 303(d) listed. The pH and DO TMDLs for these creeks are due in 2010.

In the year 2002 cycle, Black Swamp and UT to Assamoosick Swamp XDW were added for DO and pH, and UT to Seacorrie Swamp XDX was added for DO. In addition, XDX was considered impaired for ammonia. These TMDLs are due in 2014. Phosphorus was considered an observed effect in XDX, XDW, and portions of Seacorrie and German Swamps. This is not an impairing cause.

During the year 2004 cycle, the Aquatic Life Use impairments and observed effects remained.

In 1998, the entire mainstem of Assamoosick Swamp (23.8 miles) was assessed fully supporting but threatened of the Recreation Use. The segment was later identified to Virginia for listing consideration (station 5AASM013.36). The segment was downgraded in 2002, therefore the TMDL is due in 2010. In 2002 Black Swamp, Seacorrie Swamp, XDW, and XDX were also considered impaired of the Recreation Use. These TMDLs are due in 2014. In 2004, German Swamp was added to the impairment. This TMDL is due in 2016.

Note: the fecal coliform impairment of Assamoosick Swamp was shortened in the year 2002 cycle to end at the Route 607 bridge. There appears to be acceptable fecal coliform levels in this downstream portion (0/2 at 5AASM003.00, 0/10 at 5AASM000.89).

IMPAIRMENT SOURCE: Natural Conditions, Phosphorus, Ammonia, Unknown, NPS-Agriculture, Unknown, NPS-Agriculture

The DO and pH violations in this segment are attributed to natural conditions. Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where

appropriate.

The source of the phosphorus and ammonia violations is considered unknown, although the upstream CAFO facilities are suspected. The phosphorus is not considered an impairing cause, but should be investigated because it may be exacerbating the naturally occurring low DO and pH in the watershed.

The source of the fecal coliform violations is considered unknown. There is not enough information to determine if the CAFO facilities are the source of the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Dinwiddie, Petersburg, Petersburg, Surry, Sussex

STREAM NAME: Blackwater Swamp, Warwick Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K31R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 44.22 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 13.10

LATITUDE: 37.18580 **LONGITUDE:** -77.38740

DOWNSTREAM LIMIT:

DESCRIPTION: Blackwater River

RIVER MILE: 0.00

LATITUDE: 37.10100 **LONGITUDE:** -77.14500

Blackwater Swamp and Warwick Swamp from their headwaters to the Blackwater River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Blackwater Swamp and Warwick Swamp were originally assessed as impaired of the Aquatic Life Use in 1998 due to DO and pH violations. During the year 2004 cycle, the impairment was continued on widespread violations:

DO 9/20, pH 7/20 at the Rt. 625 bridge (5ABKR003.68).
DO 3/10 at the Rt. 627 bridge (5AWKS009.11);

1994-1995 exceedances:
DO 1/2, pH 1/2 at Rt. 625 bridge (5AWKS006.46);
DO 1/2, pH 1/2 at Rt. 624 bridge (5AWKS003.66);
DO 1/2, pH 2/2 at Rt. 460 bridge (5AWKS002.12);
DO 5/7, pH 3/7 at Rt. 613 bridge (5AWKS001.00).

In the 1998 cycle, Warwick Swamp from its headwaters to the Route 627 bridge was assessed fully supporting but threatened of the Recreation use. During the year 2002 cycle, the entire mainstems of Warwick Swamp and Blackwater Swamp were considered impaired of the Recreation use. Due to an acceptable fecal coliform violation rate at 5AWKS001.00, the Warwick Swamp segment is being shortened to its original length. The fecal coliform TMDLs are due in 2014.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The DO and pH violations are suspected to be caused by natural swampwater conditions throughout the watershed.

The source of the fecal coliform violations in Blackwater Swamp is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Petersburg, Prince George

STREAM NAME: Second Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K31R-02

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 15.21 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 15.21

LATITUDE: 37.17580 **LONGITUDE:** -77.41840

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.13980 **LONGITUDE:** -77.21900

Second Swamp from its headwaters to its mouth at Blackwater Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Second Swamp was assessed as not supporting the Aquatic Life Recreation Use support goals based on pH and fecal coliform violation rates of 2/9 at the Route 618 bridge (5ASEC001.11).

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The DO violations are suspected to be caused by natural swampwater conditions throughout the watershed.

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Surry, Sussex

STREAM NAME: Blackwater River

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-01

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 24.55 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Warwick Swamp

RIVER MILE: 88.00

LATITUDE: 37.10100 **LONGITUDE:** -77.14500

DOWNSTREAM LIMIT:

DESCRIPTION: Cypress Swamp, Route 617 bridge

RIVER MILE: 58.22

LATITUDE: 37.02600 **LONGITUDE:** -77.89160

Blackwater River from Warwick Swamp to Cypress Swamp

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

This segment was assessed not supporting of the Aquatic Life Use goal based on the following violations:
DO 15/50, pH 6/50 at the Rt. 40 bridge (5ABLW074.66)
DO 11/50, pH 7/50 at the Rt. 617 bridge (5ABLW058.22)
1994 stations:
DO 4/6, pH 3/6 at the 5ABLW087.70;
DO 3/4, pH 1/4 at 5ABLW069.30;
DO 3/3, pH 1/3 at 5ABLW064.46.

The Aquatic Life Use impairment was originally listed in 1998, therefore the TMDL is due in 2010.

The segment was assessed not supporting of the Recreation Use based on a fecal coliform violation rate of 7/48 at 5ABLW074.66. The Recreation Use impairment was first listed in 2002, therefore the fecal coliform TMDL is not due until 2014.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The DO and pH violations in this segment are attributed to natural conditions.

Targeted monitoring and wetland delineation may be necessary to identify the limits of the segment affected by natural conditions. Such segments should be reclassified as wetlands where appropriate.

The source of the fecal coliform impairment is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Sussex

STREAM NAME: Spring Branch

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.52 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: old Borden Chemical Waverly Plant discharge

RIVER MILE: 2.70

LATITUDE: 37.05500 **LONGITUDE:** -77.12140

DOWNSTREAM LIMIT:

DESCRIPTION: Blackwater River confluence

RIVER MILE: 0.00

LATITUDE: 37.06640 **LONGITUDE:** -77.07140

From the old Borden Chemical/Spurlock Adhesives discharge to the confluence with the Blackwater River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Severely impaired benthic community.

There are four biological monitoring stations on Spring Branch. 5ASRN002.96 is located upstream of all the discharges; 5ASRN002.66 is located 50 yards below the Route 460 bridge; 5ASRN001.24 is located 100 yards below the Sussex Service Authority's Spring Branch WWTF discharge; and 5ASRN000.65 is located downstream of Bryant's Pond, near the mouth of Spring Branch. All the stations, with the exception of the control station upstream of the discharges, rated moderately to severely impaired during the 1998 cycle.

IMPAIRMENT SOURCE: Unknown, PS - Industrial, Municipal Point Sources

The source of the impairment of Spring Branch is unknown. There are one municipal discharge and two industrial discharges to the stream. There are also extensive sludge deposits, attributed to the old Waverly primary plant (it has been upgraded to secondary treatment), in Spring Branch and Bryant's Pond, 1/4 mile downstream of the Sussex Service Authority's STP discharge.

Additional targeted monitoring is required to further characterize the nature of the impairment and to identify specific causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Prince George, Surry, Sussex

STREAM NAME: Otterdam Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-03

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 11.53 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 12.40

LATITUDE: 37.14170 **LONGITUDE:** -77.18540

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Blackwater River

RIVER MILE: 0.00

LATITUDE: 37.07020 **LONGITUDE:** -77.04490

Mainstem from its headwaters to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Otterdam Swamp is considered not supporting of the Aquatic Life Use based on numerous DO & pH water quality standard violations at confined animal feeding operation (CAFO) special study stations. The TMDLs are due in 2014.

In addition, the lower portion of Otterdam Swamp downstream of Averys Pond is considered to have "observed effects" due to phosphorus and ammonia violations. These are not impairing causes.

IMPAIRMENT SOURCE: Natural Conditions

The DO and pH violations are suspected to be caused by natural swampwater conditions throughout the watershed.

The source of the ammonia and phosphorus effects is currently considered unknown, but the upstream hogfarms are suspected to be a contributing source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Surry

STREAM NAME: Otterdam Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.58 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Averys Pond

RIVER MILE: 5.58

LATITUDE: 37.11600 **LONGITUDE:** -77.09370

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Blackwater River

RIVER MILE: 0.00

LATITUDE: 37.07020 **LONGITUDE:** -77.04490

Otterdam Swamp downstream of Averys Pond. Nested within segment VAP-K32R-03.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed not supporting of the Recreation Use goal based on the following fecal coliform violation rates:

FC 4/15 at 5AOTR001.26;
FC 9/17 at 5AXDR000.38;
FC 4/12 at 5AOTR004.31;
FC 2/17 at 5AOTR005.69.

These are confined animal feeding operation (CAFO) special study stations.

IMPAIRMENT SOURCE: Unknown

Source is unknown. There is not enough data to determine if the CAFO facilities are the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Surry, Sussex

STREAM NAME: Coppahaunk Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-05

ASSESSMENT CATEGORY: 5A, 5C

SEGMENT SIZE: 12.49 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 12.30

LATITUDE: 37.02140 **LONGITUDE:** -77.11430

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Blackwater River

RIVER MILE: 0.00

LATITUDE: 37.03690 **LONGITUDE:** -76.96880

Mainstem from its headwaters to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Coppahaunk Swamp was assessed not supporting of the Aquatic Life Use based on the numerous dissolved oxygen & pH violations. The segment was initially listed in 1998 as fully supporting but threatened. The TMDLs are due in 2014.

The segment was assessed not supporting of the Recreation Use based on numerous fecal coliform violations.

In addition, phosphorus screening levels were exceeded at two stations. Therefore phosphorus is listed as an observed effect, but is not an impairing cause.

These are confined animal feeding operation (CAFO) special study stations.

IMPAIRMENT SOURCE: Unknown, NPS - Agriculture

The DO and pH violations in this segment are attributed to natural swampwater conditions throughout the watershed.

The source of the fecal coliform violations and phosphorus screening level exceedances is considered unknown, although the confined animal feeding operations are suspected.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Surry

STREAM NAME: Cypress Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-06

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 17.1 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 17.6

LATITUDE: 37.14390 **LONGITUDE:** -77.00480

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Blackwater River

RIVER MILE: 0.00

LATITUDE: 37.02600 **LONGITUDE:** -76.89160

Mainstem from its headwaters to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Cypress Swamp was assessed not supporting of the Aquatic Life Use based on numerous current and historical dissolved oxygen and pH violations at two locations - the Route 31 bridge (5ACPP003.20) and the Route 616 bridge (5ACPP006.04).

The segment was initially listed as impaired in 1998. The TMDLs are due in 2010.

IMPAIRMENT SOURCE: Natural Conditions

Suspected to be caused by natural swampwater conditions throughout the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Surry

STREAM NAME: Johnchecohunk Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-07

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 8.39 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.9

LATITUDE: 37.12840 **LONGITUDE:** -77.02240

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Blackwater River

RIVER MILE: 0.00

LATITUDE: 37.07400 **LONGITUDE:** -76.91750

Mainstem from its headwaters to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Johnchecohunk Swamp was assessed as fully supporting but threatened of the Aquatic Life use goal in 1998 for dissolved oxygen and pH based on a 1994 study that identified widespread violations throughout the watershed.

During the year 2004 cycle, the pH violations were confirmed (2/2). Therefore the segment has been downgraded and the pH TMDL is due in 2016.

IMPAIRMENT SOURCE: Natural Conditions

The pH violations in this segment are attributed to natural swampwater conditions throughout the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Surry

STREAM NAME: Cypress Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-08

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 17.1 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 17.6

LATITUDE: 37.14390 **LONGITUDE:** -77.00480

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Blackwater River

RIVER MILE: 0.00

LATITUDE: 37.02600 **LONGITUDE:** -76.89160

Mainstem from its headwaters to its mouth.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Cypress Swamp from Johnchecohunk Swamp to its mouth (5.35 miles) was originally listed as impaired of the Recreation use during the 2002 cycle based on fecal coliform violations at the Rt. 31 bridge (5ACPP003.20). During the 2004 cycle, the impairment was extended upstream to fecal coliform violations at 5A-PL-SCP1B and 5ACPP006.04. The TMDL for the upstream portion is not due until 2016.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Surry

STREAM NAME: Spring Grove Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAP-K32R-09

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.47 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.47

LATITUDE: 37.19410 **LONGITUDE:** -76.97460

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Cypress Swamp

RIVER MILE: 0.00

LATITUDE: 37.15450 **LONGITUDE:** -76.95320

Mainstem from its headwaters to its mouth

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Spring Grove Swamp is considered not supporting of the Aquatic Life Use because of a DO standard violation rate of 4/6 and a pH standard violation rate of 5/6 at 5ASGS000.19, a confined animal feeding operation station located at the Route 20 bridge.

In addition, the segment is considered to have an "observed effect" due to exceedances of the total phosphorus screening level. This is not an impairing cause.

IMPAIRMENT SOURCE: Natural Conditions

The DO and pH violations are suspected to be caused by natural swampwater conditions in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton

STREAM NAME: Tarrara Creek

HYDROLOGIC UNIT: 03010204

TMDL ID: VAT-K13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.8 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters start of Tarrara Creek.

RIVER MILE: 12.80

LATITUDE: 36.70700 **LONGITUDE:** -76.43000

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with the Meherrin River.

RIVER MILE: 0.00

LATITUDE: 36.73770 **LONGITUDE:** -76.30040

Segment from headwaters of Tarrara Cr. to confluence with Meherrin River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on Tarrara Cr. (5ATRR002.50) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Sufficient exceedances of standard for Fecal Coliform Bacteria recorded at monitoring station on Tarrara Creek (5ATRR002.50) is reason to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. Cause of the D.O. standard violation are attributed to naturally occurring conditions. Cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The source of the dissolved oxygen impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton

STREAM NAME: Flat Swamp (Lower)

HYDROLOGIC UNIT: 03010204

TMDL ID: VAT-K13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.5 mi upstream of Southampton Speedway adjacent to swamp.

RIVER MILE: 5.00

LATITUDE: 36.61782 **LONGITUDE:** -77.30088

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the start of Flat Swamp.

RIVER MILE: 0.00

LATITUDE: 36.60088 **LONGITUDE:** -77.23552

Segment begins 0.5 mi upstream of Southampton Speedway adjacent to swamp downstream to the start of Flat Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen and pH were recorded at DEQ's ambient water quality monitoring station on Tarrara Cr. (5AFTS002.93) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. Sufficient exceedances of the standard for Fecal Coliform Bacteria recorded at the above monitoring station is the basis to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the D.O. and pH standard exceedances are attributed to naturally occurring conditions. Cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions, Unknown

The source of the dissolved oxygen and low pH impairments is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton

STREAM NAME: Three Creek (Upper portion in K27)

HYDROLOGIC UNIT: 03010201

TMDL ID: VAT-K27R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 10.91 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of Brown's Branch

RIVER MILE: 20.95

LATITUDE: 36.69690 **LONGITUDE:** -77.38220

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Rt 308 crossing, above Southampton Correctional Farm.

RIVER MILE: 10.04

LATITUDE: 36.73020 **LONGITUDE:** -77.25150

Segment begins at the confluence of Brown's Branch and ends at the Route 308 crossing, above Southampton Correctional Farm

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of water quality standards for Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on Three Creek (5ATRE016.02) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton

STREAM NAME: Three Creek (Lower portion in K27)

HYDROLOGIC UNIT: 03010201

TMDL ID: VAT-K27R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.04 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Rt 308 crossing.

RIVER MILE: 10.04

LATITUDE: 36.73020 **LONGITUDE:** -77.25150

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence of Three Creek with the Meherrin River.

RIVER MILE: 0.00

LATITUDE: 36.79450 **LONGITUDE:** -77.16210

Segment begins at the Route 308 crossing extending downstream to the confluence with the Meherrin River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Sufficient exceedances of standards for Dissolved Oxygen and pH were recorded at station on the lower portion of Three Creek (5ATRE008.48) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Sufficient exceedances of the standard for Fecal Coliform Bacteria recorded at the above monitoring station is the basis to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. Cause of the D.O. and pH standard exceedances are attributed to naturally occurring conditions. Cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions, Unknown

The source of the Dissolved Oxygen and pH impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform Bacteria impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton, Sussex

STREAM NAME: Applewhite Swamp

HYDROLOGIC UNIT: 03010201

TMDL ID: VAT-K27R-03

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 6.24 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 5.2 miles upstream from monitoring station at (5AAPW001.04)

RIVER MILE: 6.24

LATITUDE: 36.77437 **LONGITUDE:** -77.40643

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with Three Creek

RIVER MILE: 0.00

LATITUDE: 36.72150 **LONGITUDE:** -77.34084

Segment begins 5.2 miles upstream of monitoring station @ RM 6.24 and extends downstream to confluence with Three Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Sufficient exceedances (2/2) of standards for pH were recorded at station on Applewhite Swamp (5AAPW001.04) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the pH standard exceedances is attributed to naturally occurring conditions in swamps.

IMPAIRMENT SOURCE: Natural Conditions

The monitoring station (5AAPW001.04) is located on Applewhite Swamp, which empties into Three Creek. The land use in the watershed is mixed forest and swamp. The source of the pH standard exceedances is attributed to naturally occurring conditions in swamps. Water Quality Standards revision is needed to reflect swamp natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton

STREAM NAME: Darden Mill Run

HYDROLOGIC UNIT: 03010201

TMDL ID: VAT-K30R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.59 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of Darden Mill Run.

RIVER MILE: 9.59

LATITUDE: 36.54420 **LONGITUDE:** -77.00620

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the VA/NC state line.

RIVER MILE: 0.00

LATITUDE: 36.62160 **LONGITUDE:** -77.14380

Segment extends the length of Darden Mill Run, headwaters to VA/NC state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Sufficient exceedances of the standard for Dissolved Oxygen and pH recorded at station (5ADMR008.42) on Darden Mill Run to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) reports. The cause of the D.O. & pH standard violations is attributed to naturally occurring conditions. Sufficient exceedances of the standard for Fecal Coliform Bacteria recorded at the above monitoring station is the basis to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions, Unknown

The source of the DO & pH impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform bacteria standard violation is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Franklin City, Isle of Wight, Southampton, Suffolk

STREAM NAME: Blackwater River (Downstream from Zuni)

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K33R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 40.22 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Route 460 crossing Blackwater R @ Zuni.

RIVER MILE: 40.22

LATITUDE: 36.86857 **LONGITUDE:** -76.83552

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Virginia/North Carolina state line.

RIVER MILE: 0.00

LATITUDE: 36.54387 **LONGITUDE:** -76.91635

Segment extends from the Rt 460 crossing (@ Zuni) downstream to the Virginia/North Carolina state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - Hg

A VDH fish consumption advisory (Issued 10/2003 due to DEQ total Hg fish tissue data) is the cause of the impairment of the Fish Consumption Use Support Goal for the 2004 305(b) report. This advisory extends from State Rt 460 at Zuni downstream approximately 40 miles to the Virinia/North Carolina state line. The advisory warns that "no more than two meals per month of any gamefish should be consumed due to mercury levels". The cause of the Hg in fish tissue is unknown.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Isle of Wight, Southampton

STREAM NAME: Blackwater River (Upper)

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K33R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 21.98 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Route 620 crossing of the Blackwater River near Walls Bridge (start of watershed

RIVER MILE: 57.2

LATITUDE: 36.90560 **LONGITUDE:** -76.81690

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends 0.1 mi downstream of the confluence with Antioch Swamp.

RIVER MILE: 35.22

LATITUDE: 36.83070 **LONGITUDE:** -76.85690

Segment extends from the Route 620 crossing of the Blackwater River near Walls Bridge (start of watershed) downstream to 0.1 mi downstream of the confluence with Antioch Swamp (RM 35.22).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen (DO) were recorded at monitoring station (5ABLW040.22) on Blackwater R. to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the DO standard violation is attributed to naturally occurring conditions. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the above monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The source of the DO impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform bacteria standard violation is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Isle of Wight, Surry

STREAM NAME: Mill Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 16.78 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at confluence of Moores Swamp with Mill Swamp.

RIVER MILE: 16.78

LATITUDE: 37.04950 **LONGITUDE:** -76.83030

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Rattlesnake Swamp.

RIVER MILE: 0.00

LATITUDE: 36.95930 **LONGITUDE:** -76.78780

Segment begins at conlfuence of Moores Swamp with Mill Swamp downstream to confluence with Rattlesnake Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Sufficient exceedances of standard for Dissolved Oxygen and pH were recorded at a station on Mill Swamp (5AMSW006.77) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Sufficient exceedances of the standard for Fecal Coliform bacteria recorded at the above station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the D.O. and pH standard exceedances are attributed to naturally occurring conditions. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions, Unknown

The source of the Dissolved Oxygen and pH impairments is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform bacteria standard violation is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Isle of Wight

STREAM NAME: Rattlesnake (Creek) Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K34R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.16 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at confluence of Pouches Swamp.

RIVER MILE: 8.16

LATITUDE: 36.95930 **LONGITUDE:** -76.77180

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with the Blackwater River.

RIVER MILE: 0.00

LATITUDE: 36.91480 **LONGITUDE:** -76.81600

Segment begins at confluence of Pouches Swamp and ends at the confluence with the Blackwater River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of water quality standards for Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on Rattlesnake Swamp (5ARKN006.40) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the above monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the D.O. standard violation is attributed to naturally occurring conditions. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the Dissolved Oxygen impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform bacteria standard violation is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Sussex

STREAM NAME: Seacock Swamp (Upper)

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K35R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 0.8 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the spillway of Drumwright Pond, near Wakefield.

RIVER MILE: 19.35

LATITUDE: 36.95600 **LONGITUDE:** -77.00090

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with an unnamed tributary, approx. 0.1 mi. downstream of Rt 628.

RIVER MILE: 18.55

LATITUDE: 36.95410 **LONGITUDE:** -76.98950

Segment extends from the spillway of Drumwright Pond downstream to confluence with UT, 0.1 mi. downstream of the Rt 628 crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Sufficient exceedances of water quality standards for Dissolved Oxygen and pH were recorded at DEQ's ambient water quality monitoring station on Seacock Swamp (5ASCK018.65) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) reports.The cause of the standard violations is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions

The source of the impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton

STREAM NAME: Seacock Swamp (Lower)

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K35R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.47 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of Brantley Swamp (RM 8.73).

RIVER MILE: 8.73

LATITUDE: 36.87940 **LONGITUDE:** -76.92530

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Round Hill Swamp (RM 6.26).

RIVER MILE: 6.26

LATITUDE: 36.85020 **LONGITUDE:** -76.91860

Segment from confluence of Brantley Swamp to confluence with Round Hill Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the standard for Fecal Coliform bacteria were recorded at DEQ's ambient water quality monitoring station on lower Seacock Swamp (5ASCK006.96) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The source of the Fecal Coliform bacteria standard violation is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Sussex

STREAM NAME: Seacock Swamp unnamed tributary

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K35R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.06 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters.

RIVER MILE: 1.06

LATITUDE: 36.00000 **LONGITUDE:** -77.00000

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with Seacock Swamp.

RIVER MILE: 0.00

LATITUDE: 36.00000 **LONGITUDE:** -77.00000

Segment begins at headwaters and ends at confluence with Seacock Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen and pH recorded at monitoring station (5AXDY000.96) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. This is an area of hardwood swamp/wetlands where low dissolved oxygen and pH levels can naturally occur. Sufficient exceedances of the standard for Fecal Coliform Bacteria recorded at the above station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. Cause of the depressed D.O. and pH is believed to be naturally occurring. Cause of the Fecal Coliform bacteria exceedance is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions, Unknown

The monitoring station (5AXDY000.96) is located on on an unnamed Tributary to Seacock Swamp. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from confined animal feeding operations, wetlands areas and storm water runoff. The source of the depressed D.O. and pH is believed to be naturally occurring. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform bacteria exceedance is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Sussex

STREAM NAME: Airfield Pond (Lower) unnamed tributary

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K35R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.23 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins near Route 622.

RIVER MILE: 1.23

LATITUDE: 36.92179 **LONGITUDE:** -77.02746

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, where it empties into Airfield Pond

RIVER MILE: 0.00

LATITUDE: 36.91252 **LONGITUDE:** -77.03109

Segment begins near Rt 622 and ends at mouth where it empties into Airfield Pond.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen and pH recorded at monitoring station (5AXDZ000.81) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. This is an area of hardwood swamp/wetlands where low dissolved oxygen and pH levels can naturally occur. Sufficient exceedances of the standard for Fecal Coliform Bacteria recorded at the above station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. Cause of the depressed D.O. and pH is believed to be naturally occurring. Cause of the Fecal Coliform bacteria exceedance is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions, Unknown

The monitoring station (5AXDZ000.81) is located on on an unnamed Tributary to Airfield Pond. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the depressed D.O. and pH is believed to be naturally occurring. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform bacteria exceedance is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Sussex

STREAM NAME: Airfield Pond (Upper) unnamed tributary

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K35R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.58 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins north of Route 622.

RIVER MILE: 1.81

LATITUDE: 36.92858 **LONGITUDE:** -77.03317

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with lower portion of UT.

RIVER MILE: 1.23

LATITUDE: 36.92179 **LONGITUDE:** -77.02746

Segment begins north of Route 622 and ends at confluence with lower portion of UT.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen recorded at monitoring station (5AXDZ001.73) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. This is an area of hardwood swamp/wetlands where low dissolved oxygen can naturally occur. Sufficient exceedances of the standard for Fecal Coliform Bacteria recorded at the above station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. Cause of the depressed D.O. is believed to be naturally occurring. Cause of the Fecal Coliform bacteria exceedance is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

The monitoring station (5AXDZ001.73) is located on on an unnamed Tributary to Airfield Pond. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the depressed D.O. is believed to be naturally occurring. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform bacteria exceedance is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton

STREAM NAME: Brantley Swamp

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K35R-07

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 7.04 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at confluence with Lightwood Swamp, upstream of monitoring station (5ABNT002.70)

RIVER MILE: 7.04

LATITUDE: 36.88310 **LONGITUDE:** -76.96534

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with Seacock Swamp

RIVER MILE: 0.00

LATITUDE: 36.87944 **LONGITUDE:** -76.92527

Segment begins at confluence with Lightwood Swamp and extends downstream to the confluence with Seacock Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen and pH were recorded at DEQ's ambient water quality monitoring station on Brantley Swamp (5ABNT002.70) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions

The monitoring station (5ABNT002.70) is located on Brantley Swamp, which empties into Seacock Swamp. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Franklin City, Isle of Wight, Southampton, Suffolk

STREAM NAME: Blackwater River (Lower)

HYDROLOGIC UNIT: 03010202

TMDL ID: VAT-K36R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 19.87 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at river mile 19.87 (from unnamed tributary near Town of Edgehill.

RIVER MILE: 19.87

LATITUDE: 36.69940 **LONGITUDE:** -76.91880

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at Virginia/North Carolina state line.

RIVER MILE: 0.00

LATITUDE: 36.62990 **LONGITUDE:** -76.89160

Segment begins at river mile 19.87 (from unnamed tributary near Town of Edgehill and ends at Virginia/North Carolina state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen were recorded at monitoring stations (5ABLW016.27, 5ABLW014.88, 5ABLW014.28 5ABLW013.16, 5ABLW012.96, 5ABLW012.28, 5ABLW011.48, 5ABLW010.60, 5ABLW009.80, 5ABLW009.14, 5ABLW001.10) on Blackwater River to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) reports. The cause of the standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions

The source of the impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Southampton

STREAM NAME: Buckhorn Creek unnamed tributary

HYDROLOGIC UNIT: 03010203

TMDL ID: VAT-K37R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins upstream 1.52 mi. from station 5AXDN000.48 (@ Rt. 258 crossing).

RIVER MILE: 2.00

LATITUDE: 36.54550 **LONGITUDE:** -76.98990

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the point where the unnamed tributary crosses the VA/NC state line.

RIVER MILE: 0.00

LATITUDE: 36.54410 **LONGITUDE:** -76.96670

Segment begins upstream 1.52 mi. from station 5AXDN000.48 (@ Rt. 258 crossing) and ends at the point where the unnamed tributary crosses the VA/NC state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen and pH were recorded at DEQ's ambient water quality monitoring station on Unnamed tributary to Buckhorn Cr. (5AXDN000.48) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions

The source of the impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Suffolk

STREAM NAME: Somerton Creek

HYDROLOGIC UNIT: 03010203

TMDL ID: VAT-K38R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 13.78 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 5.00 mi. upstream from Rt. 745 crossing of Buckhorn Creek.

RIVER MILE: 13.78

LATITUDE: 36.56580 **LONGITUDE:** -76.81240

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the point where Buckhorn Creek crosses the VA/NC state line.

RIVER MILE: 0.00

LATITUDE: 36.55160 **LONGITUDE:** -76.89810

Segment from 5.00 mi. upstream from Rt. 745 crossing to VA/NC state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen and pH were recorded at DEQ's ambient water quality monitoring station on Somerton Cr. (5ASTN008.78) to assess this segment as not and not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the standard violation is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions

The source of the impairment is attributed to naturally occurring conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Suffolk

STREAM NAME: Somerton Creek unnamed tributary (March Swam

HYDROLOGIC UNIT: 03010203

TMDL ID: VAT-K38R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 7.47 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 5.82 miles upstream from monitoring station (5AXEN001.65)

RIVER MILE: 7.47

LATITUDE: 36.63310 **LONGITUDE:** -76.82773

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with Somerton Creek

RIVER MILE: 0.00

LATITUDE: 36.55967 **LONGITUDE:** -76.85068

Segment begins 5.82 miles upstream of monitoring station @ RM 7.35 and extends downstream confluence with Somerton Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen and pH were recorded at DEQ's monitoring station (5AXEN001.65) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the standard violation is attributed to naturally occurring conditions for swamps. Water Quality Standards revision is needed to reflect swamp natural conditions.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions

The monitoring station (5AXEN001.65) is located on a tributary (March Swamp), which empties into Somerton Creek. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the impairment is attributed to naturally occurring conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Suffolk

STREAM NAME: Chapel Swamp

HYDROLOGIC UNIT: 03010203

TMDL ID: VAT-K38R-03

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.42 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at Holy Neck Pond (0.39 mi upstream from station 5ACHP002.03)

RIVER MILE: 2.42

LATITUDE: 36.59200 **LONGITUDE:** -76.82040

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with Somerton Creek

RIVER MILE: 0.00

LATITUDE: 36.57291 **LONGITUDE:** -76.80350

Segment begins at Holy Neck Pond (0.39 mi upstream from station 5ACHP002.03) and extends downstream to the confluence with Somerton Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen and pH were recorded at DEQ's monitoring station (5ACHP002.03) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the standard violation is attributed to naturally occurring conditions for swamps. Water Quality Standards revision is needed to reflect swamp natural conditions.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions

The monitoring station (5ACHP002.03) is located on Chapel Swamp, which empties into Somerton Creek. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the impairment is attributed to naturally occurring conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Chesapeake

STREAM NAME: Feeder Canal to Dismal Swamp

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K39R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.16 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Deep Creek locks.

RIVER MILE: 14.16

LATITUDE: 36.74100 **LONGITUDE:** -76.34490

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the VA/NC state line.

RIVER MILE: 0.00

LATITUDE: 36.55070 **LONGITUDE:** -76.37750

Segment from Deep Creek locks downstream to VA/NC state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: pH, Dissolved Oxygen, Fish Tissue - Hg

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen & pH were recorded at DEQ's ambient water quality monitoring station on Unnamed tributary to Lake Drummond (5BXCK000.00) to assess this segment as not-supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the Dissolved Oxygen & pH standard violations is attributed to naturally occurring conditions. A VDH fish consumption advisory (issued 10/2003 due to total Hg reported in DEQ fish tissue samples) is the cause of the Fish Consumption Use Support Goal impairment for the 2004 305(b) report.This advisory extends from the Deep Creek Locks downstream approximately 14 miles to the Virinia/North Carolina state line (including the feeder ditch to Lake Drummond). The advisory warns that "no more than two meals of any gamefish should be consumed due to mercury levels". The cause of the Hg in fish tissue exceedance is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions, Unknown

The source of the pH impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Hg impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Chesapeake

STREAM NAME: Northwest River (Lower) unnamed tributary

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K40R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.94 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Saint Brides Road crossing.

RIVER MILE: 3.94

LATITUDE: 36.60400 **LONGITUDE:** -76.55260

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the unnamed tributary's confluence with the Northwest River.

RIVER MILE: 0.00

LATITUDE: 36.56520 **LONGITUDE:** -76.20220

Segment from St Brides Rd crossing to confluence with Northwest River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on this unnamed tributary to the Northwest River (5BXAM000.60) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Chesapeake

STREAM NAME: Northwest River (Upper & Middle)

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K40R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 13.63 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters.

RIVER MILE: 21.86

LATITUDE: 36.60180 **LONGITUDE:** -76.27680

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the unnamed tributary downstream of Smith Creek.

RIVER MILE: 8.23

LATITUDE: 36.56740 **LONGITUDE:** -76.15210

Segment begins at the headwaters downstream to unnamed tributary south of Smith Cr.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of water quality standards for Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on the Northwest River (BNTW012.86, BNTW011.90, BNTW010.23, 5BNTW009.49, 5BNTW0008.97) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) report. The cause of the standard violation is attributed to naturally occurring conditions.

IMPAIRMENT SOURCE: Unknown

The source of the impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Chesapeake

STREAM NAME: Indian Creek

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K40R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.48 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Saint Brides Road bridge crossing Indian Creek.

RIVER MILE: 3.48

LATITUDE: 36.60380 **LONGITUDE:** -76.22580

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence of Indian Creek with the Northwest River.

RIVER MILE: 0.00

LATITUDE: 36.57240 **LONGITUDE:** -76.16220

Segment begins at the Saint Brides Road bridge downstream to confluence Northwest R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform & E.coli

Sufficient exceedances of Virginia's dissolved oxygen (DO) standard recorded on Indian Creek (5BIND001.15) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. This area is hardwood swamp/wetlands where low D.O. levels can naturally occur. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform & E.coli bacteria were recorded at the above monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the depressed DO concentrations is suspected to be naturally occurring. The cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Indian Creek monitoring station is located at the Indian Creek Road bridge, in the Saint Brides area of Chesapeake. The land use in the watershed is mixed forested, agricultural production, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential /agricultural area. The specific source of the depressed dissolved oxygen concentrations is currently unknown, but believed to be naturally occurring. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform & E.coli bacteria standard violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Chesapeake, Virginia Beach

STREAM NAME: Pocaty River

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K41R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 6.61 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of Pocaty River.

RIVER MILE: 6.61

LATITUDE: 36.68023 **LONGITUDE:** -76.15293

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream at the confluence of Pocaty River with the North Landing River.

RIVER MILE: 0.00

LATITUDE: 36.67785 **LONGITUDE:** -76.06976

Segment begins at the headwaters of the Pocaty River downstream to the confluence with the North Landing River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen were recorded on the Pocaty River station (5BPCT001.79) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur. The cause of the depressed Dissolved Oxygen concentrations is currently unknown, but is suspected to be naturally occurring.

IMPAIRMENT SOURCE: Unknown

The Pocaty River monitoring station is located at the Route 190 (Blackwater Road) Bridge, in the Fentress area of Virginia Beach. The land use in the watershed is mixed forested, agricultural production, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential /agricultural area. This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur. The specific source of the depressed dissolved oxygen concentrations is believed due to high organic content and stagnant flow conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Milldam Creek

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K41R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.29 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of Blackwater Creek.

RIVER MILE: 3.29

LATITUDE: 36.57907 **LONGITUDE:** -76.08000

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence of Blackwater Creek with the North Landing River.

RIVER MILE: 0.00

LATITUDE: 36.59748 **LONGITUDE:** -76.04874

Segment from headwaters downstream to confluence with North Landing River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen were recorded on Milldam Creek (5BMLD001.92) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) report. This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the above monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 & 2004 305(b) report. The cause of the depressed Dissolved Oxygen concentrations is currently unknown, but is suspected to be naturally occurring. The cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Milldam Creek monitoring station is located at the Route 190 (Blackwater Road) Bridge, in the Fentress area of Virginia Beach. The land use in the watershed is mixed forested, agricultural production, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential /agricultural area. This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur. The specific source of the enteric bacteria causing the elevated Fecal Coliform Bacteria levels is currently unknown. The specific source of the depressed dissolved oxygen concentrations is believed due to high organic content and stagnant flow conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

Additional monitoring is necessary to determine whether the impairment is not naturally occuring.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Chesapeake, Virginia Beach

STREAM NAME: Albemarle Canal (upstream of North Landing River

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K41R-03

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 10.66 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Great Bridge Locks, head of Albemarle & Chesapeake Canal.

RIVER MILE: 22.84

LATITUDE: 36.71990 **LONGITUDE:** -76.24170

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream at island in North Landing River (RM 12.18), upstream of West Neck Creek.

RIVER MILE: 12.18

LATITUDE: 36.69740 **LONGITUDE:** -76.07360

Segment begins at Great Bridge locks (head of Albemarle & Chesapeake Canal) and ends downstream at island in North Landing River (RM 12.18), upstream of West Neck Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Chloride

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen and Chloride were recorded at monitoring station in the Albemarle & Chesapeake Canal (5ANLR013.61 & 5BNRL010.75) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur. The cause of the depressed Dissolved Oxygen concentrations is suspected to be naturally occurring and due to high organic content and stagnant conditions within the canal. The cause of the chloride standard exceedance is attributed to naturally occurring conditions of saline water intrusion from downstream estuarine waters (Currituck Sound).

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions

The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding forested / agricultural / residential area. This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur. The source of the elevated chloride concentrations is attributed to a naturally occurring condition of saline water intrusion from downstream estuarine waters (Currituck Sound). The source of the DO & chloride standard exceedance is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect natural conditions in this waterway.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Chesapeake, Virginia Beach

STREAM NAME: North Landing River

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K41R-04

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 12.01 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the island in North Landing River (RM 12.18), upstream of West Neck Creek.

RIVER MILE: 12.01

LATITUDE: 36.69740 **LONGITUDE:** -76.07360

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream at Virginia/North Carolina state line.

RIVER MILE: 0.00

LATITUDE: 36.55040 **LONGITUDE:** -76.02430

Segment begins at the island in North Landing River (RM 12.18), upstream of West Neck Creek and ends downstream at Virginia / North Carolina state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Chloride

Sufficient exceedances of Virginia's water quality standard for Chloride were recorded at monitoring stations in the North Landing River (5BNLR010.75, 5BNRL010.25, 5BNRL007.56, 5BNRL005.56, 5BNRL003.83, 5BNRL002.11) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the chloride standard exceedance is attributed to naturally occurring conditions of saline water intrusion from downstream estuarine waters (Currituck Sound).

IMPAIRMENT SOURCE: Natural Conditions

The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding forested / agricultural / residential area. The source of the elevated chloride concentrations is attributed to a naturally occurring condition of saline water intrusion from downstream estuarine waters (Currituck Sound). Water Quality Standards revision is needed to reflect natural chlorice conditions in this waterway.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: West Neck Creek (Middle)

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K41R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.1 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at southside of Princess Anne Rd. crossing.

RIVER MILE: 6.20

LATITUDE: 36.75587 **LONGITUDE:** -76.03996

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossin

RIVER MILE: 3.10

LATITUDE: 36.72396 **LONGITUDE:** -76.03596

Segment begins at southside of Princess Anne Road crossing and ends at widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossing. NOTE: West Neck Creek (Upper) segment moved to VAT-C08E-07 in accord with USGS flow study 94-4067 and data indicating estuarine conditions.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Chloride, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen and Chloride were recorded at DEQ's ambient water quality monitoring station on West Neck Cr. (5BWNC003.65) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) reports. The cause of the depressed Dissolved Oxygen concentrations is suspected to be naturally occurring and due to high organic content and stagnant conditions within swamp waters. The cause of the chloride standard exceedance is attributed to naturally occurring conditions of saline water intrusion from upstream and downstream estuarine waters. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at the above monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Natural Conditions, Unknown

This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur. The source of the Dissolved Oxygen and Chloride impairments is attributed to naturally occurring conditions. The source of the depressed Dissolved Oxygen concentrations is suspected to be due to high organic content and stagnant conditions within swamp waters. The cause of the chloride standard exceedance is attributed to saline water intrusion from upstream and downstream estuarine waters. Water Quality Standards revision is needed to reflect swamp natural conditions. The source of the Fecal Coliform bacteria standard exceedance is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: West Neck Creek (Lower)

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K41R-06

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 3.71 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossi

RIVER MILE: 3.71

LATITUDE: 36.72396 **LONGITUDE:** -76.03596

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth (RM 0.0) at confluence with North Landing River.

RIVER MILE: 0.00

LATITUDE: 36.68460 **LONGITUDE:** -76.06540

Segment begins at widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossing and ends at mouth (RM 0.0) at confluence with North Landing River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Chloride

Sufficient exceedances of Virginia's water quality standard for Chloride were recorded at monitoring station on West Neck Creek (5BWNC001.73) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the chloride standard exceedance is attributed to naturally occurring conditions of saline water intrusion from downstream estuarine waters (Currituck Sound).

IMPAIRMENT SOURCE: Natural Conditions

This is an area of hardwood swamp/wetlands. The source of the impairment is attributed to naturally occurring conditions. Water Quality Standards revision is needed to reflect swamp natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Nawney Creek (Upper)

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K42E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.8 mile upstream of Nawney Creek Road crossing of Nawney Creek.

RIVER MILE: 2.64

LATITUDE: 36.66090 **LONGITUDE:** -76.01560

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends 0.6 mile downstream of Nawney Creek Road bridge.

RIVER MILE: 1.24

LATITUDE: 36.64700 **LONGITUDE:** -76.00790

Segment extends 0.8 mile upstream and 0.6 mile downstream of Nawney Creek Road bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform & Enterococci

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen recorded at station on Nawney Cr. (5BNWN001.84) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) reports. The cause of the dissolved oxygen standard violation is attributed to naturally occurring conditions for swamp areas with high organic matter and low flow velocities. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform & Enterococci bacteria were recorded at the above monitoring station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Natural Conditions, Unknown

This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur due to high organic matter content and low flow velocities. The source of the low dissolved oxygen impairment is attributed to naturally occurring conditions. The land use in the watershed is mixed agricultural and livestock production. Nearby farm fields are spray irrigated using effluent from animal rearing facilities. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area. The cause of the Fecal Coliform bacteria standard violation is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Nawney Creek (Lower)

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K42E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.6 mile downstream of Nawney Creek Road bridge.

RIVER MILE: 1.24

LATITUDE: 36.64710 **LONGITUDE:** -76.00790

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Redhead/Back Bay

RIVER MILE: 0.00

LATITUDE: 36.63530 **LONGITUDE:** -75.99360

Segment begins 0.6 mile downstream of Nawney Creek Road bridge and ends at the confluence with Redhead/Back Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the Fecal Coliform bacteria standard at monitoring station 5BNWN000.00 to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 & 2004 305(b) reports. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Nawney Creek station is located at the confluence of Nawney Creek with Back Bay (5BNWN000.00). The land use in the watershed is mixed agricultural and livestock production. Nearby farm fields are spray irrigated using effluent from animal rearing facilities. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Hell Point Creek (Lower) tributary to North Bay

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K42E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.002 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at intersection of creek and canal upstream of monitoring station.

RIVER MILE: 0.46

LATITUDE: 36.71850 **LONGITUDE:** -75.96730

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with North Bay.

RIVER MILE: 0.00

LATITUDE: 36.71390 **LONGITUDE:** -75.96739

Segment begins at intersection of creek and canal upstream of monitoring station and ends at mouth, confluence with North Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci

Sufficient exceedances of the Fecal Coliform & Enterococci bacteria standard at monitoring station 5BHPC000.00 to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The monitoring station (5BHPC000.00) is located at the mouth of the creek where it empties into North Bay. The land use in the watershed is mixed agricultural and livestock production. Nearby farm fields are spray irrigated using effluent from animal rearing facilities. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area. Additional monitoring is needed to determine the extent of impairment and sources of additional imputs of bacteria.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Muddy Creek tributary to North Bay

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K42E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at confluence with Ashville Bridge Creek

RIVER MILE: 1.14

LATITUDE: 36.71446 **LONGITUDE:** -75.98720

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with North Bay.

RIVER MILE: 0.00

LATITUDE: 36.71197 **LONGITUDE:** -75.97274

Segment begins at confluence with Ashville Bridge Creek and ends at the mouth, the confluence with North Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the Fecal Coliform bacteria standard at monitoring station 5BMDY000.00 to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The monitoring station (5BMDY000.00) is located at the mouth of the creek where it empties into North Bay. The land use in the watershed is mixed agricultural and livestock production. Nearby farm fields are spray irrigated using effluent from animal rearing facilities. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Beggars Bridge Creek tributary to Shipps Bay

HYDROLOGIC UNIT: 03010205

TMDL ID: VAT-K42E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.6 miles upstream from monitoring station (5BBBC000.76), at confluence of numerous

RIVER MILE: 1.17

LATITUDE: 36.68339 **LONGITUDE:** -75.99326

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with Shipps Bay

RIVER MILE: 0.00

LATITUDE: 36.67641 **LONGITUDE:** -75.97578

Segment begins at the confluence of numerous unnamed tributaries (RM 1.34) near Dawley Corners and extends downstream to the mouth at the confluence with Shipps Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the Fecal Coliform bacteria standard at monitoring station 5BBBC000.76 to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The monitoring station (5BBBC000.76) is located at the Muddy Creek Road crossing of Beggars Bridge Creek. The land use in the watershed is mixed agricultural and livestock production. Nearby farm fields are spray irrigated using effluent from animal rearing facilities. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /agricultural area. The source of the Fecal Coliform bacteria standard exceedance is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: CHESAPEAKE BAY - VA portion of CBP segment

HYDROLOGIC UNIT: 02080101

TMDL ID: VACB-C10E-POC

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 54 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

This waterbody segment encompasses VA waters of Pocomoke Sound and Beasley Bay. Contains part of 2002 303d segment VACB-R01E-06. Includes monitoring stations EE3.3, EE3.4.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Estuarine Bioassessments (Benthos)

This segment is non-supporting for the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report due assessment of estuarine probabilistic benthic survey results.

IMPAIRMENT SOURCE: Unknown

Anthropogenic Eutrophication

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: CHESAPEAKE BAY - VA portion of CBP Segment

HYDROLOGIC UNIT: 02080101

TMDL ID: VACB-C10E-TAN

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 122 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

This waterbody segment encompasses waters of Tangier Sound. Includes monitoring station EE3.2.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Estuarine Bioassessments (Benthos)

This segment is non-supporting for the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report due assessment of estuarine probabilistic benthic survey results.

IMPAIRMENT SOURCE: Unknown

Anthropogenic Eutrophication

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster, Northumberland

STREAM NAME: CHESAPEAKE BAY - VA portion of CB5MH

HYDROLOGIC UNIT: 02080101

TMDL ID: VACB-R01E-CB5

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 215 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

Segment encompasses Bay mainstem open water from the MD-VA state line southward to line running from North shore mouth of Rappahannock River to Tangier Island. Includes monitoring stations CB5.4, CB5.4W, CB5.5. Contains parts of 2002 303d segments VACB-R01E-02 and VACB-R01E-05

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Estuarine Bioassessments (Benthos), EPA Overlisting (Nutrients)

This segment is non-supporting for the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report due to dissolved oxygen criteria violations in Deep Water and Deep Channel areas (< 4.0 mg/l Violation rate of 65% Deep Channel, 24% Deep water, .2% Open Water) observed at water quality monitoring stations CB5.4, CB5.4W, CB5.5. The segment is also non-supporting for Aquatic Life Use Support Goal because of impaired benthic communities. This segment was also listed as impaired in 1998 by EPA due to nutrient enrichment concerns.

IMPAIRMENT SOURCE: Nonpoint Sources, Point Sources, Sources Ouside State Jurisdiction, Unknown, Nonpoint Sources, Point Sou

Anthropogenic Eutrophication

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton, Lancaster, Mathews, Poquoson

STREAM NAME: CHESAPEAKE BAY - CBP segment CB6PH

HYDROLOGIC UNIT: 02080101

TMDL ID: VACB-R01E-CB6

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 287 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

This segment encompasses Eastern Chesapeake Bay mainstem open water from mouth of Rappahannock River to Mobjack Bay. Includes monitoring stations CB6.1, CB6.2, CB6.3, CB6.4. Contains parts of 2002 303d segments VACB-R01E-03, VACB-R01E-05, VACB-R01E-07, VACB-R01-08

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, EPA Overlisting (Nutrients)

This segment is non-supporting for the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report due to dissolved oxygen criteria violations in Deep Water (< 4.0 mg/l Violation rate of 29% Deep water, 4% Open Water) observed at water quality monitoring stations CB6.1, CB6.2, CB6.3, and CB6.4. Most of this segment was also listed as impaired in 1998 by EPA due to nutrient enrichment concerns.

IMPAIRMENT SOURCE: Nonpoint Sources, Point Sources, Sources Ouside State Jurisdiction, Nonpoint Sources, Point Sources, Sour

Anthropogenic Eutrophication

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack, Northampton

STREAM NAME: CHESAPEAKE BAY - CBP Segment CB7PH

HYDROLOGIC UNIT: 02080101

TMDL ID: VACB-R01E-CB7

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 587 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

This segment encompasses Western Chesapeake Bay mainstem open water from mouth of Rappahannock River to Mobjack Bay. Includes monitoring stations CB7.1, CB7.1N, CB7.1S, CB7.2, CB7.2E, CB7.3, CB7.3E, CB7.4, CB7.4N. Contains parts of 2002 303d segments VACB-R01E-03, VACB-R01E-06, VACB-R01-08.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, EPA Overlisting (Nutrients)

This segment is non-supporting for the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report due to dissolved oxygen criteria violations in Deep Water (< 4.0 mg/l Violation rate of 23% Deep water, 3% Open Water) observed at water quality monitoring stations CB7.1, CB7.1N, CB7.1S, CB7.2, CB7.2E, CB7.3, CB7.3E, CB7.4, CB7.4N. Most of this segment was also listed as impaired in 1998 by EPA due to nutrient enrichment concerns.

IMPAIRMENT SOURCE: Nonpoint Sources, Point Sources, Sources Ouside State Jurisdiction, Nonpoint Sources, Point Sources, Sour

Anthropogenic Eutrophication

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester, Mathews, Poquoson, York

STREAM NAME: CHESAPEAKE BAY - CBP Segment MOBPH

HYDROLOGIC UNIT: 02080101

TMDL ID: VACB-R01E-MOB

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 96 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

This segment encompasses Mobjack Bay and other waters off the mouth of the York River. The CBP segment name is MOBPH. Includes monitoring stations WE4.1, WE4.2, WE4.3 and WE4.4, Contains parts of 2002 303d segment VACB-R01E-04, VACB-R01E-06, plus other non-listed area.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: EPA Overlisting (Dissolved Oxygen), EPA Overlisting (Nutrients)

This segment is fully supporting of Aquatic Life Use when assessed against criteria. The imparement is due solely to EPA Overlisting and their stated caues of nutrients and D.O.

IMPAIRMENT SOURCE: Nonpoint Sources, Point Sources, Sources Ouside State Jurisdiction, Nonpoint Sources, Point Sources, Sour

Anthropogenic Eutrophication

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Great Wicomico River

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-01

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.54 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 13.55

LATITUDE: 37.88720 **LONGITUDE:** -76.44860

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 089A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction, Dissolved Oxygen

VDH-DSS Shellfish Condemnation 089A, 4/3/2002
The TMDL is due in 2010.

In the 2004 cycle, the segment was assessed as not supporting of the Aquatic Life Use goal based on a dissolved oxygen violation rate of 12/97 at 7-GWR008.89, located 100 yards above Route 7. The DO TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Balls Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.09

LATITUDE: 37.84930 **LONGITUDE:** -76.39530

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 089B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 089B, 4/3/2002

Size shortened in 2004 cycle

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Tipers Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-03

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.27

LATITUDE: 37.83390 **LONGITUDE:** -76.37080

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 089C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 089C, 4/3/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Whays Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-05

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.35

LATITUDE: 37.84940 **LONGITUDE:** -76.30690

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 089D

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 089D, 4/3/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Warehouse Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-06

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.50

LATITUDE: 37.85890 **LONGITUDE:** -76.31810

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 089E

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 089E, 4/3/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Horn Harbor

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-07

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.07

LATITUDE: 37.86060 **LONGITUDE:** -76.34170

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 089F

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 089F, 4/3/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Cockrell Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-08

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 1.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 3.49

LATITUDE: 37.85920 **LONGITUDE:** -76.29440

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.12

LATITUDE: 37.31830 **LONGITUDE:** -76.28610

Described in VDH Notice and Description of Shellfish Condemnation Number 002

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 002A, 9/14/1993

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Prentice Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.11

LATITUDE: 37.72640 **LONGITUDE:** -76.33940

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.88

LATITUDE: 37.72720 **LONGITUDE:** -76.33580

Described in VDH Notice and Description of Shellfish Condemnation Number 022D

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 022D, 5/1/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Chesapeake Bay: Owens Pond

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.18 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.58

LATITUDE: 37.85280 **LONGITUDE:** -76.26110

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.00

LATITUDE: 37.84270 **LONGITUDE:** -76.24920

Described in VDH Notice and Description of Shellfish Condemnation Number 122

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 122, 1/3/1992

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Chesapeake Bay: Little Taskmasters Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.46

LATITUDE: 37.82330 **LONGITUDE:** -76.26810

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.08

LATITUDE: 37.82030 **LONGITUDE:** -76.26420

Described in VDH Notice and Description of Shellfish Condemnation Number 190A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 190A, 4/21/1999

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.3 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 4.81

LATITUDE: 37.79670 **LONGITUDE:** -76.36030

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 2.69

LATITUDE: 37.79250 **LONGITUDE:** -76.33280

Described in VDH Notice and Description of Shellfish Condemnation Number 123

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 123, 6/24/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Cloverdale Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.93

LATITUDE: 37.77640 **LONGITUDE:** -76.31940

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.62

LATITUDE: 37.77560 **LONGITUDE:** -76.31390

Described in VDH Notice and Description of Shellfish Condemnation Number 124A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 124A, 5/15/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Ball Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.18

LATITUDE: 37.76720 **LONGITUDE:** -76.32610

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 124B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 124B, 5/15/2001

Size extended in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Dividing Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-15

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.42 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 3.54

LATITUDE: 37.77000 **LONGITUDE:** -76.34060

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 022A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction, Dissolved Oxygen

VDH-DSS Shellfish Condemnation 022A, 5/1/2002
The segment was initially listed for the Shellfishing Use in 1998. The size has been adjusted through the assessment cycles and now incorporates the old Lawrence Cove segment. The TMDL is due in 2010.

In 2004 the segment was also assessed as impaired of the Aquatic Life use based on a dissolved oxygen violation rate of 3/19 at 7-XDB000.08. The DO TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster, Northumberland

STREAM NAME: Fleets Bay

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-16

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 2.43 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Indian Creek confluence

RIVER MILE:

LATITUDE: 37.66320 **LONGITUDE:** -76.33030

DOWNSTREAM LIMIT:

DESCRIPTION: Dymer Creek confluence

RIVER MILE:

LATITUDE: 37.65400 **LONGITUDE:** -76.33500

Fleets Bay north of the midpoint between Tabbs and Dymer Creeks.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Dissolved oxygen violation rate of 3/3 in bottom layer of Fleets Bay at the confluence with Dymer Creek (7-DYM000.00) during the 2002 cycle.

The station was not monitored during the 2004 cycle.

IMPAIRMENT SOURCE: Stratification

Bottom water DO violations during special study.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Prentice Creek, Unnamed Cove

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.73560 **LONGITUDE:** -76.33310

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.73810 **LONGITUDE:** -76.33110

Described in VDH Notice and Description of Shellfish Condemnation Number 022B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 022B, 5/1/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Prentice Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.73000 **LONGITUDE:** -76.33880

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.72890 **LONGITUDE:** -76.33560

Described in VDH Notice and Description of Shellfish Condemnation Number 022C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 022C, 5/1/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster

STREAM NAME: Lees Cove

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-20

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.50

LATITUDE: 37.67640 **LONGITUDE:** -76.33810

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.27

LATITUDE: 37.67360 **LONGITUDE:** -76.33690

Described in VDH Notice and Description of Shellfish Condemnation Number 024B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 024B, 7/14/2000

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Chesapeake Bay, UT

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-21

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.44

LATITUDE: 37.81610 **LONGITUDE:** -76.27720

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.00

LATITUDE: 37.81330 **LONGITUDE:** -76.27360

Described in VDH Notice and Description of Shellfish Condemnation Number 190B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 190B, 4/21/1999

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster, Northumberland

STREAM NAME: Indian Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-22

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.4 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 3.15

LATITUDE: 37.70720 **LONGITUDE:** -76.36060

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 1.63

LATITUDE: 37.69280 **LONGITUDE:** -76.34640

Described in VDH Notice and Description of Shellfish Condemnation Number 057A, 11/30/2000

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Condemnation 057A

VDH-DSS Shellfish Condemnation 057A, 11/30/2000

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster, Northumberland

STREAM NAME: Indian Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-23

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.82 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Pitmans Cove

RIVER MILE: 2.00

LATITUDE: 37.69490 **LONGITUDE:** -76.34880

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.65400 **LONGITUDE:** -76.33500

From Pitmans Cove downstream to the mouth at the Chesapeake Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

In the 2002 cycle, Indian Creek was assessed not supporting of the Aquatic Life use based on widespread bottom water dissolved oxygen violations.

DO 2/4 at 7-IND000.00;
DO 4/31 at 7-IND000.50;
DO 2/4 at 7-IND0001.42;
DO 2/4 at 7-IND001.23;
DO 2/4 at 7-IND001.80.

During the 2004 cycle, the DO results were 2/27 at 7-IND001.50, which are acceptable. More monitoring should be conducted to confirm the impairment.

IMPAIRMENT SOURCE: Stratification

Bottom water DO violations during special study 8/22/1996.

The source of the mercury and arsenic is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster

STREAM NAME: Dymer Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-24

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 3.14

LATITUDE: 37.68810 **LONGITUDE:** -76.36780

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 1.98

LATITUDE: 37.67780 **LONGITUDE:** -76.36030

Described in VDH Notice and Description of Shellfish Condemnation Number 024A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 024A, 7/14/2000

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster

STREAM NAME: Georges Cove

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-25

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.69

LATITUDE: 37.66140 **LONGITUDE:** -76.35640

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.38

LATITUDE: 37.66330 **LONGITUDE:** -76.35250

Described in VDH Notice and Description of Shellfish Condemnation Number 024C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 024C, 7/14/2000

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster

STREAM NAME: Tabbs Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-27

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 2.31

LATITUDE: 37.65650 **LONGITUDE:** -76.37140

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 133

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 133, 12/6/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster

STREAM NAME: Antipoison Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-28

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 2.77

LATITUDE: 37.64250 **LONGITUDE:** -76.37080

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 188A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 188A, 6/28/2002

Size extended in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Jarvis Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-30

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.88

LATITUDE: 37.71190 **LONGITUDE:** -76.32220

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 022E

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 022E, 5/1/2002

Size increased in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Betts Mill Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-33

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 089G

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 089G, 4/3/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Lancaster

STREAM NAME: Davenport Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01E-34

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 188B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 188B, 6/26/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northumberland

STREAM NAME: Bush Mill Stream

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.87 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.30

LATITUDE: 37.87500 **LONGITUDE:** -76.54140

DOWNSTREAM LIMIT:

DESCRIPTION: Tributary at river mile 2.43

RIVER MILE: 2.43

LATITUDE: 37.84660 **LONGITUDE:** -76.46120

Segment comprises all of Bush Mill Stream upstream of tributary at river mile 2.43.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment continues to be assessed as not supporting of the Recreation use support goal based on a fecal coliform standard violation rate of 3/20 at the Route 601 bridge (7-BMS004.46).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violation is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester, Middlesex

STREAM NAME: Dragon Run

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C02E-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 4.60

LATITUDE: 37.58610 **LONGITUDE:** -76.62360

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Piankatank River

RIVER MILE: 0.00

LATITUDE: 37.56670 **LONGITUDE:** -76.57510

From the tidal limit downstream to the mouth at the Piankatank River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The segment was assessed not supporting of the Aquatic Life Use based on a dissolved oxygen standard violation rate of 3/20 at the Route 17 bridge (7-DRN003.40).

IMPAIRMENT SOURCE: Natural Conditions

The dissolved oxygen impairment is suspected to be caused by natural conditions from upstream swamps.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester, King and Queen, Middlesex

STREAM NAME: Dragon Run

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C02R-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 11.57 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Route 602 bridge

RIVER MILE: 15.08

LATITUDE: 37.68490 **LONGITUDE:** -76.72720

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 4.60

LATITUDE: 37.58610 **LONGITUDE:** -76.62360

From the Route 602 bridge downstream to the tidal limit.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

The segment is impaired of the Aquatic Life Use based on a pH violation rate of 6/29 at 7-DRN010.48 (Route 603 bridge).

The segment length was changed during the year 2002 cycle because it was determined that Dragon Swamp is tidally influenced to approximately river mile 4.6.

IMPAIRMENT SOURCE: Natural Conditions

The pH impairment is believed to be caused by natural conditions from upstream swamps.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Essex, King and Queen, Middlesex

STREAM NAME: Dragon Run

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C02R-02

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 19.81 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 34.89

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Route 602 bridge

RIVER MILE: 15.08

LATITUDE: 37.68490 **LONGITUDE:** -76.72720

From the headwaters downstream to the Route 602 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Dragon Run was assessed impaired of the Aquatic Life Use in 2004 due to violations of the dissolved oxygen and pH standard at the Route 604 bridge (7-DRN015.51).

IMPAIRMENT SOURCE: Natural Conditions

The source of the pH and dissolved oxygen violations is attributed to natural conditions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester, Middlesex

STREAM NAME: Dragon Run

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C02R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.55 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Route 603 bridge

RIVER MILE: 10.48

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Deep Point Boat Landing

RIVER MILE:

LATITUDE: **LONGITUDE:**

Dragon Run and the Piankatank River from the State Route 603 bridge near Mascot downstream to Deep Point Boat Landing across from Piankatank Shores.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Mercury in Fish, VDH Fish Consumption Restriction

Dragon Run and the Piankatank River are considered impaired of the Fish Consumption Use based on DEQ monitoring which has indicated elevated levels of mercury in largemouth bass. The VDH has issued a fish consumption restriction for largemouth bass in this area.

A portion of this area was considered fully supporting but threatened in 2002 based on these results. Because of the VDH advisory, the segment location was altered and the segment was downgraded to impaired.

The segment size incompasses 6.55 riverine miles and 1.79 estuarine square miles.

IMPAIRMENT SOURCE: Unknown

The source of the mercury is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester, Mathews, Middlesex

STREAM NAME: Piankatank River

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.45 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Mouth of Dragon Swamp

RIVER MILE: 21.38

LATITUDE: 37.56670 **LONGITUDE:** -76.57510

DOWNSTREAM LIMIT:

DESCRIPTION: Fishing Bay, approximately river mile 2

RIVER MILE: 0.00

LATITUDE: 37.53550 **LONGITUDE:** -76.29680

From the limit of tide downstream to the point at Fishing Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The segment was assessed not supporting of the Aquatic Life Use because of dissolved oxygen violations.
DO 3/16 at 7-PNK015.49
DO 1/2 at MA98-0091 (bottom layer violation)

1995 Study Stations:
DO 4/7 at 7-PNK001.92;
DO 3/6 at 7-PNK002.86;
DO 3/5 at 7-PNK007.54;
DO 2/4 at 7-PNK009.53;
DO 2/4 at 7-PNK011.58;

IMPAIRMENT SOURCE: Stratification

Bottom water DO violations resulting from stratification.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester, Middlesex

STREAM NAME: Harpers Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 1.97 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.56530 **LONGITUDE:** -76.57520

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.53670 **LONGITUDE:** -78.48560

Described in VDH Notice and Description of Shellfish Condemnation 076A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 076A, 6/6/2000

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Frenchs Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-03

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.19

LATITUDE: 37.52690 **LONGITUDE:** -76.48190

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.00

LATITUDE: 37.52890 **LONGITUDE:** -76.48110

Described in VDH Notice and Description of Shellfish Condemnation 076B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 076B, 6/6/2000

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Piankatank River: Ferry Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-04

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.31

LATITUDE: 37.51110 **LONGITUDE:** -76.47920

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.12

LATITUDE: 37.51610 **LONGITUDE:** -76.46170

Described in VDH Notice and Description of Shellfish Condemnation 171

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 171, 6/9/98

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Middlesex

STREAM NAME: Piankatank River: Wilton Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-05

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.74

LATITUDE: 37.54170 **LONGITUDE:** -76.41310

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.08

LATITUDE: 37.52060 **LONGITUDE:** -76.41670

Described in VDH Notice and Description of Shellfish Condemnation 126, 3/2/1993

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 126, 3/2/1993

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Middlesex

STREAM NAME: Healy Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-06

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.12

LATITUDE: 37.54810 **LONGITUDE:** -76.38530

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.00

LATITUDE: 37.53830 **LONGITUDE:** -76.39220

Described in VDH Notice and Description of Shellfish Condemnation 129

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 129, 2/26/99

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Middlesex

STREAM NAME: Piankatank River: Moore Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-07

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.87

LATITUDE: 37.54780 **LONGITUDE:** -76.35640

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.38

LATITUDE: 37.54170 **LONGITUDE:** -76.35890

Described in VDH Notice and Description of Shellfish Condemnation 208, 2/26/1999

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 108, 2/26/1999

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Middlesex

STREAM NAME: Jackson Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-08

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.21

LATITUDE: 37.54830 **LONGITUDE:** -76.34440

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 084A, 11/1/2001

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 084A, 11/1/01

Size increased during the 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Middlesex

STREAM NAME: Jackson Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.63

LATITUDE: 37.55330 **LONGITUDE:** -76.33420

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.40

LATITUDE: 37.55000 **LONGITUDE:** -76.33390

Described in VDH Notice and Description of Shellfish Condemnation 084B, 11/1/2001

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 084B, 11/1/01

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Cobbs Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.07

LATITUDE: 37.51470 **LONGITUDE:** -76.39530

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 170

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 170, 11/5/01

Size reduced in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Harper Creek, Foxes Creek, Gallaman Swamp

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.52 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.76

LATITUDE: 37.51870 **LONGITUDE:** -76.59210

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 1.00

LATITUDE: 37.52960 **LONGITUDE:** -76.51190

The segment consists of Harper Creek and its major tributaries, Foxes Creek and Gallaman Swamp.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The segment was initially listed as fully supporting but threatened in 1998 due to dissolved oxygen violations recorded at monitoring station 7-HRP001.15 (Harper Creek at Route 198). During the 2002 cycle the segment was downgraded.

In the 2004 cycle, the segment continued to show low dissolved oxygen in the summer months (6 violations out of 19 samples).

IMPAIRMENT SOURCE: Unknown

Source is unknown. There is a large beaver pond upstream and the area is swampy.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Queens Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.28 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.49140 **LONGITUDE:** -76.36420

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.48690 **LONGITUDE:** -76.32860

Described in VDH Notice and Description of Shellfish Condemnation Number 099A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 099A, 2/1/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Milford Haven

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.48750 **LONGITUDE:** -76.31190

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.48970 **LONGITUDE:** -76.30470

Described in VDH Notice and Description of Shellfish Condemnation 099D

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 099D, 2/1/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Milford Haven: Edwards Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-03

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.88

LATITUDE: 37.50030 **LONGITUDE:** -76.29390

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.42

LATITUDE: 37.49610 **LONGITUDE:** -76.29250

Described in VDH Notice and Description of Shellfish Condemnation 197B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 197B, 2/1/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Stutts Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-05

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.37 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 061

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 061, 4/10/01

Condemnation was expanded in 2004 cycle and now incorporates the old condemnations on Stutts (due 2010) and Morris Creeks (due 2014).

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Morris Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 1.11

LATITUDE: 37.44780 **LONGITUDE:** -76.31190

DOWNSTREAM LIMIT:

DESCRIPTION: River mile 0.15

RIVER MILE: 0.15

LATITUDE: 37.45830 **LONGITUDE:** -76.30560

Morris Creek from tidal limit to approximately river mile 0.15

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The segment was considered impaired of the Aquatic Life Use in the 2002 cycle due to a dissolved oxygen violation rate of 2/3 at 7-MRC000.69, which is located off of Route 653.

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IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Billups Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-07

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.88

LATITUDE: 37.44190 **LONGITUDE:** -76.28610

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.92

LATITUDE: 37.45220 **LONGITUDE:** -76.27170

Described in VDH Notice and Description of Shellfish Condemnation 204

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 204, 3/31/1999

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester, Mathews

STREAM NAME: North River

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-08

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.47 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.46280 **LONGITUDE:** -76.42720

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 157A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 157A, 6/21/2002

Size was reduced by 0.01 sq. mi. in 2004 cycle

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Elmington Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.50

LATITUDE: 37.42360 **LONGITUDE:** -76.46080

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.19

LATITUDE: 37.42280 **LONGITUDE:** -76.45560

Described in VDH Notice and Description of Shellfish Condemnation 157B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 157B, 6/21//2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Back Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 1.23

LATITUDE: 37.41580 **LONGITUDE:** -76.46940

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE: 0.00

LATITUDE: 37.41920 **LONGITUDE:** -76.45220

Described in VDH Notice and Description of Shellfish Condemnation 157C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 157C, 6/21/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Blackwater Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.5 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 2.48

LATITUDE: 37.44310 **LONGITUDE:** -76.41250

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 131

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 131, 6/21/2002

Size increased in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Davis Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE: 0.63

LATITUDE: 37.39580 **LONGITUDE:** -76.42750

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 207

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 207, 6/21/2002

Size increased in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: East River

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.4 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.45100 **LONGITUDE:** -76.37610

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 092

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 092, 6/12/2002

Size increased by 0.11 sq. mi. in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Put In Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-14

ASSESSMENT CATEGORY: 5A, 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.43250 **LONGITUDE:** -76.32370

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.41430 **LONGITUDE:** -76.33870

Described in VDH Notice and Description of Shellfish Condemnation Number 05A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction (1998), Dissolved Oxygen (2004)

VDH-DSS Shellfish Condemnation 05A, 6/5/96
TMDL is due in 2010

In 2014, the segment was also listed as being not supporting of the Aquatic Life use goal based on a dissolved oxygen violation rate of 2/8 at 7-XDK000.10. The TMDL is due in 2014.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Davis Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.33550 **LONGITUDE:** -76.29910

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.33060 **LONGITUDE:** -76.30000

Described in VDH Notice and Description of Shellfish Condemnation 085

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 085, 11/13/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Horn Harbor

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.24 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.37520 **LONGITUDE:** -76.31730

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 026A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 026A, 1/25/2002

Size increased during 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Doctors Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.35030 **LONGITUDE:** -76.28310

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.30530 **LONGITUDE:** -76.27760

Described in VDH Notice and Description of Shellfish Condemnation 026B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 026B, 1/25/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Winder Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-25

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.47970 **LONGITUDE:** -76.35250

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.48180 **LONGITUDE:** -76.32610

Described in VDH Notice and Description of Shellfish Condemnation 099B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 099B, 2/1/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Lanes Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-26

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.47680 **LONGITUDE:** -76.31140

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 099C

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 099C, 2/1/2001

Size increased during 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Lower East River: Unnamed Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-27

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.39910 **LONGITUDE:** -76.33010

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.39650 **LONGITUDE:** -76.33490

Described in VDH Notice and Description of Shellfish Condemnation 212A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 212A, 5/29/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Milford Haven: Barn Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-28

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 197A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 197A, 2/1/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Mathews

STREAM NAME: Miles Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04E-29

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 212B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 212B, 5/29/2001

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester, Mathews

STREAM NAME: Burke Mill Stream

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C04R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.69 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Burke Pond

RIVER MILE: 2.69

LATITUDE: 37.48440 **LONGITUDE:** -76.45610

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 0.00

LATITUDE: 37.46480 **LONGITUDE:** -76.44690

Burke Mill Stream from Burke Pond to extent of tide.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The segment was assessed as impaired of the Recreation Use in 2004 based on a fecal coliform violation rate of 3/19 at the Route 3/Route 14 bridge (7-BUR001.19).

IMPAIRMENT SOURCE: Unknown

The source of the fecal coliform violations is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Ware River

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C05E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.54 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.41320 **LONGITUDE:** -76.51330

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation 096

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 096, 5/4/2001

Size reduced in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Wilson Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C05E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.24 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.37770 **LONGITUDE:** -76.48650

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.36370 **LONGITUDE:** -76.47210

Described in VDH Notice and Description of Shellfish Condemnation 106

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 106, 8/4/1997

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Fox Mill Run

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.31 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.07

LATITUDE: 37.44810 **LONGITUDE:** -76.60190

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 2.01

LATITUDE: 37.40360 **LONGITUDE:** -76.51340

From its headwaters to the limit of tide.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Assessed not supporting of the Aquatic Life Use because of a dissolved oxygen violation rate of 2/19 at the Route 17 bridge (7-FOX002.49).

Not supporting of the Recreation Use based on a fecal coliform violation rate of 5/18 at 7-FOX002.49.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Northwest Branch Severn River

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C06E-01

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.59 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.33620 **LONGITUDE:** -76.49530

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: 37.31710 **LONGITUDE:** -76.46680

Described in VDH Notice and Description of Shellfish Condemnation Number 093

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 093, 12/15/2000
Includes Vaughns Creek

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Monday Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C06E-02

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.27540 **LONGITUDE:** -76.40830

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 125

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 125, 12/3/2002

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Southwest Branch Severn River: Heywood Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C06E-04

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.28270 **LONGITUDE:** -76.47370

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 054A (previously called 101)

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 054A, 4/15/2002

Size reduced during 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Southwest Branch Severn River: Thorntons Creek

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C06E-05

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upstream condemnation boundary

RIVER MILE:

LATITUDE: 37.28140 **LONGITUDE:** -76.47960

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream condemnation boundary

RIVER MILE:

LATITUDE: **LONGITUDE:**

Described in VDH Notice and Description of Shellfish Condemnation Number 054B

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

VDH-DSS Shellfish Condemnation 054B, 4/15/2002

Size reduced by 0.03 sq. mi. in 2004 cycle.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Gloucester

STREAM NAME: Northwest Branch of Severn River

HYDROLOGIC UNIT: 02080102

TMDL ID: VAP-C06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.1 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.54

LATITUDE: 37.35910 **LONGITUDE:** -76.51690

DOWNSTREAM LIMIT:

DESCRIPTION: Tidal limit

RIVER MILE: 3.44

LATITUDE: 37.33640 **LONGITUDE:** -76.49480

From its headwaters to the limit of tide.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Chloride, Chloride

Considered to be not supporting of the Recreation Use goal because of a fecal coliform violation rate of 7/18 at 7-SEN004.04. The TMDL is due in 2014.

The segment was also listed in 2004 for the Aquatic Life and Wildlife Uses due to two chloride violations at 7-SEN004.04. The TMDL is due in 2016.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton, York

STREAM NAME: Brick Kiln Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of Route 134

RIVER MILE: 4.64

LATITUDE: 37.08333 **LONGITUDE:** -76.40000

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends one-half mile downstream of Rt. 134

RIVER MILE: 3.64

LATITUDE: 37.08333 **LONGITUDE:** -76.40000

Segment begins one-half mile upstream of the Route 134 Bridge and extends one-half mile downstream.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004), Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria & Enterococci (2004) and Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on Brick Kiln Creek (7-BRK004.14) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal and not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard violation is the presence of enteric bacteria. The cause of the depressed oxygen levels is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Brick Kiln Creek monitoring station is located at the Route 134 Bridge over Brick Kiln Creek, City of Hampton. The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton, Newport News

STREAM NAME: New Market Creek (Lower)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mi upstream Rt 134 Bridge

RIVER MILE: 2.40

LATITUDE: 37.01667 **LONGITUDE:** -76.36667

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends one-half mi downstream Rt 134 Br

RIVER MILE: 1.40

LATITUDE: 37.03333 **LONGITUDE:** -76.35000

Segment begins 0.5 mi. upstream of station at Route 134 bridge and extends 0.5 mi. downstream.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004)

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform & Enterococci (2004) Bacteria were recorded at DEQ's ambient water quality monitoring station on New Market Creek (7-NEW001.92) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard exceedances is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The New Market Creek monitoring station is located at the Route 134 Bridge, in the City of Hampton. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: New Market Creek (Upper)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mi upstream of Big Bethel Road.

RIVER MILE: 5.94

LATITUDE: 37.01470 **LONGITUDE:** -76.42330

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends one-half mi downstream of Big Bethel Road.

RIVER MILE: 4.94

LATITUDE: 37.02330 **LONGITUDE:** -76.40290

Segment begins one-half mile upstream of the monitoring station at Big Bethel Road.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria and Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on New Market Creek (7-NEW005.44) to assess this segment as not supporting of the Clean Water Act's Recreation Use and Aquatic Life Use Support Goals for the 2002 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. The cause of the Dissolve Oxygen criteria violation is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The New Market Creek monitoring station is located at the Big Bethel Road crossing, City of Hampton. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations and cause of the depressed oxygen levels are currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: York

STREAM NAME: Poquoson River (Upper)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream Route 1510

RIVER MILE: 4.60

LATITUDE: 37.13333 **LONGITUDE:** -76.43333

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends one-half mi downstream Route 1510

RIVER MILE: 3.60

LATITUDE: 37.13333 **LONGITUDE:** -76.33333

Segment begins one-half mile upstream of Route 1510 and extends one-half mile downstream.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004)

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform & Enterococci (2004) Bacteria were recorded at DEQ's ambient water quality monitoring station on Poquoson River (7-POQ004.12) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform & Enterococci (2004) Bacteria standard exceedances is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Poquoson River monitoring station is located at the pier off Route 1510, Hollywood Boulevard, in York County. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: Back River,Southwest Branch

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of station at mouth of Southwest Br.

RIVER MILE: 0.50

LATITUDE: 37.08550 **LONGITUDE:** -76.33500

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth of Southwest Branch, Back River.

RIVER MILE: 0.00

LATITUDE: 37.09470 **LONGITUDE:** -76.33230

Segment extends from one-half mile upstream of station at mouth of Southwest Br.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station at the mouth of Southwest Branch Back River (7-SWB000.00) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Southwest Br. Back River monitoring station is located at the mouth near Langley AFB, in City of Hampton. The watershed potentially receives inputs from residential sewage treatment systems, wetlands areas, and storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Poquoson, York

STREAM NAME: Lambs Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-06

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.13333 **LONGITUDE:** -76.36250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.15000 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 137E, located in Poquoson River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: York

STREAM NAME: Patricks Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-07

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.11 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.13333 **LONGITUDE:** -76.36250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.15000 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 137C, located in Poquoson River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Poquoson

STREAM NAME: Roberts Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-08

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.13333 **LONGITUDE:** -76.36250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.15000 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 137F, located in Poquoson River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Poquoson

STREAM NAME: White House Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-09

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.13333 **LONGITUDE:** -76.36250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.15000 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 137G, located in Poquoson River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: York

STREAM NAME: Back Creek - York County

HYDROLOGIC UNIT: 02080107

TMDL ID: VAT-C07E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.20000 **LONGITUDE:** -76.42500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.20000 **LONGITUDE:** -76.45000

VDH-DSS shellfish harvesting condemnation # 151, located in Back Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: York

STREAM NAME: Poquoson River

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.29 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.13333 **LONGITUDE:** -76.36250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.15000 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 137D, located in Poquoson River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Poquoson

STREAM NAME: Back River: Front Cove

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.31667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.11667 **LONGITUDE:** -76.31667

VDH-DSS shellfish harvesting condemnation # 193, located in Back River - Front Cove.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: Back River: Long and Crunland Creeks

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.2 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10000 **LONGITUDE:** -76.28889

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.05000 **LONGITUDE:** -76.28889

VDH-DSS shellfish harvesting condemnation # 158, Back River:Long and Grunland Creeks.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: Harris River (Creek)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.27 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 21G, located in Back River - Harris Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: Inlet #1

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 21F, located in Back River - Inlet #1.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: Wallace Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 21H, located in Back River - Wallace Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Poquoson

STREAM NAME: Topping Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-17

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation #21A Back River - Topping Creek #21A

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Poquoson

STREAM NAME: Cedar & Brick Kiln Creeks - Back River

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 21B, located in Back River - Cedar Creek & Brick Kiln Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.
The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: Tabbs Creek - Back River

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 21D, located in Back River - Tabbs Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.
The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: Inlet #2 - Back River

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-20

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 21H, located in Back River - Inlet #2.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.
The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton, Poquoson, York

STREAM NAME: Back River,Northwest Branch & Brick Kiln Cr

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-21

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.26 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 21C, located in Back River-Northwest Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.
The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Hampton

STREAM NAME: Back River,Southwest Branch & Newmarket Cr

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-22

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.62 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.29167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.10833 **LONGITUDE:** -76.39167

VDH-DSS shellfish harvesting condemnation # 21E, located in Back River - Southwest Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: York

STREAM NAME: Chisman Creek (Upper)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-23

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.18 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.13333 **LONGITUDE:** -76.36250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.15000 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 137A, located in Chisman Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: York

STREAM NAME: Unnamed Cove

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07E-24

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.05

LATITUDE: 37.13333 **LONGITUDE:** -76.36250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.15000 **LONGITUDE:** -76.45556

VDH-DSS shellfish harvesting condemnation # 137B, located in Poquoson River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: York

STREAM NAME: Harwoods Mill Reservoir

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C07L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 300 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at northwest end of reservoir.

RIVER MILE: 0.85

LATITUDE: 37.16364 **LONGITUDE:** -76.47832

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at southeast end of reservoir, Rt 17 crossing.

RIVER MILE: 0.00

LATITUDE: 37.13786 **LONGITUDE:** -76.45819

Segment begins at northwest end of reservoir and ends at southeast end of reservoir, Rt 17 crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Copper, Dissolved Oxygen, Copper

Sufficient exceedances of the standard for dissolved copper (acute criteria) and dissolved oxygen at USGS station in the eastern portion of reservoir (01677850) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. Sufficient exceedances of the standard for dissolved copper (acute criteria) to assess this segment as not supporting of the Clean Water Act's Wildlife Use Support Goal for the 2004 305(b) report. The cause of the dissolved oxygen standard violation is unknown. The cause of the dissolved copper standard (acute) exceedances is believed due to the addition of copper biocides for algal control.

IMPAIRMENT SOURCE: Cu addition as algaecide, Unknown, Cu addition as algaecide

The source of the acute copper exceedances is suspected to be caused by the addition of copper biocides to prevent excessive growth of algae.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Thalia Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the start of estuarine waters within Thalia Creek (near I-264).

RIVER MILE: 1.90

LATITUDE: 36.83304 **LONGITUDE:** -76.12136

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at Rt 58 bridge (at Virginia Beach Boulevard).

RIVER MILE: 0.26

LATITUDE: 36.84900 **LONGITUDE:** -76.12474

Begins at the start of estuarine waters within Thalia Creek (near I-264) and extends downstream to the Rt 58 (Virginia Beach Blvd) crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci(2004), Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria (& Enterococcci 2004) and Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on Thalia Creek (7-THA000.76 & 7-THA001.39) to assess this segment as not supporting of the Clean Water Act's Recreation Use and not supporting of the Clean Water Act's Aquatic Life Use Support Goals for the 2002 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. The cause of the depressed oxygen levels is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The downstream Thalia Creek monitoring station is located at the Route 58 Bridge over Thalia Creek in the City of Virginia Beach. The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR. The source of the bacteria impairment is suspected to be a combination of inputs from stormwater, non-point, on-site septic systems, and wildlife.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Western Branch Lynnhaven

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.15 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence with Thurston Branch.

RIVER MILE: 3.08

LATITUDE: 36.85750 **LONGITUDE:** -76.11970

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends one-half mile downstream of station @ RM 2.13.

RIVER MILE: 2.13

LATITUDE: 36.86930 **LONGITUDE:** -76.11080

Segment begins at the confluence with Thurston Branch and extends one-half mile downstream of station 7-WES002.58.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station on Western Branch Lynnhaven (7-WES002.58) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR The source of the bacteria impairment is suspected to be a combination of inputs from stormwater, non-point, on-site septic systems, and wildlife.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: London Bridge Creek & Canal #2

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.11 - Sq. Mi.

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at Bow Cr. Blvd. Bridge.

RIVER MILE: 3.81

LATITUDE: 36.78083 **LONGITUDE:** -76.08250

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence of Thurston Branch.

RIVER MILE: 0.00

LATITUDE: 36.84127 **LONGITUDE:** -76.05731

Segment begins at Ships Corner (Bow Cr. Blvd. Bridge) ends at confluence of Thurston Branch. Includes all of Canal #2.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform & Enterococci (2004)

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform & Enterococci(2004) Bacteria and Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station on London Bridge Creek (7-LOB001.79, 7-LOB003.70 & XBO001.30) to assess this segment as not supporting of the Clean Water Act's Recreation Use and Aquatic Life Use Support Goals for the 2002 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. The cause of the depressed oxygen levels is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations and organic enrichment causing the depressed oxygen levels is currently unknown. This watershed is ranked high priority for potential NPS pollution by DCR. The source of the bacteria impairment is suspected to be a combination of inputs from stormwater, non-point, on-site septic systems, and wildlife.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Eastern Branch Lynnhaven River

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.46 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at Rt 58 (Virginia Beach Blvd) crossing.

RIVER MILE: 3.77

LATITUDE: 36.84127 **LONGITUDE:** -76.05731

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream at area adjacent to Robinhood Forest.

RIVER MILE: 1.84

LATITUDE: 36.86553 **LONGITUDE:** -76.07018

Segment begins at Rt 58 (Virginia Beach Blvd) crossing and extends downstream to area adjacent to Robinhood Forest.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria at DEQ's ambient water quality monitoring station (7-EBL002.54) to assess this segment as not supporting of the Clean Water Act's Recreation Use and Aquatic Life Use Support Goals for the 2002 305(b) report.The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR. The source of the bacteria impairment is suspected to be a combination of inputs from stormwater, non-point, on-site septic systems, and wildlife.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: West Neck Creek (Upper) to London Bridge Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at Princess Anne Road crossing of West Neck Creek.

RIVER MILE: 10.82

LATITUDE: 36.79381 **LONGITUDE:** -76.07029

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at junction with London Bridge Creek.

RIVER MILE: 7.65

LATITUDE: 36.75587 **LONGITUDE:** -76.03996

Segment begins at Princess Anne Road crossing downstream towards Lynnhaven R to junction with London Bridge Creek.. Segment has been determined to be influenced by estuarine tidal flow from C08E (Lynnhaven River). Moved from K41R (2002) to C08E (2004) per USGS flow study 94-4067.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

Moved from K41R (2002) to C08E per USGS flow study

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci (2004), Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen recorded @ (5BWNC010.02) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. This is an area of hardwood swamp/wetlands where low dissolved oxygen levels can naturally occur. Sufficient exceedances of standard for Fecal Coliform Bacteria & Enterococci (2004) recorded at the above station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. Cause of the depressed D.O. is unknown, but may be naturally occurring. The cause of the Fecal Coliform bacteria is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown, Unknown

This segment has been determined by USGS flow study to drain north to C08E (Lynnhaven River). Moved from K41R (2002) to C08E (2004) per USGS flow study. The West Neck Creek monitoring station is located at Ships Corner Road Bridge over the creek in the City of Virginia Beach. The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. The specific source of the impairments is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Little Creek Channel

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-09

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-tenth mile upstream of monitoring station 7-LCC000.19.

RIVER MILE: 0.29

LATITUDE: 36.92290 **LONGITUDE:** -76.18800

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth of Little Creek.

RIVER MILE: 0.00

LATITUDE: 36.92100 **LONGITUDE:** -76.18180

Segment begins one-tenth mile upstream of station near mouth and extends to mouth of Little Creek Channel.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Sufficient exceedance of criteria based fish tissue value for PCBs at monitoring station (7-LCC000.19) to assess this segment as not supporting of the Clean Water Act's Fish Consumption Use Support Goal for the 2002 305(b) report.

The cause of the elevated fish tissue levels of PCBs is unknown.

IMPAIRMENT SOURCE: Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR. The specific source of the PCBs is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Dey Cove/Mill Dam Creek

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.07 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.87917 **LONGITUDE:** -75.99167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.88333 **LONGITUDE:** -76.12500

VDH-DSS shellfish harvesting condemnation # 25C, located in Lynnhaven, Broad and Linkhorn Bays.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Linkhorn Bay

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 1.24 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.87917 **LONGITUDE:** -75.99167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.88333 **LONGITUDE:** -76.12500

VDH-DSS shellfish harvesting condemnation # 25D, located in Linkhorn Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Long Creek/Broad Bay

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.41 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.87917 **LONGITUDE:** -75.99167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.88333 **LONGITUDE:** -76.12500

VDH-DSS shellfish harvesting condemnation # 25B, located in Lynnhaven, Broad and Linkhorn Bays.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Lynnhaven River and Bay

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 4.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.87917 **LONGITUDE:** -75.99167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 36.88333 **LONGITUDE:** -76.12500

VDH-DSS shellfish harvesting condemnation # 25A, located in Lynnhaven Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Lake Smith (Lower)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08L-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 74 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-tenth mile upstream of station 7-LAS000.06 (lake mile 0.16).

RIVER MILE: 0.16

LATITUDE: 36.89050 **LONGITUDE:** -76.16190

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the lake terminus south of Route 13 (lake mile 0.0).

RIVER MILE: 0.00

LATITUDE: 36.89260 **LONGITUDE:** -76.16220

Segment begins one-tenth mile upstream of station 7-LAS000.06 (lake mile 0.16) and ends at the lake terminus south of Route 13 (lake mile 0.00).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen recorded at station 7-LAS000.06 to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the Dissolved Oxygen standard exceedances (low DO) is unknown at this time.

IMPAIRMENT SOURCE: Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Norfolk

STREAM NAME: Little Creek Reservoir (Lower)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-C08L-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 57 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins upstream one-tenth mile from station @ LTR000.04.

RIVER MILE: 0.14

LATITUDE: 36.90410 **LONGITUDE:** -76.16720

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at terminus of reservoir south of Route 60.

RIVER MILE: 0.00

LATITUDE: 36.90680 **LONGITUDE:** -76.16730

Segment begins one-tenth mile upstream of station @ LTR000.04 and ends at terminus of reservoir south of Route 60.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Sufficient exceedances of Virginia's water quality standard for pH was recorded at DEQ's lake water quality monitoring station on Little creek Reservoir (7-LTR000.04) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the pH standard violation is unknown at this time, but may be due to algal blooms as evidenced by the high pH measurements.

IMPAIRMENT SOURCE: Unknown

The watershed receives inputs from storm water runoff associated with the surrounding residential /urban area. This watershed is ranked high priority for potential NPS pollution by DCR.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Bulbeggar Creek

HYDROLOGIC UNIT: 02060009

TMDL ID: VAT-C09E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at headwaters of Bulbeggar Creek

RIVER MILE: 6.34

LATITUDE: 37.97143 **LONGITUDE:** 75.59154

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence of UT at RM 2.39.

RIVER MILE: 2.39

LATITUDE: 37.96278 **LONGITUDE:** 75.62921

Segment begins at headwaters of Bulbeggar Creek and ends at confluence of UT at RM 2.39.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria and Dissolved Oxygen were recorded at DEQ's ambient water quality monitoring station @ Rt 701 crossing (7-BLB004.63) to assess this segment as not supporting of the Clean Water Act's Recreation Use and Aquatic Life Use Support Goals for the 2004 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. The cause of the depressed oxygen levels is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The watershed receives inputs from storm water runoff, adjacent wetlands, and on-site sewage systems. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations and organic enrichment causing the depressed oxygen levels is currently unknown.
Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Pocomoke Sound and Pocomoke River

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C09E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 2.17 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.95000 **LONGITUDE:** -75.68333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.99167 **LONGITUDE:** -75.62500

VDH-DSS shellfish harvesting condemnation # 33, located in Pocomoke Sound and Pocomoke River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Pitts Creek unnamed tributary

HYDROLOGIC UNIT: 02060009

TMDL ID: VAT-C09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.96 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the most upstream point east of New Church

RIVER MILE: 5.96

LATITUDE: 37.99269 **LONGITUDE:** -75.58622

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Pitts Creek

RIVER MILE: 0.00

LATITUDE: 37.97531 **LONGITUDE:** -75.50489

Segment begins at most upstream point east of New Church and ends at the confluence with Pitts Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen recorded at DEQ's ambient water quality monitoring station on Unnamed tributary to Pitts Creek (7-XAE001.42) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The cause of the standard exceedances is unknown at this time. Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria to assess this segment as not supporting of the Clean Water Act's Recreation Use for the 2004 305(b) report.

IMPAIRMENT SOURCE: Unknown, Unknown

The specific source of the impairments is currently unknown.
This tributary receives diffuse inputs. On-site sewage treatment system leachate from residences bordering the creek is a potential source, as well as storm water runoff. There is a no-discharge VPA (VPA1070) permitted facility located adjacent to a connecting tributary. Prior to 8/99 (discharged terminated) this facility discharged effluent into the connecting tributary. Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Holdens Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence with Sandy Bottom Branch

RIVER MILE: 4.30

LATITUDE: 37.91667 **LONGITUDE:** -75.58333

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends 0.5 mile downstream of the Jenkins Bridge crossing.

RIVER MILE: 2.20

LATITUDE: 37.91667 **LONGITUDE:** -75.61667

Segment begins at the confluence with Sandy Bottom Branch extending downstream to 0.5 mile downstream of the Jenkins bridge crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station on Holdens Creek (7-HLD002.67) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 1998 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The Holdens Creek monitoring station is located at the Jenkins Bridge over Holdens Creek. On-site sewage treatment system leachate from residences bordering the creek is a potential source. The watershed receives inputs from storm water runoff associated with the surrounding residential /agricultural area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Muddy Creek (Lower)

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at start of estuarine portion of Muddy Creek

RIVER MILE: 3.63

LATITUDE: 37.84735 **LONGITUDE:** -75.63617

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at downstream expansion of creek (RM 1.85).

RIVER MILE: 1.85

LATITUDE: 37.85768 **LONGITUDE:** -75.65435

Segment begins at start of estuarine portion of Muddy Creek and ends at downstream expansion of creek (RM 1.85).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station (7-MUD002.29) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report.

The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The monitoring station is located at the end of Rt 685 adjacent to Muddy Creek. On-site sewage treatment system leachate from residences bordering the creek and wildlife are potential sources. The watershed receives inputs from storm water runoff associated with the surrounding wetlands /agricultural area. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Messongo Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins upstream 0.50 mi. from station 7-MES006.92.

RIVER MILE: 7.42

LATITUDE: 37.88140 **LONGITUDE:** -75.61520

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream 0.5 mi. from Rt. 692 crossing.

RIVER MILE: 6.42

LATITUDE: 37.88410 **LONGITUDE:** -75.62280

Segment extends one half mile up and down stream of Rt. 692 crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen and Fecal Coliform bacteria were recorded at DEQ's ambient water quality monitoring station on Messongo Cr. (7-MES006.92) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal and not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the standards exceedances is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Bagwell Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.80020 **LONGITUDE:** -75.69270

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.79680 **LONGITUDE:** -75.71370

VDH-DSS shellfish harvesting condemnation # 138C, located in Hunting, Doe, Bagwell and Deep Cree

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Deep Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.16 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.72360 **LONGITUDE:** -75.69480

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.78940 **LONGITUDE:** -75.74920

VDH-DSS shellfish harvesting condemnation # 138A, located in Hunting, Doe, Bagwell and Deep Creeks

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Guilford Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.84167 **LONGITUDE:** -75.68333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.81667 **LONGITUDE:** -75.63333

VDH-DSS shellfish harvesting condemnation # 176B, located in Beasley Bay:Young and Guilford Cr

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Starling Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.91667 **LONGITUDE:** -75.73333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.91250 **LONGITUDE:** -75.73333

VDH-DSS shellfish harvesting condemnation # 118, located in Starling Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Tangier Island

HYDROLOGIC UNIT: 02080101

TMDL ID: VAT-C10E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.82 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.83389 **LONGITUDE:** -76.01722

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.81917 **LONGITUDE:** -76.01722

VDH-DSS shellfish harvesting condemnation number 86, located around Tangier Island.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Young Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.84167 **LONGITUDE:** -75.68333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.81667 **LONGITUDE:** -75.63333

VDH-DSS shellfish harvesting condemnation # 176C, located in Beasley Bay:Young and Guilford Cr

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Muddy Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.00

LATITUDE: 37.84167 **LONGITUDE:** -75.68333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.81667 **LONGITUDE:** -75.63333

VDH-DSS shellfish harvesting condemnation # 176A, Muddy Crs

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Messongo Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-17

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.23 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.90000 **LONGITUDE:** -75.66667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.95833 **LONGITUDE:** -75.62500

VDH-DSS shellfish harvesting condemnation # 167, located in Messongo Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Hunting Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.16 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.77420 **LONGITUDE:** -75.69000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.79270 **LONGITUDE:** -75.71460

VDH-DSS shellfish harvesting condemnation # 138B, located in Hunting, Doe, Bagwell and Deep Cree

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Sandy Bottom Branch unnamed tributary

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.65 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of unnamed tributary

RIVER MILE: 1.65

LATITUDE: 37.90073 **LONGITUDE:** -75.57131

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Sandy Bottom Br.

RIVER MILE: 0.00

LATITUDE: 37.90313 **LONGITUDE:** -75.58453

Begins at headwaters of this unnamed tributary downstream to confluence Sandy Bottom Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

Biological monitoring at station 7-XAZ000.30 (located at the Route 693 culvert) indicated the stream's benthic community was moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) was not met for the protection of benthic aquatic life and this segment was assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. Although six sample events during this data period indicate a reduction in bacteria levels, a previous assessment (indicating elevated levels of Fecal Coliform Bacteria for the 1996 report) is retained resulting in assessment of not supporting of the Clean Water Act's Recreation Use. Assessment is retained until sufficient data for re-evaluation is acquired.

The specific cause of the impairments is currently considered unknown.

IMPAIRMENT SOURCE: Unknown & Point Source, Unknown

The specific source of the impairment is currently unknown.
This tributary contributes significant flow to the downstream impaired segment on Sandy Bottom Branch. On-site sewage treatment system leachate from residences bordering the creek is a potential source. The segment receives flow in the headwaters area from effluent discharged by the Tyson Foods VPDES (VA0004049) discharge. Stream flow is predominately composed of treated effluent from the Tyson Foods VPDES (VA0004049) permitted discharge at the headwaters of the tributary. The facility has completed a toxicity reduction evaluation and is meeting limitations for whole effluent toxicity.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Sandy Bottom Branch

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C10R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.24 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of Sandy Bottom Branch

RIVER MILE: 1.24

LATITUDE: 37.90313 **LONGITUDE:** -75.58453

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Holdens Creek

RIVER MILE: 0.00

LATITUDE: 37.91472 **LONGITUDE:** -75.59263

Begins at the headwaters of Sandy Bottom Branch and extends to its confluence with Holdens Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Wildlife Use - Not Supporting

IMPAIRMENT CAUSE: Copper, General Standard (Benthic), Fecal Coliform, Copper

Biological monitoring at station 7-SBB000.17 (located at the Route 695 Bridge over Sandy Bottom Branch) indicated the stream's benthic community was moderately impaired for the 2002 report (slightly impaired in 2004). As a result, DEQ's General Standard (VR680-21-01.2) was not met for the protection of benthic aquatic life and this segment was assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Dissolved metals monitoring at the above station resulted in exceedances of the acute criteria for copper (4/7) within a three year period. As a result, this segment was assessed as not-supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) reports and not-supporting of the Clean Water Act's Wildlife Use Support Goal for the 2004 305(b) report. Sufficient exceedances of Virginia's standard for Fecal Coliform Bacteria were recorded at the above station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report.
The specific cause of the impairments is currently considered unknown.

IMPAIRMENT SOURCE: Unknown & Point Source, Unknown, Unknown, Unknown & Point Source

The segment receives flow from upstream effluent discharged by the Tyson Foods discharge. Stream flow is influenced by treated effluent from the Tyson Foods VPDES (VA0004049) permitted discharge at the headwaters of an upstream tributary. The facility has complied with its permit. The facility has completed a toxicity reduction evaluation and is meeting limitations for whole effluent toxicity. The facility's VPDES permit received an effluent limitation for copper in December 1999. The specific source of the benthic impairment and copper standard exceedance is currently unknown. On-site sewage treatment system leachate from residences bordering the creek is a potential source of bacteria. The specific source of the Fecal Coliform bacteria impairment is currently considered unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Onancock Creek, North Br.

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C11E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the end of tidal influence

RIVER MILE: 0.93

LATITUDE: 37.71730 **LONGITUDE:** -75.74237

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with the mainstem Onancock Creek.

RIVER MILE: 0.00

LATITUDE: 37.71233 **LONGITUDE:** -75.75658

Segment begins at the end of tidal influence (upstream of Rt 658) and extends downstream to the confluence with mainstem Onancock Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen (DO) and Fecal Coliform Bacteria (FC) were recorded at DEQ's ambient water quality monitoring station on North Branch Onancock Cr. (7-ONB000.20, 7-ONB000.56) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal and not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. Data for DO during the 2004 period shows minimal exceedances (1/24), at the downstream station (7-ONB000.20). This portion will be retained until absence of impairment is confirmed. The cause of the DO and FC impairments is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The two North Branch Onancock Creek monitoring stations indicating exceedances are located two-tenths of a mile from the mouth of the creek (7-ONB000.20) and at the Route 658 bridge (7-ONB000.56). The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. A marina is located at the mouth of the creek. The Onancock STP discharge is located between the monitoring stations. The facility has been in compliance with its effluent limitations. The specific source of the elevated Fecal Coliform Bacteria levels and depressed oxygen concentration is currently unknown.

Additional monitoring is necessary to confirm impairment and determine whether it is not naturally occuring.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Onancock Creek, Central Br.

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C11E-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of the mouth

RIVER MILE: 0.50

LATITUDE: 37.70522 **LONGITUDE:** -75.74576

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with the mainstem of Onancock Creek

RIVER MILE: 0.00

LATITUDE: 37.71144 **LONGITUDE:** -75.75606

Segment begins 0.5 mi. upstream of the mouth and extends downstream to the confluence with the mainstem of Onancock Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard Fecal Coliform Bacteria was recorded at DEQ's ambient water quality monitoring station on Central Branch Onancock Cr. (7-OCB000.10) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 & 2004 305(b) reports. The cause of the Fecal Coliform Bacteria standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The Central Branch Onancock Creek monitoring stations is located one-tenth of a mile from the mouth of the creek (7-OCB000.10), in the Town of Onancock area of Accomack Co. The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding forested/agricultural/residential area. A marina is located at the mouth of the creek. The specific source of the enteric bacteria causing the elevated Fecal Coliform bacteria levels is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Onancock Creek, Southern Br.

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C11E-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of the mouth

RIVER MILE: 0.50

LATITUDE: 37.69961 **LONGITUDE:** -75.75084

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with the mainstem of Onancock Creek

RIVER MILE: 0.00

LATITUDE: 37.70926 **LONGITUDE:** -75.75852

Segment begins 0.5 mi. upstream of the mouth and extends downstream to the confluence with the mainstem of Onancock Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard Fecal Coliform Bacteria was recorded at DEQ's ambient water quality monitoring station on Southern Branch Onancock Cr. (7-OSB000.13) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The Southern Branch Onancock Creek monitoring stations is located one-tenth of a mile from the mouth of the creek (7-OSB000.13), in the Town of Onancock area of Accomack Co. The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding forested/agricultural/residential area. The specific source of the enteric bacteria causing the elevated Fecal Coliform Bacteria levels is currently unknown.

Additional monitoring is necessary to determine whether the source is naturally occuring.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Onancock Creek, Upper Mainstem

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C11E-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.24 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of the three branches.

RIVER MILE: 5.09

LATITUDE: 37.71144 **LONGITUDE:** -75.75606

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence of Leatherberry Creek.

RIVER MILE: 4.28

LATITUDE: 37.71065 **LONGITUDE:** -75.77083

Segment begins at the confluence of the three branches and ends at confluence of Leatherberry Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standard Fecal Coliform Bacteria was recorded at DEQ's ambient water quality monitoring station on upper mainstem Onancock Cr. (7-OCN004.56) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the elevated bacteria levels is unknown.

IMPAIRMENT SOURCE: Unknown

The upper mainstem Onancock Creek monitoring stations is located upstream of Leatherberry Creek (7-OCN004.56) The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. The specific source of the enteric bacteria causing the elevated Fecal Coliform Bacteria levels is currently unknown.

Additional monitoring is necessary to determine whether the source is naturally occuring.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Chesconessex Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C11E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.50

LATITUDE: 37.74583 **LONGITUDE:** -75.77500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.73333 **LONGITUDE:** -75.75000

VDH-DSS shellfish harvesting condemnation # 112, Chesconessex Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Finneys Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C11E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.25

LATITUDE: 37.70590 **LONGITUDE:** -75.80270

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.72050 **LONGITUDE:** -75.80700

VDH-DSS shellfish harvesting condemnation # 13A, Onancock Creek-Finneys Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Cedar Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C11E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.35

LATITUDE: 37.72460 **LONGITUDE:** -75.76880

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.71780 **LONGITUDE:** -75.77960

VDH-DSS shellfish harvesting condemnation # 13B, Onancock Creek-Cedar Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Onancock Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C11E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.36 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 10.00

LATITUDE: 37.71080 **LONGITUDE:** -75.75550

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.00

LATITUDE: 37.72110 **LONGITUDE:** -75.82900

VDH-DSS shellfish harvesting condemnation # 13C, Onancock Creek-Onancock Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Pungoteague Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C12E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.34 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.27

LATITUDE: 37.66667 **LONGITUDE:** -75.78750

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.66667 **LONGITUDE:** -75.83333

VDH-DSS shellfish harvesting condemnation # 119B, located in Pungoteague Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Taylor Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C12E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.17 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.52

LATITUDE: 37.66667 **LONGITUDE:** -75.78750

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.66667 **LONGITUDE:** -75.83333

VDH-DSS shellfish harvesting condemnation # 119C & D, located in Taylor Creek & Underhill Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Taylor Creek tributary to Pungoteague Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C12R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.71 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at confluence of UT downstream of Rt 180.

RIVER MILE: 3.79

LATITUDE: 37.62542 **LONGITUDE:** -75.80519

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at start of tidal waters downstream of station.

RIVER MILE: 3.08

LATITUDE: 37.63459 **LONGITUDE:** -75.80839

Segment begins at confluence of UT downstream of Rt 180 and ends at start of tidal waters downstream of station.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring at station 7-TAY003.11 (located at the Rt 178 crossing) indicates the stream's benthic community was moderately impaired for the 2004 report. As a result, DEQ's General Standard (VR680-21-01.2) was not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report.The specific cause of the impairment is currently considered unknown.

IMPAIRMENT SOURCE: Unknown

The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. The specific source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Nassawadox Creek (Lower)

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.2 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at confluence of Warehouse Creek.

RIVER MILE: 2.30

LATITUDE: 37.48553 **LONGITUDE:** -75.92743

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence of Church Creek.

RIVER MILE: 1.10

LATITUDE: 37.47475 **LONGITUDE:** -75.94312

Segment begins at confluence of Warehouse Creek and ends at confluence of Church Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of Virginia's water quality standards for Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station on Nassawadox Cr. (7-NSS001.62, located near Bayford) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. The source of the Fecal Coliform bacteria impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Church Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.2 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.90

LATITUDE: 37.45833 **LONGITUDE:** -75.91667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.45833 **LONGITUDE:** -75.90000

VDH-DSS shellfish harvesting condemnation # 185, located in Church Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Craddock Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.57

LATITUDE: 37.56667 **LONGITUDE:** -75.87917

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 38.05000 **LONGITUDE:** -75.90833

VDH-DSS shellfish harvesting condemnation # 195, located in Craddock Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Holly Grove Cove

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.14 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.14

LATITUDE: 37.49583 **LONGITUDE:** -75.88333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.53333 **LONGITUDE:** -75.87917

VDH-DSS shellfish harvesting condemnation # 110B, Nassawadox Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Nassawadox Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.38 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at end of tidal waters.

RIVER MILE: 1.7

LATITUDE: 37.49583 **LONGITUDE:** -75.88333

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with Kelly Cove.

RIVER MILE: 0.00

LATITUDE: 37.53333 **LONGITUDE:** -75.87917

VDH-DSS shellfish harvesting condemnation # 110A, Nassawadox Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack, Northampton

STREAM NAME: Occohannock Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.46 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.8

LATITUDE: 37.55000 **LONGITUDE:** -75.85833

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.56667 **LONGITUDE:** -75.80833

VDH-DSS shellfish harvesting condemnation #43, located in Occohannock Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Warehouse Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.00

LATITUDE: 37.47917 **LONGITUDE:** -75.91667

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.47083 **LONGITUDE:** -75.88333

VDH-DSS shellfish harvesting condemnation #48, located inWarehouse Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Kusian Cove

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-17

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.10

LATITUDE: 37.63340 **LONGITUDE:** -75.82980

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.63080 **LONGITUDE:** -75.84730

VDH-DSS shellfish harvesting condemnation # 160B,Nandua Creek:Kusian Cv

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: McLean Gut

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.76

LATITUDE: 37.63333 **LONGITUDE:** -75.82500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.61667 **LONGITUDE:** -75.87083

VDH-DSS shellfish harvesting condemnation # 160C, located in Nandua Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Nandua Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C13E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.61

LATITUDE: 37.63333 **LONGITUDE:** -75.82500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.61667 **LONGITUDE:** -75.87083

VDH-DSS shellfish harvesting condemnation # 160A, located in Nandua Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Hungar Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C14E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the end of tidal waters, upstream 0.05 mi. from station 7-HUG004.40 at the Rt. 622 c

RIVER MILE: 4.45

LATITUDE: 37.44370 **LONGITUDE:** -75.92540

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the downstream peninsula opposite Waterford Point.

RIVER MILE: 3.90

LATITUDE: 37.44180 **LONGITUDE:** -75.92920

Segment begins at end of tidal waters, upstream 0.05 mi. from station 7-HUG004.40 at the Rt. 622 crossing and ends at the peninsula opposite Waterford Point.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen and Fecal Coliform Bacteria were recorded at DEQ's ambient water quality monitoring station on Hungars Cr. (7-HUG004.40) to assess this segment as not supporting of the Clean Water Act's Aquatic Life & Recreation Use Support Goals for the 2002 305(b) report. The cause of the standard exceedances is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. The source of the dissolved oxygen and Fecal Coliform bacteria impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Barlow Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C14E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.8

LATITUDE: 37.38333 **LONGITUDE:** -75.97500

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.37917 **LONGITUDE:** -75.96250

VDH-DSS shellfish harvesting condemnation # 191, located in Barlow Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Hungar Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C14E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 5.29

LATITUDE: 37.42500 **LONGITUDE:** -75.95000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3.90

LATITUDE: 37.43333 **LONGITUDE:** -75.91667

VDH-DSS shellfish harvesting condemnation # 136C,Hungar, Jacobus and Mattawoman Cree

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Jacobus Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C14E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.52

LATITUDE: 37.42500 **LONGITUDE:** -75.95000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.43333 **LONGITUDE:** -75.91667

VDH-DSS shellfish harvesting condemnation # 136B, located in Hungar, Jacobus and Mattawoman Cree

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Mattawoman Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C14E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.16 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.14

LATITUDE: 37.42500 **LONGITUDE:** -75.95000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.43333 **LONGITUDE:** -75.91667

VDH-DSS shellfish harvesting condemnation # 136A, Hungar, Jacobus and Mattawoman Cree

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: The Gulf

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C14E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.21 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.9

LATITUDE: 37.37083 **LONGITUDE:** -75.97917

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.45

LATITUDE: 37.36667 **LONGITUDE:** -75.95417

VDH-DSS shellfish harvesting condemnation # 174, located in The Gulf.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Westerhouse Creek - Part A

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C14E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.28

LATITUDE: 37.44167 **LONGITUDE:** -75.96250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.43333 **LONGITUDE:** -75.95417

VDH-DSS shellfish harvesting condemnation # 199A, located in Westerhouse Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Westerhouse Creek - Part B

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C14E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.57

LATITUDE: 37.44167 **LONGITUDE:** -75.96250

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.43333 **LONGITUDE:** -75.95417

VDH-DSS shellfish harvesting condemnation # 199B, located in Westerhouse Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Cherrystone Inlet: Kings Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C15E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.8

LATITUDE: 37.27500 **LONGITUDE:** -76.00278

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.27500 **LONGITUDE:** -75.97917

VDH-DSS shellfish harvesting condemnation # 139, Cherrystone Inlet: Kings Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Cape Charles Harbor (Upper)

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C16E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at most upstream end of harbor.

RIVER MILE: 0.50

LATITUDE: 37.26350 **LONGITUDE:** -76.01505

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends 0.23 mi. downstream from monitoring station (located at boat ramp near upstream end of

RIVER MILE: 0.00

LATITUDE: 37.26430 **LONGITUDE:** -76.02055

Segment begins at most upstream end of harbor and ends 0.23 mi. downstream from monitoring station (located at boat ramp).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Enterococci

Sufficient exceedances (2/3) of Virginia's water quality standard for Enterococci bacteria were recorded at DEQ's ambient water quality monitoring station at the boat ramp in Cape Charles Harbor (7-CCH000.43) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goals for the 2004 305(b) report. The cause of the standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station is located at the most upstream end of Cape Charles Harbor, within the north west branch at the boat ramp. The surrounding area is mixed urban and industrial. Potential sources are storm water runoff and VPDES point source effluent (the Cape Charles STP (VA0021288) outfall is located in the adjacent branch). The specific source of the Enterococci bacteria impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Old Plantation Creek

HYDROLOGIC UNIT: 02080109

TMDL ID: VAT-C16E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3.3

LATITUDE: 37.25833 **LONGITUDE:** -75.98750

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.00

LATITUDE: 37.27083 **LONGITUDE:** -75.97500

VDH-DSS shellfish harvesting condemnation # 152, located in Old Plantation Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Swans Gut Creek

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.14 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Virginia/ Maryland state line.

RIVER MILE: 3.30

LATITUDE: 38.00908 **LONGITUDE:** -75.44959

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth of the creek (confluence with Chincoteague Bay).

RIVER MILE: 0.00

LATITUDE: 37.98647 **LONGITUDE:** -75.42675

Segment begins at the Virginia/ Maryland state line and ends at the mouth of the creek (confluence with Chincoteague Bay).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen (2/9) was recorded at DEQ's ambient water quality monitoring station on Swans Gut Cr. (7-SGT002.46) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the low dissolved oxygen standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The Swans Gut Creek monitoring station (7-SGT002.46) is located at the Rt 679 crossing. The land use in the watershed is mixed agricultural, forested, wetlands, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding area. The specific source of the impairments is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Little Mosquito Creek

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.04 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the UT confluence 0.75 mi. upstream of station.

RIVER MILE: 1.55

LATITUDE: 37.95146 **LONGITUDE:** -75.46203

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth of the creek (confluence with Mosquito Creek).

RIVER MILE: 0.00

LATITUDE: 37.94570 **LONGITUDE:** -75.43983

Segment begins at the UT confluence 0.75 mi. upstream of station and ends at the mouth of the creek (confluence with Mosquito Creek).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen (3/29) was recorded at DEQ's ambient water quality monitoring station on Little Mosquito Cr. (7-LTM000.80) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the low dissolved oxygen standard violation is unknown. Sufficient exceedances for Fecal Coliform Bacteria (4/29) recorded at the above station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report.
The cause of the elevated Fecal Coliform Bacteria levels is currently unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Little Mosquito Creek monitoring station (7-LTM000.80) is located northwest of the NASA Flight Facility's main runway. The land use in the watershed is mixed agricultural, forested, wetlands, and federal facility use (NASA Wallops Flight Facility). The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding area. The specific source of the impairments is currently unknown.

Additional monitoring is necessary to confirm the spatial extent of the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Black Point Drain

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.2

LATITUDE: 37.91210 **LONGITUDE:** -75.38150

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.89460 **LONGITUDE:** -75.39710

VDH-DSS shellfish harvesting condemnation #20C - Chincoteague Island - Adjacent Areas

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Greenbackville Harbor

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-13

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.02 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.3

LATITUDE: 38.00556 **LONGITUDE:** -75.38889

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 38.00972 **LONGITUDE:** -75.38889

VDH-DSS shellfish harvesting condemnation # 153, located in Greenbackville Harbor.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Mosquito & Little Mosquito Creek

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-14

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.11 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 3.8

LATITUDE: 37.94583 **LONGITUDE:** -75.44167

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.94583 **LONGITUDE:** -75.49167

VDH-DSS shellfish harvesting condemnation # 32, located in Mosquito & Little Mosquito Creeks.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 1998 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Swans Gut Creek

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-15

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.14 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.5

LATITUDE: 37.98333 **LONGITUDE:** -75.43333

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 38.01250 **LONGITUDE:** -75.45000

VDH-DSS shellfish harvesting condemnation number 97, located in Swans Gut Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Jennys Gut

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-16

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.25

LATITUDE: 37.93800 **LONGITUDE:** -75.44570

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.93100 **LONGITUDE:** -75.45650

VDH-DSS shellfish harvesting condemnation #209, Jennys Gut

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Drainage ditch

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-17

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.3

LATITUDE: 37.89940 **LONGITUDE:** -75.37910

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.88210 **LONGITUDE:** -75.41250

VDH-DSS shellfish harvesting condemnation #20E - Chincoteague Island - Adjacent Areas

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Chincoteague Channel/Fowling Gut

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-18

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.58 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.10

LATITUDE: 37.93920 **LONGITUDE:** -75.37700

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.89760 **LONGITUDE:** -75.42460

VDH-DSS shellfish harvesting condemnation #20A - Chincoteague Island - Adjacent Areas

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Toms Cove Boat Basin

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-19

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.001 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.25

LATITUDE: 37.87660 **LONGITUDE:** -75.35310

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.88490 **LONGITUDE:** -75.38850

VDH-DSS shellfish harvesting condemnation #20D - Chincoteague Island - Adjacent Areas

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Andrews Landing Gut

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-20

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.03 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.23

LATITUDE: 37.90160 **LONGITUDE:** -75.42050

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.88540 **LONGITUDE:** -75.46290

VDH-DSS shellfish harvesting condemnation #20B - Chincoteague Island - Adjacent Areas

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Assateague Channel/Sheepshead Creek

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D01E-21

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.23 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.15

LATITUDE: 37.97910 **LONGITUDE:** -75.30730

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.89940 **LONGITUDE:** -75.37910

VDH-DSS shellfish harvesting condemnation #20-F, Chincoteague Island - Adjacent Areas

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Assawoman Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D02E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.09 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the confluence of Petit Branch

RIVER MILE: 4.22

LATITUDE: 37.85181 **LONGITUDE:** -75.53173

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the mouth of the creek (confluence with Womans Bay).

RIVER MILE: 2.38

LATITUDE: 37.83756 **LONGITUDE:** -75.50988

Segment begins at the confluence of Petit Branch and ends at the mouth of the creek (confluence with Womans Bay).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Fecal Coliform

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen (4/29) was recorded at DEQ's ambient water quality monitoring station on Assawoman Cr. (7-ASW003.36) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the standard violation is unknown. There are sufficient exceedances for Fecal Coliform Bacteria (4/29) recorded on Assawoman Cr. (7-ASW003.36) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report.
The cause of the elevated Fecal Coliform Bacteria levels is currently unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Assawoman Creek monitoring station (7-ASW003.36) is located in Accomack County. The land use in the watershed is mixed agricultural , forested, and residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding forested/agricultural/residential area. The specific source of the impairment is currently unknown.

Additional monitoring is necessary to confirm the spatial extent of the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Assawoman Creek

HYDROLOGIC UNIT: 02060010

TMDL ID: VAT-D02E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.15 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 5.1

LATITUDE: 37.83611 **LONGITUDE:** -75.48889

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.86528 **LONGITUDE:** -75.53611

VDH-DSS shellfish harvesting condemnation # 135, located in Assawoman Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Petit Branch

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.9 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters, 1.1 mile upstream Route 679 Bridge.

RIVER MILE: 1.90

LATITUDE: 37.85250 **LONGITUDE:** -75.55994

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the start of tidal waters.

RIVER MILE: 0.00

LATITUDE: 37.85121 **LONGITUDE:** -75.53880

Segment begins at headwaters, 1.1 mile upstream Route 679 Bridge and ends at the start of tidal waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

Sufficient exceedances of the Fecal Coliform bacteria standard recorded at station on Petit Br. (7-PET000.80, Rt 679 crossing) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria. Biological monitoring at the above station indicates the stream's benthic community is moderately impacted. This segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Current information suggests the benthic habitat may naturally retard benthic diversity. The specific cause of the low taxa diversity is currently unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The Petit Branch monitoring station is located at the Route 679 Bridge over Petit Branch. On-site sewage treatment system leachate from residences bordering the creek is a potential source. Upstream farm land is spray irrigated using effluent from the waste treatment system at Eastern Shore Seafood (VPA01060), a Virginia Pollution Abatement no-discharge permitted facility. The watershed receives inputs from storm water runoff associated with the surrounding residential /agricultural and wetlands areas. The specific source of the enteric bacteria causing the Fecal Coliform Bacteria standard violations is currently unknown. Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Gargathy Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03E-01

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 0.06 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 1.6 miles upstream of monitoring station (7-GAR001.80)

RIVER MILE: 3.45

LATITUDE: 37.78778 **LONGITUDE:** -75.56742

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at confluence with Gargathy Bay

RIVER MILE: 1.38

LATITUDE: 37.77138 **LONGITUDE:** -75.55689

Segment begins 1.6 miles upstream of monitoring station @ RM 3.45 and extends downstream to RM 1.38, confluence with Gargathy Bay.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances of Virginia's water quality standard for Dissolved Oxygen recorded at the station on Gargathy Creek (7-GAR001.80, located at Rt 680 crossing) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the low dissolved oxygen concentrations is most probably natural and characteristic of this tidal wetlands area.

IMPAIRMENT SOURCE: Natural Conditions

The monitoring station (7-GAR001.80) is located on Gargathy Creek, which empties into the Atlantic Ocean. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and storm water runoff. The source of the low dissolved oxygen concentrations is most probably natural and characteristic of this tidal wetlands area.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Finney Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.001 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the end of tidal waters.

RIVER MILE: 2.83

LATITUDE: 37.65612 **LONGITUDE:** -75.67961

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the point where the stream width greatly widens.

RIVER MILE: 2.02

LATITUDE: 37.64667 **LONGITUDE:** -75.68043

Segment begins at the end of tidal waters and ends at the point where the stream width greatly widens.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the Fecal Coliform bacteria standard recorded at station on upper portion of Finney Cr. (7-FNC002.43, Rt 605 crossing) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform Bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The monitoring station (7-FNC002.43) is located at the Rt 605 crossing. The land use in the watershed is agricultural, forested, wetlands & low density residential near Locustville. The watershed potentially receives inputs from on-site sewage treatment systems, wetlands areas and storm water runoff. The source of the bacteria impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Folly Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.29 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.7

LATITUDE: 37.68750 **LONGITUDE:** -75.62917

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.70833 **LONGITUDE:** -75.65833

VDH-DSS shellfish harvesting condemnation # 173, located in Folly Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Gargathy Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03E-11

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.12 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.7

LATITUDE: 37.78778 **LONGITUDE:** -75.56742

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.77138 **LONGITUDE:** -75.55689

VDH-DSS shellfish harvesting condemnation # 172, located in Gargathy Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

The cause of the shellfishing restriction is the potential of contaminated shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Parker Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03E-12

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.08 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 2.7

LATITUDE: 37.72500 **LONGITUDE:** -75.60000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.72500 **LONGITUDE:** -75.62500

VDH-DSS shellfish harvesting condemnation # 98, Parker Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Parker Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.26 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Route 13 culvert crossing

RIVER MILE: 2.26

LATITUDE: 37.73333 **LONGITUDE:** -75.65000

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the Rt 744 Bridge

RIVER MILE: 0.00

LATITUDE: 37.71667 **LONGITUDE:** -75.61667

Segment begins at the Route 13 culvert crossing and ends at the Rt 744 Bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform & E.coli (2004)

Quarterly biological monitoring at station 07-PAR004.35 (Business Rt. 13 Bridge) and 07-PAR003.09 (Rt. 744 Bridge) on Parker Creek indicated the stream's benthic community is severely impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. Sufficient exceedances of the standard for Fecal Coliform & Enterococci (2004) bacteria at the above two station to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 305(b) report. The specific cause of the benthic impairment is unknown. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown, Unknown

Stream flow is predominately composed of treated effluent from the Perdue Farms VPDES (VA0003808) permitted discharge at the headwaters of the tributary. The facility has completed a toxicity reduction evaluation and is meeting limitations for whole effluent toxicity. Perdue Farms, Incorporated is conducting a special study in conjunction with citizen groups to elucidate the source of the enteric bacteria. The Perdue Farms discharge has been in compliance with their effluent limitations for Fecal Coliform Bacteria.
The specific source of the Fecal Coliform & Enterococci bacteria impairment is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Gargathy Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.66 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of tributary.

RIVER MILE: 4.66

LATITUDE: 37.82850 **LONGITUDE:** -75.57320

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the beginning of tidal waters.

RIVER MILE: 0.00

LATITUDE: 37.80560 **LONGITUDE:** -75.56140

Segment begins at the headwaters of the tributary and ends at the beginning of tidal waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

Quarterly biological monitoring at station 07-GAR006.01 (located at Rt 157) indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The specific cause of the benthic impairment is currently considered unknown. Sufficient exceedances (2/4) of the standard for Fecal Coliform bacteria at the above station is the basis to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown, Unknown

The specific source of the impairments is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Ross Branch tributary to Folly Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.11 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of tributary.

RIVER MILE: 3.11

LATITUDE: 37.69480 **LONGITUDE:** -75.70670

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the start of tidal waters.

RIVER MILE: 0.00

LATITUDE: 37.69630 **LONGITUDE:** -75.66340

Segment begins at headwaters extending downstream to start of tidal waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Quarterly biological monitoring at station 07-RSS001.40 (located at State Route 600) indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.

The specific cause of the impairment is currently considered unknown.

IMPAIRMENT SOURCE: Unknown

The specific source of the impairment is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Accomack

STREAM NAME: Folly Creek unnamed tributary

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D03R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.61 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters of tributary.

RIVER MILE: 1.61

LATITUDE: 37.72860 **LONGITUDE:** -75.65840

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the beginning of tidal waters.

RIVER MILE: 0.00

LATITUDE: 37.70990 **LONGITUDE:** -75.65340

Segment begins at headwaters extending to start of tidal waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Quarterly biological monitoring at station 07-XDE000.40 (located at State Route 652) indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.

The specific cause of the impairment is currently considered unknown.

IMPAIRMENT SOURCE: Unknown

The specific source of the impairment is currently unknown.

Targeted monitoring is necessary to further delineate the extent of impairment and to characterize its causes and sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Red Bank Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D04E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.28 miles upstream from monitoring station (7-RBC003.01), at end of tidal waters.

RIVER MILE: 3.29

LATITUDE: 37.44600 **LONGITUDE:** -75.85060

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends 0.31 miles downstream from monitoirng station at confluence with unnamed tributary (XD

RIVER MILE: 2.70

LATITUDE: 37.44093 **LONGITUDE:** -75.84454

Segment begins 0.28 miles upstream from monitoring station (7-RBC003.01), at end of tidal waters and ends 0.31 miles downstream from monitoirng station at confluence with unnamed tributary (XDF) entering from south.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances (2/5) of Virginia's water quality standard for Dissolved Oxygen recorded at station on Red Bank Creek (7-RBC003.01) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the dissolved oxygen standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (7-RBC003.01) is located on Red Bank Creek, which empties into Hog Island Bay. The land use within this segment's watershed contains a tomato plasticulture farm. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Red Bank Creek unnamed tributary

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D04E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.3 miles upstream from monitoring station (7-XDF00.11), where creek branches.

RIVER MILE: 0.40

LATITUDE: 37.43742 **LONGITUDE:** -75.84892

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at mouth, confluence with Red Bank Creek

RIVER MILE: 0.00

LATITUDE: 37.44093 **LONGITUDE:** -75.84454

Segment begins 0.3 miles upstream of monitoring station @ RM 0.40 (where creek branches) and extends downstream to confluence with Red Bank Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances (2/5) of Virginia's water quality standard for Dissolved Oxygen recorded at station on unnamed tributary to Red Bank Creek (7-XDF000.11) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the dissolved oxygen standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station (7-XDF000.11) is located on a Tributary to Red Bank Creek, which empties into Hog Island Bay. The land use surrounding this segment contains a tomato plasticulture farm. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Red Bank Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.1 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.5 miles upstream from monitoring station (7-RBC003.87) at headwaters.

RIVER MILE: 4.37

LATITUDE: 37.44844 **LONGITUDE:** -75.86316

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends 0.5 miles downstream of monitoring station at the start of tidal waters.

RIVER MILE: 3.27

LATITUDE: 37.44600 **LONGITUDE:** -75.85060

Segment begins at the headwaters and extends downstream to the start of tidal waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances (2/3) of the Fecal Coliform bacteria standard at station 7-RBC003.87 (Rt 600 crossing) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the Fecal Coliform bacteria standard violation is the presence of enteric bacteria.

IMPAIRMENT SOURCE: Unknown

The monitoring station (7-RBC003.87) is located on Red Bank Creek, which empties into Hog Island Bay. The land use surrounding this segment contains a tomato plasticulture farm. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Oyster Harbor (Slip)

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D05E-10

ASSESSMENT CATEGORY: 5B

SEGMENT SIZE: 0.05 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 1.1

LATITUDE: 37.28750 **LONGITUDE:** -75.90000

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE: 0.00

LATITUDE: 37.28611 **LONGITUDE:** -75.93333

VDH-DSS shellfish harvesting condemnation # 12, located in Oyster Harbor.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Shellfishing Use - Not Supporting

IMPAIRMENT CAUSE: VDH Shellfish Restriction

The shellfish harvesting condemntion imposed by the VDH-Division of Shellfish Sanitation is the basis to assess this segment as minimally impaired for the Shellfishing Use Support Goal. Best Professional Judgement is used to evaluate this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The determination of the minimal impairment is based on the ability to relay the resource to cleaner waters for purging and subsequent recovery of the shellfish resource.

IMPAIRMENT SOURCE: Unknown

The shellfish harvesting condemnation is issued by the VDH - Division of Shellfish Sanitation based on their bacteriological monitoring, assessment of the potential for shellfish contamination, and subsequent determination of potential threat to human health resulting from contaminated shellfish consumption. The specific source causing the shellfish harvesting restriction is unknown. VDH - Division of Shellfish Sanitation conducts periodic shoreline survey assessments to implement corrective actions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Taylor Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.25 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Penn Central RR crossing near headwaters of tributary.

RIVER MILE: 1.95

LATITUDE: 37.33087 **LONGITUDE:** -75.94018

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the impoundment 0.1 mi downstream of station.

RIVER MILE: 0.70

LATITUDE: 37.33350 **LONGITUDE:** -75.91160

Segment begins at the Penn Central RR crossing near headwaters of tributary and ends at the impoundment 0.1 mi downstream of station.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the Fecal Coliform Bacteria standard (11/31) recorded on Taylor Creek (7-TAL000.80) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2002 & 2004 305(b) reports.
The cause of the elevated Fecal Coliform Bacteria levels is currently unknown.

IMPAIRMENT SOURCE: Unknown

The Taylor Creek monitoring station is located at the Route 600 bridge, in the Indiantown Neck area of Northampton Co. The land use in the watershed is mixed forested, agricultural production, and sparse residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding forested/agricultural/residential area. The specific source of the enteric bacteria causing the elevated Fecal Coliform Bacteria levels is currently unknown.

Additional monitoring is necessary to confirm impairment and determine whether it is not naturally occuring.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Holt Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D05R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.71 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters.

RIVER MILE: 1.71

LATITUDE: 37.38982 **LONGITUDE:** -75.90558

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the beginning of tidal waters.

RIVER MILE: 0.00

LATITUDE: 37.38811 **LONGITUDE:** -75.88287

Segment begins at the headwaters of tributary (near the Penn Central RR crossing) and extends downstream to the beginning of tidal waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the Fecal Coliform Bacteria standard (6/29) recorded on Holt Creek (7-HLT002.08) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report.
The cause of the elevated Fecal Coliform Bacteria levels is currently unknown.

IMPAIRMENT SOURCE: Unknown

The Holt Creek monitoring station is located at the Route 600 bridge, east of Martins Siding in Northampton Co. The land use in the watershed is mixed forested, agricultural production, and sparse residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. The specific source of the enteric bacteria causing the elevated Fecal Coliform Bacteria levels is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Holt Creek unnamed tributary

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D05R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.38 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the Penn Central RR crossing near headwaters.

RIVER MILE: 1.38

LATITUDE: 37.39901 **LONGITUDE:** -75.90502

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Holt Creek.

RIVER MILE: 0.00

LATITUDE: 37.38914 **LONGITUDE:** -75.88876

Segment begins at the Penn Central RR crossing near headwaters and ends at the confluence with Holt Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Sufficient exceedances of the Fecal Coliform Bacteria standard (2/4) recorded on unnamed tributary to Holt Creek (7-XDI000.88) to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report.
The cause of the elevated Fecal Coliform Bacteria levels is currently unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station is located slightly upstream of the Route 600 bridge, east of Martins Siding in Northampton Co. The land use in the watershed is mixed forested, agricultural production, and sparse residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. The specific source of the enteric bacteria causing the elevated Fecal Coliform Bacteria levels is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Magothy Bay

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D06E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.1 - Sq. Mi.

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins 0.1 miles upstream from monitoring station at Cushmans Landing.

RIVER MILE: 4.16

LATITUDE: 37.17700 **LONGITUDE:** -75.94123

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends 0.1 miles downstream from monitoirng station at Cushmans Landing.

RIVER MILE: 3.96

LATITUDE: 37.17546 **LONGITUDE:** -75.94145

Segment begins 0.1 miles upstream from monitoring station at Cushmans Landing (7-MAG004.06) and ends 0.1 miles downstream from monitoirng station at Cushmans Landing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Sufficient exceedances (3/9) of Virginia's water quality standard for Dissolved Oxygen recorded at station at Cushmans Landing (7-MAG004.06) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The cause of the dissolved oxygen standard violation is unknown.

IMPAIRMENT SOURCE: Unknown

The monitoring station is located on Cushmans Landing, which is adjacent to Magothy Bay. The land use in the watershed is primarily wetlands & low density residential. The watershed potentially receives inputs from wetlands areas and some storm water runoff. The source of the impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.55 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the start of Mill Creek upstream of Penn central RR crossing.

RIVER MILE: 1.55

LATITUDE: 37.22003 **LONGITUDE:** -75.96521

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends downstream of Rt 600 at the beginning of the impoundment upstream of tidal waters.

RIVER MILE: 0.00

LATITUDE: 37.21445 **LONGITUDE:** -75.94461

Segment begins at the start of Mill Creek upstream of Penn central RR crossing and ends downstream of Rt 600 at the beginning of the impoundment upstream of tidal waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH, Fecal Coliform

Sufficient exceedances of Virginia's water quality standards for Dissolved Oxygen (DO) and pH were recorded at DEQ's ambient water quality monitoring station on Mill Cr. (7-MCR002.00) to assess this segment as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the DO standard violation is unknown. Sufficient exceedances of the Fecal Coliform Bacteria standard (6/26) recorded at the above station is the basis to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the elevated Fecal Coliform Bacteria levels is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

The monitoring station is located at the Route 600 bridge, north of Capeville in Northampton Co. The land use in the watershed is mixed forested, agricultural production, and sparse residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. he source of the impairments is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Northampton

STREAM NAME: Narrow Channel Branch

HYDROLOGIC UNIT: 02080110

TMDL ID: VAT-D06R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.37 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the headwaters.

RIVER MILE: 1.37

LATITUDE: 37.27090 **LONGITUDE:** -75.94680

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the beginning of tidal waters.

RIVER MILE: 0.00

LATITUDE: 37.27860 **LONGITUDE:** -75.92870

Segment begins at the headwaters and ends at the beginning of tidal waters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

Quarterly biological monitoring at the station on Narrow Channel Branch (7-NCB000.97, located at Rt 600) indicated the stream's benthic community is moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use Support Goal for the 2004 305(b) report. The specific cause of the benthic impairment is unknown. Sufficient exceedances of the Fecal Coliform Bacteria standard (2/4) recorded at the above station is the basis to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The cause of the elevated Fecal Coliform Bacteria levels is currently unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The monitoring station is located at the Route 600 bridge, east of Bayview in Northampton Co. The land use in the watershed is mixed forested, agricultural production, and sparse residential. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff. The specific source of the enteric bacteria causing the elevated Fecal Coliform Bacteria levels is currently unknown. The source of the benthic impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Lake Wesley

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-D07E-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the start of Lake Wesley

RIVER MILE: 0.40

LATITUDE: 36.82340 **LONGITUDE:** -75.97320

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Rudee Inlet

RIVER MILE: 0.00

LATITUDE: 36.83020 **LONGITUDE:** -75.97320

Segment begins at the upstream start of Lake Wesley and extends to the confluence with Rudee Inlet.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Support

IMPAIRMENT CAUSE: pH

Sufficient exceedances of the criteria for pH were recorded at DEQ's ambient water quality monitoring station on Lake Wesley (7-LAE000.20) to assess this segment not supporting for the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report.

The cause of the alkaline pH concentrations is currently unknown.

IMPAIRMENT SOURCE: Unknown

The Lake Wesley monitoring station is located in the center of Lake Wesley, City of Virginia Beach. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential area. The specific source of the alkaline pH concentrations is currently unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Lake Rudee

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-D07E-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.13 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the start of Lake Rudee.

RIVER MILE: 0.60

LATITUDE: 36.82323 **LONGITUDE:** -75.98292

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at Rudee Inlet.

RIVER MILE: 0.00

LATITUDE: 36.82970 **LONGITUDE:** -75.96960

Segment begins at the start of Lake Rudee and extends downstream to the confluence with Rudee Inlet.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: pH, Fecal Coliform

Sufficient exceedances of the criteria for pH were recorded at DEQ's ambient water quality monitoring station on Lake Rudee (7-LAI000.04, 7-LAI000.18,7-LAI000.56) to assess this segment not supporting for the Clean Water Act's Aquatic Life Use Support Goal for the 2002 305(b) report. The cause of the alkaline pH concentrations is currently unknown. Sufficient exceedances of the Fecal Coliform Bacteria standard (8/48 - at 0.18 & 6/49 - at 0.56) recorded at the above station is the basis to assess this segment as not supporting of the Clean Water Act's Recreation Use Support Goal for the 2004 305(b) report. The segment impaired by bacteria excludes the Rudee Inlet Canal. The cause of the elevated Fecal Coliform Bacteria levels is unknown.

IMPAIRMENT SOURCE: Unknown, Unknown

The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential area. The specific source of the alkaline pH concentrations is currently unknown.

Additional monitoring is necessary to confirm the extent of impairment and determine whether it is not naturally occuring.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Owl Creek (lower)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-D07E-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.01 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins one-half mile upstream of mouth

RIVER MILE: 0.50

LATITUDE: 36.81927 **LONGITUDE:** -75.98626

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends at the confluence with Lake Rudee

RIVER MILE: 0.00

LATITUDE: 36.82323 **LONGITUDE:** -75.98292

Segment begins 0.50 mi. upstream of start of Owl Creek to the confluence with Lake Rudee.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH

Sufficient exceedances of the criteria for pH were recorded at DEQ's ambient water quality monitoring station on Owl Creek (7-OWL000.01) to assess this segment not supporting for the Clean Water Act's Aquatic Life Use Support Goal for the 2002 & 2004 305(b) report.

The cause of the alkaline pH concentrations is currently unknown.

IMPAIRMENT SOURCE: Unknown

The Owl Creek monitoring station (7-OWL000.01) is located off the Marine Science Museum parking lot, City of Virginia Beach. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential area. The specific source of the alkaline pH concentrations is currently unknown.

Additional monitoring is necessary to confirm the extent of impairment and determine whether it is not naturally occuring.

Fact Sheets for Category 5 Waters

RIVER BASIN: Chesapeake Bay/Atlantic/Small Coastal Basins

CITY/COUNTY: Virginia Beach

STREAM NAME: Owl Creek (upper)

HYDROLOGIC UNIT: 02080108

TMDL ID: VAT-D07E-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.004 - Sq. Mi.

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Segment begins at the start of Owl Creek headwaters.

RIVER MILE: 1.02

LATITUDE: 36.81502 **LONGITUDE:** -75.99184

DOWNSTREAM LIMIT:

DESCRIPTION: Segment ends 0.5 mi. above confluence with lake Rudee.

RIVER MILE: 0.50

LATITUDE: 36.81927 **LONGITUDE:** -75.98626

Segment begins at start of Owl Cr. and extends to mid-way point, 0.5 mi. above confluence with lake Rudee.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform & Enterococci

Sufficient exceedances of the criteria for Fecal Coliform Bacteria & Enterococci were recorded at DEQ's ambient water quality monitoring station on Owl Creek (7-OWL000.77) to assess this segment not supporting for the Clean Water Act's Recreation Use Support Goal for the 2002 & 2004 305(b) reports.
The cause of the elevated Fecal Coliform & Enterococci Bacteria concentrations is currently unknown.

IMPAIRMENT SOURCE: Unknown

The Owl Creek monitoring station (7-OWL000.77) is located upstream of the Marine Science Museum building. The watershed potentially receives inputs from wetlands areas, residential sewage treatment systems, and storm water runoff associated with the surrounding residential area and waterpark. The specific source of the elevated bacteria concentrations is currently unknown.

VIRGINIA

305(b)/303(d)

WATER QUALITY INTEGRATED REPORT

APPENDIX A, VOLUME 3

APPENDICES B-G

Richmond, Virginia

August 2004

Appendix A, continued

Category 5 Waters Fact Sheets

Roanoke/Yadkin, Tennessee/Big Sandy, and New River Basins

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte, Halifax, Campbell, Pittsylvania

STREAM NAME: Staunton (Roanoke) River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAC-L19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 83.9 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Leesville Dam

RIVER MILE: 140.02

LATITUDE: 37.09389 **LONGITUDE:** -79.39972

DOWNSTREAM LIMIT:

DESCRIPTION: Pipeline crossing approximately 5.4 miles downsteam of the Route 360 bridge

RIVER MILE: 56.12

LATITUDE: 37.03778 **LONGITUDE:** -78.99611

Staunton (Roanoke) River mainstem from Leesville Dam downstream to a pipeline crossing approximately 5.4 miles downstream of the Route 360 bridge.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, Fecal Coliform (80.46 miles)

The Virginia Department of Health (VDH) has issued a 'Health Advisory' for fishing in this segment of the Staunton (Roanoke) River based on fish tissue analysis. The segment does not support the fish consumption use for Smallmouth Bass, Channel Catfish, Flathead Catfish, Striped Bass, White Bass, and Carp. Fish tissue analysis reveals PCB levels high enough for issuance of an advisory. The VDH advises limiting the amount of fish consumed to two 8 oz. portions per month. Young children and pregnant women are advised not to eat any of these fish. The total VDH 'Health Advisory' extends from Leesville Dam on downstream below Clover, Virginia; 5.4 miles downstream of the Route 360 Bridge. A total length of approximately 84 miles.

Exceedance of the US EPA human health-risk based screening value (SV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) was found during the following sample events:
Below Leesville Dam (4AROA137.00) 1998 4 Species
Route 640 in Campbell Co. (4AROA125.59) 1998 6 Species
Near Taber in Campbell Co. (4AROA117.09) 1998 4 Species & 1999 3 Species
Route 761 in Campbell Co. (4AROA108.09) 1998 6 Species
Route 501 in Brookneal (4AROA097.07) 1998 8 Species & 2002 9 Species
Route 746 in Halifax Co. (4AROA067.91) 1999 3 Species
Route 92 (4AROA059.12) 1998 4 Species & 2002 8 Species

An Observed Effect of the fish consumption use is found within this segment, 22.23 miles from the mouth of the Big Otter River downstream to Buffalo Creek. Exceedances of Heptachlor epoxide from 1999 fish tissue collections at station 4AROA117.09 reveal 3 species above the screening value. Station 4AROA108.09 in Long Island reports exceedances in 2 species. An additional observed effect of the fish consumption use is found within this segment, 10.20 miles from Roanoke Creek to the pipeline crossing appoximately 5.4 miles downstream of the Route 360 bridge. Exceedences of Mercury from 2002 fish tissue collections at station 4AROA059.12 reveal 2 species above the screening value.

Fact Sheets for Category 5 Waters

Results of fish tissue and sediment sampling from the special PCB ongoing study in the Staunton (Roanoke) River are posted at the DEQ website, http://www.deq.state.va.us.

A portion of the Roanoke River segment is not supporting the recreation use to excessive counts of fecal coliform bacteria. The segment extends 80.46 miles from Goose Creek to the pipeline crossing approximately 5.4 miles downstream of the Route 360 bridge. The high counts were recorded at the following stations:
Route 29 Bus. Altavista (4AROA129.55) 4/27 Violation Rate
Route 640 Campbell Co. (4AROA124.59) 2/12 Violation Rate
Route 761 Campbell Co. (4AROA108.09) 2/14 Violation Rate
Route 501 in Brookneal (4AROA097.46) 9/51 Violation Rate
Route 746 in Halifax Co. (4AROA067.91) 4/29 Violation Rate
Route 92 (4AROA059.12) 7/47 Violation Rate

A portion of the Roanoke River segment is fully supporting, but has an observed effect for the aquatic life use. The segment extends 8.08 miles from Buffalo Creek to the Falling River confluence. Elevated levels of PCBs, Chlordane, Total DDT & DDE were found in the sediment during a 1999 sampling event at station 4AROA096.65.

During the 2004 cycle several segments were combined to reflect the entire length of the VDH fishing advisory for PCBs and the 80.46 mile segment impaired for fecal coliform bacteria.

IMPAIRMENT SOURCE: VDH Fish Consumption Advisory, Non Point Source

The exact source(s) of PCB contamination is unknown. One stormwater and one legacy industrial source has been identified in the segment. Investigations to discover potential sources continue as do fish tissue and sediment sampling studies.

The source of fecal coliform bacteria is believed to be non-point source loadings.

The exact source of the Heptachlor epoxide and Mercury is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Campbell

STREAM NAME: Seneca Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L31R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.1 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: West Little Seneca Creek

RIVER MILE: 9.10

LATITUDE: 37.15030 **LONGITUDE:** -79.13120

DOWNSTREAM LIMIT:

DESCRIPTION: Roanoke River

RIVER MILE: 0.00

LATITUDE: 37.09010 **LONGITUDE:** -79.12310

Seneca Creek mainstem from the West Little Seneca Creek mouth downstream to Seneca Creek's confluence with the Roanoke (Staunton) River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Seneca Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. High counts were recorded in 3/26 samples at the Route 704 bridge (4ASEN000.40).

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax, Charlotte, Campbell

STREAM NAME: Falling River

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 17.92 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Falling River North and South Fork confluence

RIVER MILE: 17.92

LATITUDE: 37.13944 **LONGITUDE:** -78.97083

DOWNSTREAM LIMIT:

DESCRIPTION: Falling River mouth

RIVER MILE: 0.00

LATITUDE: 37.02250 **LONGITUDE:** -78.90444

Falling River mainstem from the North and South Fork confluence downstream to the Falling River mouth on the Roanoke (Staunton) River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Falling River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/26 samples taken at 4AFRV002.78.

2/10 sampes taken at 4AFRV010.99.

4/27 samples taken at 4AFRV017.71.

During the 2004 cycle several segments of Falling River were combined into one to reflect the impaired segment from the North and South Fork Falling River confluences to the mouth of Falling River at the Roanoke River.

IMPAIRMENT SOURCE: NPS - Agriculture/Urban

The source of the fecal coliform is agriculture and urban runoff/storm sewers.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Campbell

STREAM NAME: Mollys Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L35R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.81 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 17.5

LATITUDE: 37.26680 **LONGITUDE:** -79.09470

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of a pond

RIVER MILE: 15.69

LATITUDE: 37.25030 **LONGITUDE:** -79.08830

Mollys Creek mainstem from its perennial headwaters downstream to a pond's backwaters.Mollys Creek mainstem from its perennial headwaters downstream to a pond's backwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Mollys Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. High counts were recorded in 7/26 samples at 4AMEY016.00.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Turnip Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L36R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.7 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Buck Branch

RIVER MILE: 2.70

LATITUDE: 37.01500 **LONGITUDE:** -78.85167

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth at Roanoke River

RIVER MILE: 0.00

LATITUDE: 36.98389 **LONGITUDE:** -78.84361

Turnip Creek from Buck Branch downstream to its mouth at the Roanoke River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Turnip Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/28 samples taken at 4ATIP002.55.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Cub Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L37R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.21 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Big Cub Creek

RIVER MILE: 22.51

LATITUDE: 37.20389 **LONGITUDE:** -78.73444

DOWNSTREAM LIMIT:

DESCRIPTION: Terrys Creek

RIVER MILE: 8.30

LATITUDE: 37.06167 **LONGITUDE:** -78.74361

Cub Creek from Big Cub Creek to Terrys Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Cub Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 8/21 samples taken at 4ACUB010.96.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Ash Camp Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L39R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.46 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.46

LATITUDE: 37.03611 **LONGITUDE:** -78.58472

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 37.03806 **LONGITUDE:** -78.60056

Ash Camp Creek from the its headwaters to its mouth at Roanoke Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic) (1998), Fecal Coliform (2004)

Ash Camp Creek was assessed not supporting of the Aquatic Life use support goal based on a moderately impaired benthic assessment 50 yards below Keysville STP (4AACC007.62), as well as a slightly impaired benthic assessment at the Route 654 bridge (4AACC007.62).

Ash Camp Creek is also assessed as not supproting of the recreation use due to excessives counts of fecal coliform during the 2004 cycle. High counts were recorded in 4/7 samples taken at 4AACC002.60 and in 2/6 samples taken at 4AACC004.87.

IMPAIRMENT SOURCE: PS - Municipal, Unknown

The impairment in this segment is attributed to siltation from a municipal point source in the segment.

The source of the fecal coliform is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Twittys Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L39R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.25 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: WestPoint Stevens-Drakes Discharge

RIVER MILE: 7.25

LATITUDE: 36.99583 **LONGITUDE:** -78.59667

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.92639 **LONGITUDE:** -78.66667

Twittys Creek from WestPoint Stevens-Drakes discharge downstream to its mouth at Roanoke Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Segment was assessed not supporting of the Aquatic Life use support goal based on a moderately impaired biological assessment for the 2004 305(b) cycle at 4ATWT006.40 (below Westpoint Stevens discharge) and at 4ATWT003.36 (below Drakes Branch STP).

IMPAIRMENT SOURCE: PS - Municipal, PS - Industrial

The impairment is attributed to siltation from municipal and industrial point sources in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Horsepen Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L39R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.84 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Little Horsepen Creek

RIVER MILE: 3.48

LATITUDE: 36.91972 **LONGITUDE:** -78.63972

DOWNSTREAM LIMIT:

DESCRIPTION: Reynolds Creek

RIVER MILE: 1.64

LATITUDE: 36.90250 **LONGITUDE:** -78.65833

Horsepen Creek from Little Horsepen Creek downstream to Reynolds Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Horsepen Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/25 samples taken at 4AHEN002.16.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Wards Fork Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L39R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.73 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Unnamed tributary at RM 5.73

RIVER MILE: 5.73

LATITUDE: 37.02806 **LONGITUDE:** -78.68167

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.98889 **LONGITUDE:** -78.64972

Wards Fork Creek from the unnamed tributary at river mile 5.73 downstream to its mouth at Roanoke Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Wards Fork Creek is not supporting the recreation use due to a 3/28 violation rate of fecal coliform bacteria. The violations were recorded in samples taken at 4AWFC002.12.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Berles Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L40R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.18 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.18

LATITUDE: 36.84083 **LONGITUDE:** -78.59972

DOWNSTREAM LIMIT:

DESCRIPTION: Sandy Creek

RIVER MILE: 0.00

LATITUDE: 36.84139 **LONGITUDE:** -78.63444

Berles Creek from its headwaters to Sandy Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Berles Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/9 samples taken at 4ABES001.21. This is a confined animal feeding operation (CAFO) special study station.

IMPAIRMENT SOURCE: Unknown

Source is unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax, Charlotte

STREAM NAME: Staunton (Roanoke) River

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L40R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.49 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Pipeline crossing approximately 5.4 miles downstream of Route 360 bridge

RIVER MILE: 56.12

LATITUDE: 36.77139 **LONGITUDE:** -78.67000

DOWNSTREAM LIMIT:

DESCRIPTION: Kerr Reservoir

RIVER MILE: 51.63

LATITUDE: 36.69778 **LONGITUDE:** -78.64709

Staunton (Roanoke) River from the pipeline crossing about 5.4 miles downstream of the Route 360 bridge to the backwaters of Kerr Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, Fecal Coliform

This segment of Staunton (Roanoke) River is not supporting the fish consumption use due to elevated levels of PCBs found in the fish tissue. A 1998 sampling event revealed 4 species with elevated levels and a 2002 sampling event revealed 8 species with elevated levels. Both sampling events occured at the Route 92 bridge (4AROA059.12).

This segment of Staunton (Roanoke) River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 7/47 samples taken at 4AROA059.12.

IMPAIRMENT SOURCE: Unknown, Non Point Source

The source of fecal coliform is unknown. The exact source(s) of PCB contamination is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Sandy Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L40R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.34 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.32

LATITUDE: 36.84167 **LONGITUDE:** -78.63389

DOWNSTREAM LIMIT:

DESCRIPTION: Sandy Creek at river mile 1.98

RIVER MILE: 1.98

LATITUDE: 36.85972 **LONGITUDE:** -78.59083

Sandy Creek from its headwaters to river mile 1.98, near the confluence with Berles Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This upstream segment of Sandy Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 2/10 samples taken at 4ASLA002.69.

The segment is also fully supporting but has an observed effect for the aquatic life use due to high levels of phosphorous recorded in 2/10 samples at 4ASLA002.69.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform and phosphorous are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte

STREAM NAME: Buffalo Creek, UT

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L40R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.88 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.88

LATITUDE: 36.78028 **LONGITUDE:** -78.63500

DOWNSTREAM LIMIT:

DESCRIPTION: Buffalo Creek

RIVER MILE: 0.00

LATITUDE: 36.78028 **LONGITUDE:** -78.62944

Unnamed tributary to Buffalo Creek from headwaters to Buffalo Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The unnamed tributary to Buffalo Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 5/10 samples taken at 4AXMC000.54.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte, Halifax

STREAM NAME: Buffalo Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L40R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.34 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Unnamed Trib @ RM 2.3

RIVER MILE: 2.34

LATITUDE: 36.79920 **LONGITUDE:** -78.63510

DOWNSTREAM LIMIT:

DESCRIPTION: Roanoke River

RIVER MILE: 0.00

LATITUDE: 36.81270 **LONGITUDE:** -78.66700

Buffalo Creek from an unnamed tributary at river mile 2.3 to the Roanoke River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Buffalo Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/10 samples taken at 4ABNN001.85.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Danville, Pittsylvania

STREAM NAME: Sandy River

HYDROLOGIC UNIT: 03010103

TMDL ID: VAC-L58R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.21 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Hickory Forest Creek

RIVER MILE: 7.21

LATITUDE: 36.62040 **LONGITUDE:** -79.50530

DOWNSTREAM LIMIT:

DESCRIPTION: Sandy River confluence on the Dan River

RIVER MILE: 0.00

LATITUDE: 36.58694 **LONGITUDE:** -79.41722

Sandy River mainstem from the Hickory Forest Creek mouth downstream to the Sandy River confluence on the Dan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Sandy River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 7/25 samples taken at 4ASRV000.20.

The segment has been shortened in the 2004 cycle to reflect the acceptable data recorded upstream. There were no recorded violations in 8 samples taken at 4ASRV007.46.

IMPAIRMENT SOURCE: NPS - Agriculture

The source of the fecal coliform is agriculture and urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Pittsylvania

STREAM NAME: Sandy Creek

HYDROLOGIC UNIT: 03010103

TMDL ID: VAC-L59R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.17 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 14.71

LATITUDE: 36.70190 **LONGITUDE:** -79.50220

DOWNSTREAM LIMIT:

DESCRIPTION: Little Sandy Creek

RIVER MILE: 5.54

LATITUDE: 36.63210 **LONGITUDE:** -79.43860

Sandy Creek from its headwaters downstream to its confluence with Little Sandy Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coilform

This segment of Sandy Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 5/25 samples taken at 4ASRC007.06.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax, Pittsylvania

STREAM NAME: Dan River

HYDROLOGIC UNIT: 03010104

TMDL ID: VAC-L60R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 36.79 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: VA/NC State Line

RIVER MILE: 42.82

LATITUDE: 37.54194 **LONGITUDE:** -79.21472

DOWNSTREAM LIMIT:

DESCRIPTION: Peter Creek Confluence

RIVER MILE: 6.03

LATITUDE: 36.68490 **LONGITUDE:** -78.72440

Dan River mainstem from VA/NC State Line downstream to its confluence with Peter Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: E. Coli, VDH Health Advisory (PCBs), DDT (9.73 miles), DDE (9.73 miles)

This segment of Dan River is not supporting the recreation use due to excessive counts of E. Coli. Counts exceeded the instantaneous standard in 5/13 samples taken at the Route 62 bridge (4ADAN042.80) and in 3/13 samples taken at the Route 501 bridge (4ADAN015.30). During the transition betweeen the Fecal Coliform standard and the recently approved E coli standard, both the Fecal Coliform standard (400cfu/100mL or 200cfu/100mL for two or more samples over a calendar month) and the E. coli standard (235cfu/100mL or 126cfu/100mL for two or more samples over a calendar month) apply . Since a dataset of 12 or more samples were collected for E coli, only the new standard will apply.

The segment is not supporting the fish consumption use due to a fishing advisory issued by Virginia Department of Health (VDH) on 12/27/99. The advisory on the Dan River begins at the Virginia/North Carolina border north of Virginia Route 62 downstream to Kerr Reservoir at Staunton River State Park. Flathead and channel catfish taken from these waters may contain PCBs. VDH advises the public to eat no more than two 8 oz meals of these fish per month. A portion of this segment of the Dan River is also not supporting the fish consumption use due to elevated levels of Total DDT and DDE. This portion of the river extends from the South Boston raw water intake to its confluence with Peter Creek (9.73 miles). Results of fish tissue sampling are as follows:

Near William M. Tuck airport - 4ADAN012.51 (2002 FT/Sed)
PCBs 3 Species, DDE 1 Species, Total DDT 1 Species
Below South Boston - 4ADAN012.82 (2000 FT/Sed)
PCBs 3 Species
Downstream of South Boston - 4ADAN013.34 (1999 FT/Sed)
PCBs 7 Species, DDE 1 Species, Total DDT 1 Species
Upstream of Lawsons Creek - 4ADAN017.44 (1999 FT/Sed)
PCBs in Fish Tissue 2 Species

The 2004 segment combines the 2002 L60, L62, L64 and L73 segments of the Dan River.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: Non-Point Source, Unknown, Unknown, Unknown

The source of the E. Coli is non-point source. VDH has issued a fish consumption advisory due to PCBs.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Danville

STREAM NAME: Fall Creek

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L61R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.3 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Little Fall Creek

RIVER MILE: 2.30

LATITUDE: 36.60400 **LONGITUDE:** -79.36020

DOWNSTREAM LIMIT:

DESCRIPTION: Dan River

RIVER MILE: 0.00

LATITUDE: 36.58510 **LONGITUDE:** -79.37950

Fall Creek mainstem from its mouth on the Dan River upstream to the mouth of Little Fall Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Fall Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 5/25 samples taken at 4AFAL001.58.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax, Pittsylvania

STREAM NAME: Double Creek

HYDROLOGIC UNIT: 03010104

TMDL ID: VAC-L62R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.28 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.28

LATITUDE: 36.66361 **LONGITUDE:** -79.26250

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.60833 **LONGITUDE:** -79.16028

Double Creek from its headwaters to its mouth at the Dan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Double Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/28 samples taken at 4ADBC002.19.

IMPAIRMENT SOURCE: Non-Point Source

The source of fecal coliform is non-point source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax

STREAM NAME: Byrds Branch

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L62R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.98 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.98

LATITUDE: 36.63970 **LONGITUDE:** -79.15250

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.61760 **LONGITUDE:** -79.10470

Byrds Branch from its headwaters to the mouth at the Dan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Byrds Branch is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/9 samples taken at 4ABYR002.13 and 4/9 samples taken at 4ABYR000.80.

IMPAIRMENT SOURCE: Non-Point Source

The source of fecal coliform is non-point source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax

STREAM NAME: Birch Creek

HYDROLOGIC UNIT: 03010104

TMDL ID: VAC-L63R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.83 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Carlton Creek

RIVER MILE: 4.83

LATITUDE: 36.69417 **LONGITUDE:** -79.11639

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.66361 **LONGITUDE:** -79.05472

Birch Creek from Carlton Creek to its mouth at the Dan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Birch Creek is not supporting the swimming use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 7/26 samples taken at 4ABIR001.00.

IMPAIRMENT SOURCE: Non-Point Source

The source of fecal coliform is non-point source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Pittsylvania

STREAM NAME: Banister River

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L65R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.65 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 81.35

LATITUDE: 36.83580 **LONGITUDE:** -79.55690

DOWNSTREAM LIMIT:

DESCRIPTION: Bearskin Creek confluence

RIVER MILE: 69.70

LATITUDE: 36.77040 **LONGITUDE:** -79.45340

Banister River from its headwaters to the Bearskin Creek confluence

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Banister River is not supporting the recreation use due to excessive counts of fecal coliform. Counts exceeded the instantaneous standard in 3/25 samples taken at 4ABAN070.20.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Pittsylvania

STREAM NAME: Cherrystone Creek

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L66R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.57 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Cherrystone Creek Dam

RIVER MILE: 8.57

LATITUDE: 36.85100 **LONGITUDE:** -79.43120

DOWNSTREAM LIMIT:

DESCRIPTION: Banister River

RIVER MILE: 0.00

LATITUDE: 36.80740 **LONGITUDE:** -79.33970

Cherrystone Creek mainstem from the Cherrystone Creek dam downstream to the Banister River confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Cherrystone Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 5/17 samples taken at 4ACRR003.56 and 11/26 samples taken at 4ACRR000.80.

The 2004 segment combines the 2002 impaired segments into one. The Cherrystone Creek segment was extended in the 2004 cycle from the dam to its mouth on Banister River.

IMPAIRMENT SOURCE: NPS - Agriculture/Urban

The source of the fecal coliform is agriculture and urban runoff/storm sewers.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax

STREAM NAME: Banister River

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L67R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.62 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Elkhorn Creek

RIVER MILE: 24.72

LATITUDE: 36.89833 **LONGITUDE:** -79.11083

DOWNSTREAM LIMIT:

DESCRIPTION: Banister Lake

RIVER MILE: 16.10

LATITUDE: 36.81222 **LONGITUDE:** -79.98472

Banister River from Elkhorn Creek to Banister Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform (1998), E. Coli (2004)

The segment was evaluated not supporting of the recreation use support goal based on a fecal coliform violation rate of 3/19 and a E. coli violation rate of 2/7 at the Route 642 bridge (4ABAN023.28).

Both the Fecal Coliform standard (400cfu/100mL or 200cfu/100mL for two or more samples over a calendar month) and the E. coli standard (235cfu/100mL or 126cfu/100mL for two or more samples over a calendar month) apply during the transition betweeen the Fecal Coliform standard and the recently approved E coli standard. Once a dataset of 12 or more samples are collected for E coli or after June 30, 2008 whichever comes first, only the new standard will apply.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of fecal coliform and E. Coli is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Pittsylvania

STREAM NAME: Whitehorn Creek

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L68R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.53 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Where the creek forks just downstream of the Rt. 29 crossing.

RIVER MILE: 10.53

LATITUDE: 36.91778 **LONGITUDE:** -79.37472

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Whitehorn Creek

RIVER MILE: 0.00

LATITUDE: 36.87444 **LONGITUDE:** -79.24222

Whitehorn Creek mainstem from its mouth on Georges Creek upstream to where the creek forks just downstream of the Rt. 29 crossing.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Whitehorn Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 2/17 samples taken at 4AWRN005.50.

IMPAIRMENT SOURCE: NPS - Agriculture

The source of the fecal coliform is agriculture.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Pittsylvania

STREAM NAME: Stinking River

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L69R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.98 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: North Fork Stinking River

RIVER MILE: 8.98

LATITUDE: 36.96010 **LONGITUDE:** -79.27970

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.90740 **LONGITUDE:** -79.19310

Stinking River mainstem from its mouth on the Banister River upstream to the mouth of the North Fork of Stinking River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Stinking River is not supporting the recreation use due to excessive counts of fecal coliform bacteria found in 4/27 samples taken at station 4ASNE005.30.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax

STREAM NAME: Sandy Creek

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L70R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.76 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Johns Run

RIVER MILE: 11.76

LATITUDE: 36.78556 **LONGITUDE:** -79.14528

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.82667 **LONGITUDE:** -79.02389

Sandy Creek from Johns Run to its mouth at the Banister River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Sandy Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/27 samples taken at 4ASNA000.20.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax

STREAM NAME: Banister River

HYDROLOGIC UNIT: 03010105

TMDL ID: VAC-L71R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.78 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Banister Lake Dam

RIVER MILE: 13.78

LATITUDE: 36.78167 **LONGITUDE:** -78.02389

DOWNSTREAM LIMIT:

DESCRIPTION: Dan River confluence

RIVER MILE: 0.00

LATITUDE: 36.69833 **LONGITUDE:** -78.79472

Banister River from the Banister Lake dam downstream to its confluence with the Dan River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: PCBs (2002), Fecal Coliform (1998)

This segment of Banister River is not supporting the fish consumption use due to elevated levels of PCBs found in the fish tissue. The sampling events and results occured at the following stations:

Near Route 614 (4ABAN008.30)
2002 PCB 1 Species
Upstream of pipeline (4ABAN000.05)
2000 PCB 3 Species

There are also 2 observed effects for this segment of the Banister River. Mercury and Arsenic have been found in fish tissue during 1999 and 2002 sampling events.

The US EPA conducted a study of chemical residues in lake fish in 2001 on Banister River Lake. The results show no exceedences of Mercury, PCBs or Arsenic in fish tissue.

The aquatic life use is considered fully supporting with an observed effect. Elevated levels of Total DDT was detected in the sediment near Route 716 (4ABAN001.98) during a 1999 Special Project.

This segment of Banister River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 5/41 at 4ABAN005.58.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of the PCBs and fecal coliform are unknown.

Fact Sheets for Category 5 Waters

The source of Mercury and Arsenic are unknown.
The source of the Total DDT is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax, Mecklenburg

STREAM NAME: Dan River

HYDROLOGIC UNIT: 03010104

TMDL ID: VAC-L73L-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1624.93 - Acres

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Peter Creek Cofluence

RIVER MILE: 6.03

LATITUDE: 36.68490 **LONGITUDE:** -78.72440

DOWNSTREAM LIMIT:

DESCRIPTION: Roanoke River Confluence (Kerr Reservoir)

RIVER MILE: 0.00

LATITUDE: 36.68900 **LONGITUDE:** -78.64750

Dan River from the Peter Creek confluence to the Roanoke River Confluence (Kerr Reservoir).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: E. Coli, VDH Health Advisory (PCBs)

This segment of Dan River is not supporting the recreation use due to excessive counts of E. Coli. Counts exceeded the instantaneous standard in 3/13 samples taken at the Route 501 bridge (4ADAN015.30). During the transition betweeen the Fecal Coliform standard and the recently approved E coli standard, both the Fecal Coliform standard (400cfu/100mL or 200cfu/100mL for two or more samples over a calendar month) and the E. coli standard (235cfu/100mL or 126cfu/100mL for two or more samples over a calendar month) apply . Since a dataset of 12 or more samples were collected for E coli, only the new standard will apply.

The segment is not supporting the fish consumption use due to sampling conducted at 4ADAN017.44 which found 2 species with PCBs. A fishing advisory issued by the Virginia Department of Health (VDH) is currently in effect and was issued on 12/27/99. The advisory on the Dan River begins at the Virginia/North Carolina border north of Virginia Route 62 downstream to Kerr Reservoir at Staunton River State Park. Flathead and channel catfish taken from these waters may contain PCBs. VDH advises the public to eat no more than two 8 oz meals of these fish per month.

This segment was originially a part of a 1998 riverine segment, but was resegmented in 2004 to correctly show it as a part of the backwaters of Kerr Reservoir.

IMPAIRMENT SOURCE: Non-Point Source, Unknown

The source of E. Coli and PCBs is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax, Mecklenburg

STREAM NAME: Aarons Creek

HYDROLOGIC UNIT: 03010104

TMDL ID: VAC-L73R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.68 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 14.68

LATITUDE: 36.54222 **LONGITUDE:** -78.73361

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.67250 **LONGITUDE:** -78.70056

Aarons Creek from its headwaters at the VA/NC state line downstream to its mouth at the Dan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Aarons Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/28 samples taken at 4AAAR004.72

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax

STREAM NAME: Hyco River

HYDROLOGIC UNIT: 03010104

TMDL ID: VAC-L74R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 21.13 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Bluewing Creek

RIVER MILE: 21.13

LATITUDE: 36.62083 **LONGITUDE:** -78.83806

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth

RIVER MILE: 0.00

LATITUDE: 36.68778 **LONGITUDE:** -78.77722

Hyco River from Bluewing Creek downstream to its mouth at the Dan River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Hyco River is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/47 at 4AHYC002.70. The segment was assessed as fully supporting but there is an observed effect for the fish consumption use support goal due to 1999 and 2000 fish tissue studies. The studies indicated PCBs were present in 1 species.

IMPAIRMENT SOURCE: Unknown

The sources of fecal coliform and PCBs are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax

STREAM NAME: Little Coleman Creek

HYDROLOGIC UNIT: 03010104

TMDL ID: VAC-L74R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.44 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.44

LATITUDE: 36.56778 **LONGITUDE:** -78.97750

DOWNSTREAM LIMIT:

DESCRIPTION: Coleman Creek

RIVER MILE: 0.00

LATITUDE: 36.58278 **LONGITUDE:** -78.92611

Little Coleman Creek from its headwaters to Coleman Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Little Coleman Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/10 at 4ALOL000.62. This is a confined animal feeding operation (CAFO) special study station.

IMPAIRMENT SOURCE: Unknown

Source is unknown. There is not enough data to determine if the CAFO facility is the source of impairment in this segment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Halifax

STREAM NAME: Coleman Creek

HYDROLOGIC UNIT: 03010104

TMDL ID: VAC-L74R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.45 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 8.03

LATITUDE: 36.57639 **LONGITUDE:** -78.99694

DOWNSTREAM LIMIT:

DESCRIPTION: Little Coleman Creek

RIVER MILE: 2.58

LATITUDE: 36.58222 **LONGITUDE:** -78.92694

Coleman Creek from its headwaters to Little Coleman Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Coleman Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/10 samples taken at 4ACLB005.17 and 2/10 samples taken at 4ACLB007.78. These stations are a part of a confined animal feeding operation (CAFO) special study.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Charlotte, Halifax, Mecklenburg

STREAM NAME: Kerr Reservoir

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L75L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 31626.42 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Roanoke/Dan Confluence

RIVER MILE: 45.62

LATITUDE: 36.73083 **LONGITUDE:** -78.68306

DOWNSTREAM LIMIT:

DESCRIPTION: John H. Kerr Dam

RIVER MILE: 18.04

LATITUDE: 36.59833 **LONGITUDE:** -78.29722

All of Kerr Reservoir within Virginia

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, Dissolved Oxygen (7468.87 Acres) (2004), Trophic State Index

All of Kerr Reservoir within Virginia was assessed not supporting of the Fish Consumption use support goal based on fish tissue data collected in the Roanoke River Basin. The study identified widespread PCB contamination in the Roanoke River Basin, including Kerr Reservoir. In addition, there are observed effects on the use due to mercury and heptachlor epoxide exceedences of the DEQ screening values found in the fish tissue .

A portion of Kerr Reservoir was assessed not supporting of the Aquatic Life Use based on low dissolved oxygen below the thermocline at 4AROA038.49 & 4AROA043.14. The portion extends from the Route 58 bridge crossing upstream to the backwaters of the reservoir. Kerr Reservoir is stratified May - August. Trophic State Indices were calculated at the following stations:
Route 58 Bridge (4AROA038.49) - Chlorophyll a - 62, Total Phosphorous - 58.24 and Secchi Depth - 60.
Buoy 24 (4AROA043.14) - Chlorophyll a - 66.77, Total Phosphorous - 59.59 and Secchi Depth - 63.22.
This portion of Kerr Reservoir is considered eutrophic and impaired based on these calculations.

The lower portion of the reservoir, from the Route 58 bridge to the John H. Kerr dam is considered impaired, but does not require a TMDL because the impairment is not caused by a pollutant. Trophic State Indicies were calculated at the following stations:
Buoy 1 (4AROA018.36) - Chloraphyll a - 45.8, Total Phosphorous - 49.1 and Secchi Depth - 47.37
Buoy 4 (4AROA022.52) - Chloraphyll a - 47.86, Total Phosphorous - 44.15 and Secchi Depth - 50
Buoy 9 (4AROA028.04) - Chloraphyll a - 53.74, Total Phosphorous - 49.1 and Secchi Depth - 51.93
Buoy 14 (4AROA032.42) - Chloraphyll a - 57.58, Total Phosphorous - 52.22 and Secchi Depth - 56.5
Grassy Creek Arm Route 15 (4AGRA003.22) - Chloraphyll a - 56.13 and Total Phosphorous - 50.59
Butchers Creek Arm Route 756 (4ABHB004.40) - Chloraphyll a - 48.85 and Total Phosphorous - 52.22
This portion of Kerr Reservoir is considered mesotrophic based on these calculations.

IMPAIRMENT SOURCE: Unknown, Unknown, Unknown

Fact Sheets for Category 5 Waters

The source of the contamination is considered unknown.

The source of the dissolved oxygen violations are due to one or more pollutants from anthropogenic sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Butcher Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L75R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.45 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 19.66

LATITUDE: 36.80790 **LONGITUDE:** -78.44530

DOWNSTREAM LIMIT:

DESCRIPTION: Kerr Reservoir

RIVER MILE: 7.20

LATITUDE: 36.68450 **LONGITUDE:** -78.46420

Butcher Creek from its headwaters to the Kerr Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Butcher Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/25 samples taken at 4ABHB008.63.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Beaver Pond Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L75R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.03 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 7.41

LATITUDE: 36.59570 **LONGITUDE:** -78.62080

DOWNSTREAM LIMIT:

DESCRIPTION: Kerr Reservoir

RIVER MILE: 2.38

LATITUDE: 36.59010 **LONGITUDE:** -78.56930

Beaver Pond Creek from its headwaters to Kerr Reservoir

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Beaver Pond Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 2/9 samples taken at 4ABPC003.14.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Little Buffalo Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L76R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.56 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.56

LATITUDE: 36.60722 **LONGITUDE:** -78.62944

DOWNSTREAM LIMIT:

DESCRIPTION: Buffalo Creek/Kerr Reservoir

RIVER MILE: 0.00

LATITUDE: 36.63611 **LONGITUDE:** -78.63139

Little Buffalo Creek from its headwaters to Buffalo Creek, an arm of Kerr Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Little Buffalo Creek is not supporting the recreation use due to excessive counts of E Coli and fecal coliform bacteria. Counts exceeded the E Coli instantaneous standard in 4/7 samples, as well as the fecal coliform instantaneous standard in 17/29 samples taken at 4ALFF001.85.

Both the Fecal Coliform standard (400cfu/100mL or 200cfu/100mL for two or more samples over a calendar month) and the E. coli standard (235cfu/100mL or 126cfu/100mL for two or more samples over a calendar month) apply during the transition betweeen the Fecal Coliform standard and the recently approved E coli standard. Once a dataset of 12 or more samples are collected for E coli or after June 30, 2008 whichever comes first, only the new standard will apply.

This segment is fully supporting for the aquatic life use, but has an oserved effect due to exceedances of the nutrient screening value. Total phosphorus exceeded the screening value in 11/28 samples taken at 4ALFF001.85.

IMPAIRMENT SOURCE: Unknown

Source is believed to be Newton Mobile Home Court. Additional monitoring will be performed to determine whether fecal coliform and phosphorus levels continue to violate water quality standards.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Little Bluestone Creek

HYDROLOGIC UNIT: 03010102

TMDL ID: VAC-L77R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.34 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Fork upstream of Route 696

RIVER MILE: 9.34

LATITUDE: 36.74720 **LONGITUDE:** -78.50830

DOWNSTREAM LIMIT:

DESCRIPTION: Kerr Reservoir

RIVER MILE: 0.00

LATITUDE: 36.69990 **LONGITUDE:** -78.57440

Fork upstream of Route 696 to Kerr Reservoir.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Little Blustone Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 4/26 samples taken at 4ALNE006.56.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Roanoke River/Lake Gaston

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L78R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.96 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: John H. Kerr Dam

RIVER MILE: 18.04

LATITUDE: 36.60030 **LONGITUDE:** -78.29833

DOWNSTREAM LIMIT:

DESCRIPTION: Route 1

RIVER MILE: 12.08

LATITUDE: 36.60795 **LONGITUDE:** -78.20903

Headwaters of Lake Gaston from the John H. Kerr Dam to the Smith Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

This segment of Roanoke River is not supporting the aquatic life use support goal based on water quality monitoring just downstream of the dam (4AROA018.04) and at the Route 1 bridge (4AROA012.08). At 4AROA018.04, 11 violations of the DO standard were recorded in 49 samples collected, and at 4AROA012.08, there were 6 recorded violations of the DO standard in 33 samples collected. A special study conducted in 1995 identified the Route I-85 bridge as the approximate downstream limit of the impairment.

IMPAIRMENT SOURCE: PS - Upstream Impoundment, Hypolimnetic Waters Release

The DO standard violations in this segment are seasonal, occurring only during summer months, and are attributed to the releases of hypolimnetic water releases through John H. Kerr Dam when the reservoir is stratified.

To correct the DO deficiencies in this segment, background DO levels need to be maintained at a minimum of 5.0 mg/l, which represents Virginia's water quality standard for average daily DO concentration.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Allen Creek, UT

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L78R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.92 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 0.92

LATITUDE: 36.62810 **LONGITUDE:** -78.25600

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence with Allen Creek

RIVER MILE: 0.00

LATITUDE: 36.61860 **LONGITUDE:** -78.26440

Entire tributary located just south of the intersection of Redlawn and Baskerville Roads

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of the Unnamed Tributary to Allen Creek is not supporting of the recreation use due to excessive counts of the instantaneous standard. The violation rate of 2/4 samples was observed during a special study sampling period at station 4AXUQ000.00.

IMPAIRMENT SOURCE: Non-Point Source

The source of fecal coliform is non-point sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Allen Creek

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L78R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.97 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Layton Creek Confluence

RIVER MILE: 12.92

LATITUDE: 36.69860 **LONGITUDE:** -78.33620

DOWNSTREAM LIMIT:

DESCRIPTION: Cox Creek Confluence

RIVER MILE: 3.95

LATITUDE: 36.62410 **LONGITUDE:** -78.29030

Allen Creek from Layton Creek downstream to Cox Creek

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Allen Creek is not supporting the recreation use due to excessive counts of Fecal Coliform. A violation rate of 6/25 samples was observed at the Antlers Road bridge (4AALN009.12).

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Cox Creek

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L78R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Route 58 crossing

RIVER MILE: 4.19

LATITUDE: 36.67120 **LONGITUDE:** -78.27310

DOWNSTREAM LIMIT:

DESCRIPTION: Allen Creek Confluence

RIVER MILE: 0.00

LATITUDE: 36.62390 **LONGITUDE:** -78.29000

Cox Creek from Route 58 downstream to its confluence with Allen Cree

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

This segment of Cox Creek is not supporting the Aquatic Life use goal due to violations of the minimum Dissoved Oxygen standard. A violation rate of 3/7 samples was observed at the station located on Redlawn Road (4ACOX000.38).

IMPAIRMENT SOURCE: Unknown

The source of the DO standard violations are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Roanoke River/Lake Gaston

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L79L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1379.57 - Acres

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Route 1

RIVER MILE: 12.08

LATITUDE: 36.60795 **LONGITUDE:** -78.20903

DOWNSTREAM LIMIT:

DESCRIPTION: Smith Creek Confluence

RIVER MILE: 7.40

LATITUDE: 36.57237 **LONGITUDE:** -78.15502

Roanoke River from Route 1 (backwaters of Lake Gaston) to its confluence with Smith Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

This segment of Roanoke River is not supporting the aquatic life use support goal based on water quality monitoring at the Route 1 bridge (4AROA012.08) and at the Route 85 bridge (4AROA008.66). At 4AROA012.08, 6 violations of the DO standard were recorded in 33 samples collected. Lake Gaston is stratified during July and August, the samples were split at station 4AROA008.66 dependent on what depth the thermocline appeared. There were 17 recorded violations of the DO standard in 25 samples collected above the thermocline and 5 recorded violations of the DO standard in 10 samples collected below the thermocline. A special study conducted in 1995 identified the Route I-85 bridge as the approximate downstream limit of the impairment.

IMPAIRMENT SOURCE: PS - Upstream Impoundment

The DO standard violations in this segment are seasonal, occurring only during summer months, and are attributed to the releases of hypolimnetic water releases through John H. Kerr Dam when the reservoir is stratified.

To correct the DO deficiencies in this segment, background DO levels need to be maintained at a minimum of 5.0 mg/l, which represents Virginia's water quality standard for average daily DO concentration.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Flat Creek

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L79R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.67 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Town of South Hill STP discharge

RIVER MILE: 8.67

LATITUDE: 36.69694 **LONGITUDE:** -78.13194

DOWNSTREAM LIMIT:

DESCRIPTION: Roanoke River (Lake Gaston)

RIVER MILE: 0.00

LATITUDE: 36.61750 **LONGITUDE:** -78.17750

Segment begins at the South Hill Regional Sewage Treatment Plant discharge, and extends downstream to the Roanoke River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

Biological monitoring of Flat Creek identified excessive solids deposits and an impaired benthic community downstream of the South Hill STP discharge. As a result, the segment is not supporting the aquatic life use. An improvement has been observed over the five year assessement cycle because of recent upgrades to the South Hill STP. The upgrades consisted of modern oxidation that performs nitrification and denitrafication, new secondary clarifiers, tertiary sand filtration and additional digester capacity.

The segment is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 10/43 samples at 4AFLT008.79.

In addition, there were 20 exceedances of the phosphorus screening value in 44 total samples at 4AFLT008.79.

IMPAIRMENT SOURCE: Unknown, PS - Municipal

The source of the benthic impairment are atttrributed to the South HIll STP and the source of the bacteria is considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Miles Creek

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L79R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.55 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lake Gordon

RIVER MILE: 5.55

LATITUDE: 36.68806 **LONGITUDE:** -78.21722

DOWNSTREAM LIMIT:

DESCRIPTION: Roanoke River

RIVER MILE: 0.00

LATITUDE: 36.62556 **LONGITUDE:** -78.20944

Miles Creek from Lake Gordon to the Roanoke River

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Miles Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/26 samples taken at 4AMES004.78.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Brunswick, Mecklenburg

STREAM NAME: Roanoke River/Lake Gaston

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L80L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5528.95 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: John H. Kerr Dam

RIVER MILE: 18.04

LATITUDE: 36.60030 **LONGITUDE:** -78.29833

DOWNSTREAM LIMIT:

DESCRIPTION: VA/NC State Line

RIVER MILE: 0.00

LATITUDE: 36.54539 **LONGITUDE:** -78.04863

All of Lake Gaston within Virginia.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: PCBs in Fish Tissue

A 1993 special study identified widespread PCB contamination in the Roanoke River Basin, including Lake Gaston within Virginia. Fish tissue studies conducted during 1999 and 2002 continue to show evidence of PCB contamination in the lake. As a result the lake is not supporting the fish consumption use.

IMPAIRMENT SOURCE: Unknown

The sources of the PCB contamination are considered unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Mecklenburg

STREAM NAME: Great Creek

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L80R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.91 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 9.91

LATITUDE: 36.67500 **LONGITUDE:** -78.07389

DOWNSTREAM LIMIT:

DESCRIPTION: Lake Gaston

RIVER MILE: 3.00

LATITUDE: 36.58722 **LONGITUDE:** -78.09306

Great Creek from its headwaters downstream to the pool of Lake Gaston.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Great Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/18 samples taken at 4AGRT003.82.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Brunswick

STREAM NAME: Poplar Creek

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L81R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.41 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Main Creek

RIVER MILE: 3.41

LATITUDE: 36.63056 **LONGITUDE:** -78.02778

DOWNSTREAM LIMIT:

DESCRIPTION: Lake Gaston

RIVER MILE: 0.00

LATITUDE: 36.58917 **LONGITUDE:** -78.03806

Poplar Creek from Main Creek to Lake Gaston

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Poplar Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 3/27 samples taken at 4APOB006.35.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Brunswick

STREAM NAME: Pea Hill Creek

HYDROLOGIC UNIT: 03010106

TMDL ID: VAC-L82R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.77 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 11.07

LATITUDE: 36.61056 **LONGITUDE:** -77.94639

DOWNSTREAM LIMIT:

DESCRIPTION: Lake Gaston

RIVER MILE: 6.30

LATITUDE: 36.58306 **LONGITUDE:** -77.89083

Pea Hill Creek from its headwaters downstream to Lake Gaston.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

This segment of Pea Hill Creek is not supporting the recreation use due to excessive counts of fecal coliform bacteria. Counts exceeded the instantaneous standard in 6/26 samples taken at 4APHC006.38.

IMPAIRMENT SOURCE: Unknown

The source of fecal coliform is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Montgomery

STREAM NAME: Roanoke River, South Fork

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L01R-01

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 12.65 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Elliott Cr.

RIVER MILE: 12.65

LATITUDE: 37.12723 **LONGITUDE:** -80.26614

DOWNSTREAM LIMIT:

DESCRIPTION: S.F. Roanoke R. confluence with N.F. Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.23734 **LONGITUDE:** -80.21402

The segment begins at the mouth of Elliott Creek and extends downstream to the confluence of the South and North Forks of the Roanoke River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Temperature

Recreational Use
Two stations on the S.F. Roanoke River, 4ARSF011.73 located on the Rt. 637 Bridge and 4ARSF002.20 above the old Green Hill industrial site near Rt. 11/460, find the recreational use is not supported.

4ARSF011.73 finds three of 12 fecal coliform bacteria samples exceed while 4ARSF002.20 finds three of 18 exceedances of the 400 cfu/100 ml WQS instantaneous criterion. 4ARSF011.73 excedances range from 600 to 3000 cfu/100 ml and the downstream station 4ARSF002.20 exceedances range from 600 to 5300 cfu/100 ml.

Aquatic Life Use
Upstream temperatures at 4ARSF011.73 exceed the WQS stockable trout water criterion of 21°C in two of 12 measurements and downstream at 4ARSF002.20 records two exceedances from 18 measurements. Exceedances at both stations are 22°C on the same dates 7/22/99 and 6/06/01. The waters do not support the aquatic life use (Category 5C). Low stream flows and drought conditions were observed during both 1999 and 2001.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban / Wildlife, Unknown

Recreational Use
Exact sources of the fecal coliform bacteria are not known but are believed to be related to agricultural activity, urbanization and possible wildlife contributions.

Aquatic Life Use
There are no known sources of heat in the upper portions of the South Fork. The only known source of heat is from natural solar radiation. Drought conditions for 1999 and 2001 did exist. Two VPDES permitted facilities are in the downstream portion of the segment but are not

believed to be contributing to the temperature excursions of the stockable trout water standard.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Montgomery

STREAM NAME: Roanoke River, North Fork

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.56 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Wilson Creek mouth on the N.F. Roanoke R.

RIVER MILE: 15.21

LATITUDE: 37.18750 **LONGITUDE:** -80.35236

DOWNSTREAM LIMIT:

DESCRIPTION: Unnamed Tributary in Ironto

RIVER MILE: 8.65

LATITUDE: 37.21639 **LONGITUDE:** -80.27680

The upper limit is located at the mouth of Wilson Cr. on the North Fork Roanoke River. The downstream segment end is at an unnamed tributary in the community of Ironto.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4ARNF015.09, located just downstream of the Rt. 603 crossing in Montgomery County, records nine of 21 samples exceeding the fecal coliform bacteria instantaneous criterion of 400 cfu/100 ml. The recreational use is not supported in this segment.

Observed Effect
A 1999 fish tissue collection at 4ARNF013.60 finds a 'Water of Concern' for the fish consumption use due to exceedance of the human health-risk carcinogenic Risk Based tissue screening value (TSV) of 0.072 parts per million (ppm) for arsenic (As). Two species exceed the TSV [Guidance Table 6(b)]. Fish tissue results reveal a Green Sunfish at 0.51 ppm, a White Sucker at 0.27 and a Golden Redhorse Sucker at 1.30 ppm.

IMPAIRMENT SOURCE: NPS - Urban / Agriculture / Wildlife

Recreational Use
The source of the impairment is believed to be nonpoint source pollution due to urban activities. There are some agricultural activities in this area as well. Woodlands offer the potential for wildlife contributions. This segment is downstream of the Wilson Creek segment that does not support the swimming use. Effects of Wilson Creek segment may contribute to the exceedances in the N.F. Roanoke R.

Fish Consumption Use
The source of the arsenic in fish tissue is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Montgomery

STREAM NAME: Wilson Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L02R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.91 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: East of Rt. 460, Off Rt. 723, Christiansburg.

RIVER MILE: 6.91

LATITUDE: 37.14194 **LONGITUDE:** -80.39083

DOWNSTREAM LIMIT:

DESCRIPTION: Wilson Creek mouth on N.F. Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.18778 **LONGITUDE:** -80.35222

The upper limit is just east of Rt. 460, off Rt. 723 near Christiansburg (Blacksburg Quad). The segment ends at the mouth of Wilson Creek on the North Fork of the Roanoke River just upstream of Rt. 603. The segment includes an unnamed tributary (1.65 mi.) that enters on the northern side of Wilson Creek. The segment spans the Blacksburg and Ironto Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Bacteria counts fail to meet the requirements for the use. The assessment is based on data from station 4AWLN000.40 at the Rt. 603 Bridge. The segment expanded (1.65 miles) over the 1998 Impaired waters list in 2002 with the addition of an unnamed tributary entering Wilson Creek from the north. Fourteen of 27 samples exceed the fecal coliform bacteria instantaneous criterion of 400 cfu/100 ml. Exceeding values range from 700 to 5400 cfu/100 ml. Two of three Escherichia coli (E. coli) samples exceed the 235 cfu/100 ml instantaneous criterion. E. coli exceeding values are 350 and 800 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The source of the impairment is believed to be nonpoint source pollution due to primarily urban activities. The Wilson Creek drainage lies within the corridor between Christiansburg and Blacksburg that has seen a great deal of development.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Montgomery, Roanoke

STREAM NAME: Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L03R-01

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 3.63 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: N.F. / S.F. Roanoke R. confluence.

RIVER MILE: 226.98

LATITUDE: 37.23722 **LONGITUDE:** -80.21395

DOWNSTREAM LIMIT:

DESCRIPTION: Near Dixie Caverns

RIVER MILE: 223.35

LATITUDE: 37.25194 **LONGITUDE:** -80.17232

The upstream limit of this segment is located at the confluence of the North and South Forks of the Roanoke River. The segment ends at river mile 223.35 near Dixie Caverns at the end of the WQS PWS designation.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2004), Temperature

Recreational Use
Station 4AROA227.42 is included in the 1999 Federal Consent Decree as a 1998 Attachment B station for fecal coliform bacteria. The Attachment B station represents approximately 9.25 miles from the confluence of the North and South Forks of the Roanoke River downstream to an unnamed tributary at Dixie Caverns (VAW-L03R-02). The station was not listed in 2002 as exceedances of the former WQS 1000 cfu/100 ml instantaneous criterion are 5 percent. Three of 59 samples exceed the former instantaneous criterion. The 2004 Integrated Report finds an 11.8 percent exceedance rate.

Station 4AROA227.42, located at the Rt. 773 Bridge in Lafayette, records seven of 59 fecal coliform bacteria samples exceed the current 400 cfu/100ml instantaneous criterion (Category 5A). Exceeding values range from 500 cfu/100 ml to 4300.

Aquatic Life Use
Temperature also exceeds the stockable trout water criterion of 21°C in nine of 59 measurements occuring mostly in the summer months (Category 5C). Exceedances range from 22 to 27°C. This impairment is a 2004 addition to the 2002 temperature impairment found downstream.

IMPAIRMENT SOURCE: NPS - Urban, Unkown

Recreational Use
Fecal coliform bacteria exceedances are believed to the result of nonpoint source pollution from urbanization and some agricultural contributions. Wildlife may contribute to the overall impairment.

Aquatic Life Use
The exact source(s) contributing to the temperature impairment is not known but is believed to be natural due to solar radiation.

Fact Sheets for Category 5 Waters

Exceedances occur upstream of any heat sources. There are no known significant sources of heat contributing to impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke, Salem

STREAM NAME: Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L03R-02

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 11.68 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Near Dixie Caverns

RIVER MILE: 223.35

LATITUDE: 37.25194 **LONGITUDE:** -80.17232

DOWNSTREAM LIMIT:

DESCRIPTION: Rt. 11 Bridge nearest Rt. 419.

RIVER MILE: 211.67

LATITUDE: 37.27111 **LONGITUDE:** -80.03884

The segment begins near Dixie Caverns (Glenvar Quad) extending downstream to the Rt. 11 Bridge nearest Rt. 419 crossing the Roanoke at river mile 211.67 (Salem Quad).

Note: Former 2002 State TMDL ID VAW-L03R-01N is now combined with VAW-L03R-02 in 2004.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Temperature (2004), Fish Tissue - PCBs

Recreational Use
Station 4AROA227.42 is included in the 1999 Federal Consent Decree as a 1998 Attachment B station for fecal coliform bacteria. The Attachment B station represents approximately 9.25 miles from the confluence of the North and South Forks of the Roanoke River (VAW-L03R-01) downstream to an unnamed tributary at Dixie Caverns. The station was not listed in 2002 as exceedances of the former WQS 1000 cfu/100 ml instantaneous criterion are 5 percent. Three of 59 samples exceeded the former instantaneous criterion.

The recreational use is impaired based on bacteria samples from two stations. Station 4AROA227.42, located at the Rt. 773 Bridge in Lafayette, records seven of 59 fecal coliform bacteria samples exceed the 400 cfu/100ml instantaneous criterion in 2004 (Category 5A). Exceeding values range from 500 cfu/100 ml to 4300. Located on the Rt. 11 Bridge below Eaton station 4AROA212.17 finds eight of 41 fecal coliform bacteria samples exceed the instantaneous criterion. Exceeding values range from 500 cfu/100 ml to 4100.

Aquatic Life Use
Station 4AROA212.17 finds temperature exceeds the stockable trout water criterion of 21°C in eight of 42 measurements, most in the summer (Category 5C). Exceedances range from 22 to 25°C.

Biological collections at 4AROA212.17 find the benthic community slightly impaired resulting in an 'Observed Effect'. The slightly impaired benthic community extends from the mouth of Big Bear Branch downstream to the mouth of Mason Creek on the Roanoke River. This Fact Sheet describes a 6.06 mile portion of the overall 7.26 mile extent for this Fully Supporting 'Water of Concern'.

Rapid Biological Protocol II method produces 5 year scores of 61.19 in the Spring and 58.26 in the Fall. There are fewer taxa and fewer sensitive taxa at this site compared to the reference site (4AROA224.54). The modified family biotic index has consistently indicated a

slight-to-moderate impact possibly from organic pollution. Less-than-normal rainfall in this part of the state may have affected assessments during the last several years. The benthic community at this site appears to be more sensitive to drought conditions than the reference site.

Fish consumption Use
This fact sheet describes an 11.68 mile portion of the DEQ human health-risk carcinogenic WQS tissue value (TV) impairment for polychlorinated biphenyls (PCBs).The waters do not support the fish consumption use due to exceedance of the WQS TV of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) and is categorized 5A.

Station 4AROA212.99, located on Rt. 612 Bridge at Wabum, finds no exceedances of the WQS TV or tissue screening values (TSVs) based on 1999 fish tissue collections from a total of 28 fish and three species. No exceedances of the WQS TV are observed from 2002 fish tissue collections at Station 4AROA216.33 (Salem, Below Koppers downstream of Rts. 760 & 639 junction) from 14 total fish and representing three species.

Station 4AROA216.33 1999 collections however find PCBs in excess of the WQS TV of 54 ppb in carp at 192 ppb from a total of 39 fish and five species. The 2002 fish consumption impairment remains due to exceedances of the DEQ WQS TV for PCBs, previous 2002 Listing and downstream stations exhibiting excursions of PCBs in tissue [Table 6(a); 2004 Assessment Guidance].

The total riverine DEQ fish consumption use impairment is 28.35 miles extending from Dixie Caverns in VAW-L03R (37°15'07" / 080°10'20") on downstream through watershed VAW-L04R into Smith Mountain Lake VAW-L12L (37°13'57" / 079°50'51") approximately 1 mile below the Hales Ford Bridge. The total mileage for the DEQ fish consumption impairment is 50.01 miles or 28.35 Roanoke River miles and 3249 lake acres.

There is no Virginia Department of Health (VDH) fish consumption advisory in this portion of the Roanoke River. Fish tissue concentrations are below the VDH 600 ppb level of concern. A VDH Fish Consumption Advisory located downstream is encompassed by the overall DEQ WQS TV impairment. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us and the VDH Advisory at http://www.vdh.state.va.us

IMPAIRMENT SOURCE: NPS - Urban, Unkown, Unknown

Recreational Use
Nonpoint source pollution is the believed source of the fecal coliform bacteria impairment. Possible contibuting sources include primarily urbanization and some agricultural activity.

Aquatic Life Use
The exact source(s) contributing to the temperature impairment is not known but is believed due to natural solar radiation. Exceedances occur upstream of any significant heat sources. There are no known sources of heat contributing to impairment.

Fish Consumption Use
The exact sources of the PCB contamination are unknown.

PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment.

The Virginia Department of Health (VDH) action level for PCBs is 600 ppb in fish tissue.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Salem

STREAM NAME: Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L03R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.2 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Rt. 11 Bridge nearest Rt. 419.

RIVER MILE: 211.67

LATITUDE: 37.27111 **LONGITUDE:** -80.03884

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Mason Cr. on the Roanoke R.

RIVER MILE: 210.47

LATITUDE: 37.26944 **LONGITUDE:** -80.02428

The segment begins at the Rt. 11 Bridge nearest Rt. 419 crossing the Roanoke River extending downstream to the Mason Creek mouth on the Roanoke at river mile 210.47 (Salem Quad).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Fish Tissue - PCBs

Recreational Use
The recreational use is impaired based on bacteria samples from two stations. Station 4AROA227.42, located at the Rt. 773 Bridge in Lafayette, records seven of 59 fecal coliform bacteria samples exceed the 400 cfu/100ml instantaneous criterion (Category 5A). Exceeding values range from 500 cfu/100 ml to 4300. Located on the Rt. 11 Bridge below Eaton station 4AROA212.17 finds eight of 41 fecal coliform bacteria samples exceed the instantaneous criterion. Exceeding values range from 500 cfu/100 ml to 4100.

Fish consumption Use
This fact sheet describes a 1.20 mile portion of the DEQ WQS tissue value (TV) impairment for polychlorinated biphenyls (PCBs). The waters do not support the fish consumption use due to exceedance of the DEQ human health-risk carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs).

Station 4AROA212.99, located on Rt. 612 Bridge at Wabum, finds no exceedances of the WQS TV [Table 6(a), 2004 Assessment Guidance] or tissue screening values (TSVs) [Table 6(b), 2004 Assessment Guidance] based on 1999 fish tissue collections from a total of 28 fish representing three species. Station 4AROA216.33 (Salem, Below Koppers downstream of Rts. 760 & 639 junction) 2002 fish tissue collections find no exceedances either from 14 total fish and three species.

Station 4AROA216.33 1999 collections however find PCBs in excess of the WQS TV of 54 ppb in carp at 192 ppb from a total collection of 39 fish representing five species. The 2002 fish consumption impairment remains due to exceedances of the DEQ WQS TV for PCBs and the previous 2002 Listing from downstream stations exhibiting excursions of PCBs in fish tissue [Table 6(a), 2004 Assessment Guidance].

The total riverine DEQ fish consumption use impairment is 28.35 miles extending from Dixie Caverns in VAW-L03R (37°15'07" / 080°10'20") on downstream through watershed VAW-L04R into Smith Mountain Lake VAW-L12L (37°13'57" / 079°50'51") ~1 mile below the Hales Ford Bridge. The total mileage for the DEQ fish consumption impairment is 50.01 miles or 28.35 Roanoke River miles and 3249 lake acres.

Fact Sheets for Category 5 Waters

There is no Virginia Department of Health (VDH) fish consumption advisory in this portion of the Roanoke River as described by this Fact Sheet. Fish tissue concentrations are below the VDH 600 ppb level of concern. A VDH Fish Consumption Advisory located downstream is encompassed by the overall DEQ TV impairment. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us and the VDH Advisory at http://www.vdh.state.va.us

Aquatic Life Use
Biological collections at 4AROA212.17 find the benthic community slightly impaired resulting in an 'Observed Effect'. The slightly impaired benthic community extends from the mouth of Big Bear Branch downstream to the mouth of Mason Creek on the Roanoke River. This Fact Sheet describes a 1.20 mile portion of the overall 7.26 mile extent for this Fully Supporting 'Water of Concern'.

Rapid Biological Protocol II method produces 5 year scores of 61.19 in the Spring and 58.26 in the Fall. There are fewer taxa and fewer sensitive taxa at this site compared to the reference site. The modified family biotic index has consistently indicated a slight-to-moderate impact from organic pollution. Less-than-normal rainfall in this part of the state may have affected assessments during the last several years. The benthic community at this site appears to be more sensitive to drought conditions than the reference site (4AROA224.54).

IMPAIRMENT SOURCE: NPS - Urban, Unknown

Recreational Use
The source of the fecal coliform bacteria is believed to be from nonpoint source runoff in the urban area. The Roanoke Regional WPCP reached hydraulic capacity in 1985. At that point it began improving the collection system that transports wastewater to the plant. A new interceptor along the Roanoke River is complete with other improvements to the system along Tinker Creek also completed.

Fish Consumption Use
The exact sources of the PCB contamination are unknown.

The Virginia Department of Health (VDH) action level for PCBs is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment.

Aquatic Life Use - Water of Concern
The exact source for the slightly impaired benthic community is not known but is believed to be related to urban nonpoint sources and drought conditions that existed during the 2004 assessment data window.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke City, Salem

STREAM NAME: Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.87 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Mason Cr. on the Roanoke R.

RIVER MILE: 210.47

LATITUDE: 37.26944 **LONGITUDE:** -80.02428

DOWNSTREAM LIMIT:

DESCRIPTION: Roanoke Regional STP outfall on the Roanoke R.

RIVER MILE: 200.60

LATITUDE: 37.26667 **LONGITUDE:** -79.91083

The segment begins at the Mason Creek mouth on the Roanoke (river mile 210.47 on the Salem Quad) and extends downstream to the Roanoke Regional Water Pollution Control Plant at river mile 200.60 (Roanoke Quad).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (1996), General Standard (Benthic 1996), Fish Tissue - PCBs (2002)

Monitoring station locations are: 4AROA212.17 (Riverside Drive - Rt. 11 Bridge nearest Rt. 419), 4AROA206.80 (Wasena Park near Rt. 11/460 Bridge), 4AROA206.27 (Wasena Park), 4AROA206.03 (Smith Park), 4AROA205.67 (Riversedge Park - Below Franklin Rd. Br.) and 4AROA202.20 (14th Street Bridge - above STP).

Recreational Use
The basis of the recreational use impairment are data collected from two sites along the Roanoke River. Station 4AROA212.17 records eight exceedances of the fecal coliform bacteria criterion of 400 cfu/100 ml from 41 samples. Exceeding values range from 500 cfu/100 ml to 4100. Seventeen of 58 samples exceed the criterion at station 4AROA202.20 with exceeding values ranging from 500 to >8000 cfu/100 ml.

Aquatic Life Use
The aquatic life use is not supported based on biological monitoring at four sites 4AROA206.27, 4AROA206.03, 4AROA205.67 and 4AROA202.20. Each site reports the benthic community as moderately impaired.

Station 4AROA202.20 (five surveys) finds in a fall 2000 survey, the dominant family (40% of total individuals) are the pollution tolerant midge larvae, family Chironomidae. Less than 4% of all individuals collected were mayflies and approximately 50% of stream substrate was covered with heavy growths of filamentous algae. Stations 4AROA205.67 and 4AROA206.03 both report moderate impairment from a total of three surveys. Five surveys at 4AROA206.27 also find moderate impairment. The WQS General Standard (Benthic) is contravened for 9.87 miles in this segment based on these data. The entire General Standard (Benthic) impairment extends from the mouth of Mason Creek (VAW-L03R) downstream to the backwaters of the Niagara Impoundment (VAW-L04R), a total of 11.33 miles.

Fish Consumption Use
This fact sheet describes a riverine portion (9.87 miles) of the fish consumption use impairment (28.35 miles). The fish consumption use is

impaired due to exceedance of the DEQ human health-risk carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs).

Station 4AROA206.80 finds a PCB WQS TV exceedance from 1999 fish tissue collections in Rock Bass at 130 ppb. These results are based on 32 total fish representing three species. Impairment is due to proximity of PCB tissue exceedances both up and downstream from this location [Table 6(a), 2004 Assessment Guidance]. The 2002 Fish Consumption impairment remains.

The overall DEQ impairment extends from Dixie Caverns in VAW-L03R (37°15'07" / 080°10'20") on downstream through watershed VAW-L04R into Smith Mountain Lake VAW-L12L (37°13'57" / 079°50'51") approximately one mile below the Hales Ford Bridge. The total mileage for the DEQ fish consumption impairment is 50.01 miles or 28.35 Roanoke River miles and 3249 lake acres.

There is no Virginia Department of Health (VDH) fish consumption advisory in this portion of the Roanoke River as described by this Fact Sheet. Fish tissue concentrations are below the VDH 600 ppb level of concern. A VDH Fish Consumption Advisory located downstream is encompassed by the overall DEQ WQS TV impairment. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us and the VDH Advisory at http://www.vdh.state.va.us

IMPAIRMENT SOURCE: NPS - Urban, Natural / NPS - Urban, Unknown

Recreational Use
The source of the fecal coliform bacteria is believed to be a combination of nonpoint source runoff in the urban area and sanitary overflows. The Roanoke Regional WPCP reached hydraulic capacity in 1985. At that point it began improving the collection system that transports wastewater to the plant. A new interceptor along the Roanoke River is complete with other improvements to the system along Tinker Creek also completed.

Aquatic Life Use
Benthic impairments are believed due to urban nonpoint source runoff and sedimentation as a result of interceptor replacement along the Roanoke River.

Fish Consumption Use
The exact sources of the PCB contamination are unknown.

The Virginia Department of Health (VDH) action level for PCBs is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke, Roanoke City

STREAM NAME: Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L04R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.24 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Roanoke R. at the Roanoke Regional STP outfall

RIVER MILE: 200.60

LATITUDE: 37.26667 **LONGITUDE:** -79.91083

DOWNSTREAM LIMIT:

DESCRIPTION: Niagara Dam

RIVER MILE: 198.36

LATITUDE: 37.25448 **LONGITUDE:** -79.87551

The upper limit of the segment is the Roanoke Regional STP (river mile 200.60 outfall extending downstream to the Niagara Dam. The entire segment is on the Roanoke Quad.

Note: The segment has been adjusted from the 2002 segment (1.46 miles) by including the impounded waters of Niagara Dam. The General Standard (Benthic) ends at the backwaters of the impoundment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (1996), General Standard (Benthic 1996) - 1.46 mi., Fish Tissue - PCBs (2002)

Recreational Use
The recreational use is impaired based on fecal coliform bacteria data from two sites. Seventeen of 41 samples exceed the 400 cfu/100 ml fecal coliform bacteria criterion at station 4AROA202.20 (14th Street Bridge - above Regional STP). A downstream station 4AROA196.05 at McVeigh Ford located in Watershed (VAW-L12L) records fecal coliform bacteria exceedances in four of 28 samples. Tributary streams to this segment also find the recreational use impaired and are described in separate Fact Sheets for Watersheds VAW-L05R and VAW-L06R.

Aquatic Life Use
The aquatic life use is not supported for 1.46 miles; from the Roanoke Regional STP outfall downstream to the backwaters of the Niagara Impoundment (37°15'32" / 79°53'14"). The impairment is based on biological monitoring at three sites 4AROA202.20 (14th Street Bridge - above the Roanoke Regional STP), 4AROA205.67 (Rivers Edge Park below Franklin Rd. Br.), 4AROA206.03 (Smith Park) and 4AROA206.27 (Wasena Park). Each site reports the benthic community as moderately impaired.

Station 4AROA202.20 (five surveys) finds in a fall 2000 survey, the dominant family (40% of total individuals) are the pollution tolerant midge larvae, family Chironomidae. Less than 4% of all individuals collected were mayflies and approximately 50% of stream substrate was covered with heavy growths of filamentous algae. Stations 4AROA205.67 and 4AROA206.03 both report moderate impairment from a total of three surveys. Five surveys at 4AROA206.27 also find moderate impairment. The WQS General Standard (Benthic) is contravened for 9.87 miles in this segment based on these data. The entire General Standard (Benthic) impairment extends from the mouth of Mason Creek (VAW-L03R) downstream to the backwaters of the Niagara Impoundment (VAW-L04R), a total of 11.33 miles.

Fact Sheets for Category 5 Waters

Stations 4AROA199.78 and 199.60 located in or near the impounded waters of Niagara Dam find 'Observed Effects' due to excursions of the Consensus Based Probable Effects Concentraions (PEC) screening values (SV) [MacDonald et al., 2000] causing these waters to be a Water of Concern.

Station 4AROA199.78 finds in a 2002 sediment collection excursions for:
Chlorodane SV of 17.6 at 21 parts per billion (ppb),
Fluoranthene SV of 2230 at 2306 ppb,
Pyrene SV of 1520 at 1912 ppb and
Chrysene SV of 1290 at 1594 ppb.

Station 4AROA199.60 records from a 1999 sediment collection excursions for:
Silver (Ag) SV of 2.6 parts per million (ppm) at 2.8 ppm,
Chlorodane SV of 17.6 ppb at 27,
Fluoranthene SV of 2230 ppb at 2659 and
Pyrene SV of 1520 ppb at 2197.

Neither station records excursions of the PEC PCB SV of 676 ppb.

Fish Consumption Use
This fact sheet describes a riverine portion (2.24 miles, including Niagara impoundment- 0.78 miles) of the overall DEQ non-supporting fish consumption use impairment of 28.35 miles. The fish consumption use is not supported based on fish tissue exceedances of the DEQ human health-risk based carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs) [Table 6(a), 2004 Assessment Guidance]. Stations 4AROA199.78 (Impounded Niagara waters), 4AROA199.60 (Above Niagara Dam), and a downstream station 4AROA196.05 (McVeigh Ford) in watershed VAW-L12L record values in excess of the WQS PCB TV.

4AROA199.78 2002 fish tissue collections find two species exceed WQS PCB TV of 54 ppb. Golden Redhorse Suckers (two lengths-10 analyzed) at 63 and 110 ppb and four Carp at 163, 169, 226 and 439 (four lengths-13 analyzed) from a total of 36 fish representing 4 species.

Station 4AROA199.60 reports from a 1999 total collection of 23 fish representing four species PCB values in excess of the WQS PCB TV for three species. They are: Largemouth Bass at 272, Redhorse Sucker at 101, and Carp at 489 ppb. Downstream station 4AROA196.05 records from a 1999 collection of 40 fish representing five species values in excess of the fish tissue PCB TV for four species: Largemouth Bass at 73.7, Carp at 124, Gizzard Shad at 386 and Redhorse Sucker at 89.9 ppb.

2002 collections at Station 4AROA196.05 find from a total of 41 fish representing six species exceedances of the PCB WQS TV of 54 ppb for four species. They are: Largemouth Bass at 71, three Flathead Catfish at 1267, 1446 and 1117, a Gizzard Shad at 229 and two Golden Redhorse Suckers at 67 and 74 ppb each.

The entire DEQ impairment extends from near Dixie Caverns - VAW-L03R (37°15'07" / 080°10'20") on downstream through watershed VAW-L04R into Smith Mountain Lake VAW-L12L (37°13'57" / 079°50'51") approximately one mile below the Hales Ford Bridge. The total mileage for the DEQ fish consumption impairment is 50.01 miles or 28.35 Roanoke River miles and 3249 lake acres.

There is no Virginia Department of Health (VDH) fish consumption advisory in this portion of the Roanoke River as described by this Fact Sheet. The advisory begins at Niagara Dam and extends approximately 9.5 miles downstream into Smith Mountain Lake (Buoy R78). The VDH Fish Consumption Advisory is encompassed by the overall DEQ WQS TV fish consumption impairment. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us and the VDH Advisory at http://www.vdh.state.va.us

IMPAIRMENT SOURCE: NPS - Urban, NPS - Urban, Unknown

Recreational Use
The source of the fecal coliform bacteria is believed to be a combination of nonpoint source runoff in the urban area and sanitary sewer overflows. The Roanoke Regional WPCP reached hydraulic capacity in 1985. At that point it began improving the collection system that transports wastewater to the plant. A new interceptor along the Roanoke River is complete with other improvements to the system along Tinker Creek also completed.

Aquatic Life Use
Benthic impairments are believed due to urban nonpoint source runoff and sedimentation as a result of interceptor replacement along the Roanoke River.

Fish Consumption Use
The exact sources of the PCB contamination are unknown.

The Virginia Department of Health (VDH) action level for PCBs is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford, Roanoke

STREAM NAME: Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L04R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.35 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Niagara Dam

RIVER MILE: 198.36

LATITUDE: 37.25448 **LONGITUDE:** -79.87551

DOWNSTREAM LIMIT:

DESCRIPTION: Back Cr. mouth on the Roanoke R.

RIVER MILE: 195.01

LATITUDE: 37.22528 **LONGITUDE:** -79.84753

The upper limit of the segment is the Niagara Dam extending downstream to the confluence of Back Creek on the Roanoke River (river mile 195.00).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Fish Tissue - PCBs (2002) - VDH Advisory 2003

Recreational Use
The recreational use is impaired based on fecal coliform bacteria data from two sites. Seventeen of 41 samples exceed the 400 cfu/100 ml fecal coliform bacteria criterion at station 4AROA202.20 (14th Street Bridge - above Regional STP). A downstream station 4AROA196.05 at McVeigh Ford located in Watershed (VAW-L12L) records fecal coliform bacteria exceedances in four of 28 samples. Tributary streams to this segment also find the recreational use impaired and are described in separate Fact Sheets for Watersheds VAW-L05R and VAW-L06R.

Fish Consumption Use
The Virginia Department of Health (VDH) issued a Fish Consumption Advisory on October 20, 2003. The advisory states to eat no more than one eight-ounce meal per month of flathead catfish from the advisory area (Niagara Dam to Buoy R78 in Smith Mountain Lake). These fish can travel far distances. It is also advisable that people limit consumption of flathead catfish caught from the entire lake. 2002 fish tissue collections are the basis for the advisory. Information on the VDH Flathead Catfish Advisory is available at http://www.vdh.state.va.us.

The entire DEQ fish tissue impairment extends from near Dixie Caverns - VAW-L03R (37°15'07" / 080°10'20") on downstream through watershed VAW-L04R into Smith Mountain Lake VAW-L12L (37°13'57" / 079°50'51") approximately two miles below the Hales Ford Bridge. The total mileage for the DEQ fish consumption impairment is 50.01 miles or 28.35 Roanoke River miles and 3249 lake acres.

This fact sheet describes the riverine portion (3.35 miles) within the VDH advisory area of the overall DEQ nonsupporting fish consumption use impairment of 28.35 miles. The fish consumption use is not supported based on fish tissue exceedances of the DEQ human health-risk based carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) for polychlorinated biphenyls (PCBs). Upstream station 4AROA199.60 (Above Niagara Dam), and downstream station 4AROA196.05 (McVeigh Ford) in watershed VAW-L12L record values in excess of the DEQ WQS TV [Table 6(a), 2004 Assessment Guidance]. The 2002 fish consumption impairment remains.

Fact Sheets for Category 5 Waters

Station 4AROA199.60 reports from a 1999 total collection of 23 fish representing four species values in excess of the WQS TV for three species. They are: Largemouth Bass at 272, Redhorse Sucker at 101, and Carp at 489 ppb.

Station 4AROA196.05 records from a 1999 total of 40 fish representing five species tissue values in excess of the WQS PCB TV for four species: Largemouth Bass at 73.7, Carp at 124, Gizzard Shad at 386 and Redhorse Sucker at 89.9 ppb.

2002 collections at Station 4AROA196.05 find from a total of 41 fish representing six species exceedances of the WQS PCB TV of 54 ppb for four species. They are: Largemouth Bass at 71, three Flathead Catfish at 1117, 1267, and 1446, Gizzard Shad at 229 and 2 Golden Redhorse Suckers at 67 and 74 ppb each. Flathead Catfish tissue values are above the VDH 600 ppb level of concern.

The VDH Flathead Catfish Consumption Advisory is encompassed by the overall DEQ WQS TV fish consumption use impairment. The VDH Advisory extends from Niagara Dam downstream to Buoy R78 in Smith Mountain Lake incorporating 3.35 Roanoke River miles and approximately 378 lake acres.

Information on the DEQ fish tissue sampling program can be viewed at http://www.deq.state.va.us.

IMPAIRMENT SOURCE: NPS - Urban, Unknown

Recreational Use
The source of the fecal coliform bacteria is believed to be from nonpoint source runoff in the urban area and sanitary sewer overflows. The Roanoke Regional WPCP reached hydraulic capacity in 1985. At that point it began improving the collection system that transports wastewater to the plant. A new interceptor along the Roanoke River is complete with other improvements to the system along Tinker Creek also completed.

Aquatic Life Use
Benthic impairments are believed due to urban nonpoint source runoff and sedimentation as a result of interceptor replacement along the Roanoke River.

Fish Consumption Use
The exact sources of the PCB and chlorodane contamination are unknown.

The Virginia Department of Health (VDH) action level for PCBs is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke, Roanoke City

STREAM NAME: Ore Branch

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L04R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.42 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Headwaters in Hunting Hills.

RIVER MILE: 2.42

LATITUDE: 37.21750 **LONGITUDE:** -79.96667

DOWNSTREAM LIMIT:

DESCRIPTION: Ore Br. mouth on Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.25528 **LONGITUDE:** -79.95056

The segment extends from its headwaters downstream to the mouth of Ore Branch on the Roanoke River. The segment spans the Garden City and Roanoke Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4AORE000.19 located on Sherwood Avenue finds three of six samples exceeding the instantaneous criterion of 400 cfu/100 ml for fecal coliform bacteria. Exceeding values range from 500 cfu/100 ml to 3200. The recreational use is not supported.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The source of the impairment is believed to be urban nonpoint source pollution and possible interceptor overflows.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke, Salem

STREAM NAME: Mason Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L04R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.61 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Near Bennet Springs community.

RIVER MILE: 7.61

LATITUDE: 37.36449 **LONGITUDE:** -80.05132

DOWNSTREAM LIMIT:

DESCRIPTION: Mason Cr. mouth on the Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.26944 **LONGITUDE:** -80.02444

The segment begins near the Mason Cove Community, river mile 7.61 and extends downstream to the mouth of Mason Creek on the Roanoke River. The entire segment is on the Salem Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The following are locations of the stations discussed below: 4AMSN000.60 (Near A.R. Burton Tech.), 4AMSN000.67 (Boulevard), 4AMSN002.36 (East Main St.-Rt. 460/11), 4AMSN003.36 (Garst St), 4AMSN006.92 (Carvin Cove Rd-Rt. 604), and 4AMSN012.62 (Bradshaw Rd-Rt. 622).

The recreational use remains impaired based on a 1997 special study (SS 975101). These data are outside the 2004 Assessment data window but are the basis for the 2002 303(d) Impaired Waters Listing. Each station found exceedances of the fecal coliform bacteria geometric mean criterion of 200 cfu/100 ml on Mason Creek. Stations 4AMSN000.67, 4AMSN003.36 and 4AMSN006.92 exceed in three of three calculations derived from the special study data. 4AMSN002.36 exceeds in two of three calculations. Station 4AMSN012.62 had no exceedances of the geometric mean criterion. The waters as described above therefore do not support the recreational use.

Aquatic Life Use
The segment is also a fully supporting Water of Concern. Station 4AMSN000.60 finds 'Observed Effects' from a 1999 exceedance of the sediment Consensus Based Probable Effects Concentrations (PEC) screening values (SV) [McDonald et al., 2000]. The sediment PEC SV exceedances are Fluoranthene (SV 2230) 3774 parts per billion (ppb), Pyrene (SV 1520) 3030 ppb, Benz(a)anthracene (SV 1050) 1086 ppb and Chrysene (SV 1290) 1543 ppb.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
Urban nonpoint source runoff is the primary source of the fecal coliform bacteria impairment.

Aquatic Life Use

Fact Sheets for Category 5 Waters

The source(s) of sediment organic exceedances are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke, Roanoke City

STREAM NAME: Peters Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L04R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.17 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Peters Cr. Headwaters

RIVER MILE: 7.17

LATITUDE: 37.34722 **LONGITUDE:** -80.03000

DOWNSTREAM LIMIT:

DESCRIPTION: Peters Cr. mouth on the Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.27306 **LONGITUDE:** -79.99278

The segment begins in the headwaters of Peters Creek (Salem Quad) extending downstream to the Peters Creek confluence on the Roanoke River (Roanoke Quad).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2002) - 7.17 mi., Fish Tissue - PCBs (2004) - 2.52 mi.

Recreational Use
Special study (SS 975101) station 4APEE001.04 found exceedances of the fecal coliform bacteria geometric mean criterion of 200 n/100 ml in two of three calculations derived from the special study data. These data are outside the 2004 Assessment data window but are the original basis for listing the use impaired in 2002.

Station 4APEE001.04 is located at the Shenandoah Avenue Bridge crossing Peters Creek. Six of 18 fecal coliform samples demonstrate the use remains impaired. All in excess of the 400 cfu/100 ml WQS instantaneous criterion. Exceeding values range from 500 cfu/100 ml to >8000. The recrational use is not supported for 7.17 miles based on the exceedance of the fecal coliform geometric mean criterion found in the 1997 special study data and the existing ambient instantaneous exceedances.

Fish Consumption Use
The use is not supported for 2.53 miles based on the proximity of the stations described below. The polychlorinated biphenyls (PCBs) fish comsumption impairment extends from Melrose Avenue (37°17'47" / 80°00'26") to the Peters Creek mouth on the Roanoke River (37°16'23" / 79°59'34"). The fish consumption impairment is a 2004 addition. All DEQ fish tissue data can be viewed at http://www.deq.state.va.us.

Station 4APEE001.04, located downstream of the Shenandoah Avenue Bridge, reveals 1999 fish tissue exceeds the DEQ human health-risk based carcinogenic screening value for PCBs based upon the WQS tissue value (TV) of 54 ppb in Rockbass at 68 ppb [Table 6(a), 2004 Assessment Guidance]. These results are based on a total of 28 fish representing 3 species.

4APEE000.49, located downstream of the Shenandoah Avenue Bridge also finds in a 2002 fish tissue collection an exceedance for PCB WQS TV in Rockbass at 57 ppb. These results are based on a total of 20 fish representing 3 species.

Aquatic Life Use

Fact Sheets for Category 5 Waters

A 2.53 mile portion of Peters Creek is also a 'Water of Concern' based on a 1999 ambient sediment collection. Analysis reveals exceedances of the Consenus Based Probable Effects Concentrations (PEC) [MacDonald et al. 2000] screening value (SV) for chlorodane (SV 17.6 ppb) at 30 ppb. And a WQS 1999 sediment collection finds PEC SV exceedances for:
Total Polyaromatic Hydrocarbons-PAH (SV 22800) at 26300 ppb
Fluoranthene (SV 2230) at 4903 ppb
Pyrene (SV 1520) at 3990 ppb
Benz(a)anthracene (SV 1050) at 1696 ppb
Chrysene (SV 1290) at 1543 ppb
Benzo(a)pyrene (SV 1450) at 2003 ppb
Dibenz(a,h)anthracene (SV 318) at 543 ppb.

IMPAIRMENT SOURCE: NPS - Urban, Unknown

Recreational Use
The source of the fecal coliform bacteria is believed to be urban nonpoint source pollution.

Fish Consumption Use
The exact source of the PCB contamination is unknown. The Virginia Department of Health (VDH) action level for PCBs is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment.

Aquatic Life Use
The source of sediment exceedances are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke, Roanoke City

STREAM NAME: Murray Run

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L04R-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.23 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Murray Run headwaters.

RIVER MILE: 3.23

LATITUDE: 37.22511 **LONGITUDE:** -79.99100

DOWNSTREAM LIMIT:

DESCRIPTION: Murray Run mouth on the Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.25776 **LONGITUDE:** -79.95692

The segment begins at the headwaters of Murray Run in Cave Spring and extends downstream to its mouth on the Roanoke River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4AMUR001.63 finds fecal coliform bacteria exceeds the 400 cfu/100 ml instantaneous criterion in two of six observations. Exceeding values are 600 and 8000+ cfu/100 ml. The recreational use is not supported.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
Urban nonpoint source is the believed source of the bacteria contamination.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Botetourt, Roanoke, Roanoke City

STREAM NAME: Tinker Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L05R-01

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 19.38 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Tinker Cr. headwaters off Rt. 779

RIVER MILE: 19.38

LATITUDE: 37.44778 **LONGITUDE:** -79.97250

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Tinker Cr. on the Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.26639 **LONGITUDE:** -79.90500

The upper limit is off Rt. 779 near Mt. Union (Daleville Quad) in the headwaters of Tinker Creek. The downstream limit is at the confluence of Tinker Creek with the Roanoke River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Temperature (1998) - 11.90 mi.

2004 assessed ambient, TMDL and fish tissue stations are 4ATKR015.88 (Off Rt. 779 at USGS Gage), 4ATKR009.30 (Rt. 11 Bridge near Hollins), 4ATKR000.69 (Rt. 24 Bridge in Vinton) and 4ATKR000.17 (Mouth of Tinker Creek). And citizen station 4ATKR-1-SOS (downstream of 4ATKR009.30 near Rt. 601). Station 4ATKR000.69 was overlisted by the US Environmental Protection Agency as an Attachment A overlist for temperature in 1998.

Recreational Use
The Bacteria TMDL Study for the Tinker Creek drainage is complete with anticipated U.S. Environmental Protection Agency (EPA) approval by spring 2004.

Current ambient collections at 4ATKR015.88 find fecal coliform bacteria in excess of the 400 cfu/100 ml instantaneous criterion in four of eight samples. Exceeding values range from 600 to greater than 16000 cfu/100 ml. Escherichia coli (E. coli) samples reveal one exceedance of the 235 cfu/100 ml instantaneous criterion from three samples but is insufficient to assess. The excessive value is greater than 800 cfu/100 ml.

Station 4ATKR009.30 reports two of nine fecal coliform samples exceed the 400 cfu/100 ml instantaneous criterion from ambient collections. Exceeding values are 1200 and 5400 cfu/100 ml. Escherichia coli (E. coli) samples reveal one exceedance of the 235 cfu/100 ml instantaneous criterion from three samples but is insufficient to assess. The single exceedance is greater than 800 cfu/100 ml.

Current ambient data at 4ATKR000.69 find fecal coliform bacteria instantaneous criterion exceedances in 25 of 59 observations. Exceeding values range from 500 cfu/100 ml to greater than 8000. Three of five E. coli samples exceed the instantaneous criterion of 235 cfu/100 ml. Maxima range from 260 to over 800 cfu/100 ml.

The extent of the bacteria impaired segment was originally defined by a 1997 special study (SS 975101). These data, although over 5

years old confirmed the continuation of 303(d) listing for fecal coliform bacteria. Each station exceeds the 200 cfu/100 ml geometric mean criterion in two of two calculations. They are:

4ATKR000.69 - Rt. 24 Bridge - Vinton
4ATKR001.80 - Rt. 460
4ATKR005.68 - Hollins Rd (Rt. 601)
4ATKR009.30 - Rt. 11 Bridge - near Hollins
4ATKR012.28 - Rt. 816, Botetourt Co.
4ATKR015.88 - Off Rt. 779 - at Gage
4ATKR016.64 - Off Rt. 779, Botetourt Co.

2002 exceedances of the former 1000 cfu/100 ml instantaneous fecal coliform bacteria criterion occured on more than one occasion at each station as well.

Aquatic Life Use
This segment was overlisted by the US EPA in 1998 for temperature (Attachment A-Overlist, 1999 Federal Consent Decree).

The segment is impaired for temperature for 11.90 miles from the Rt. 11 Bridge in Cloverdale (37°22'23" / 79°54'17") downstream to the mouth of Tinker Creek on the Roanoke River (37°15'59" / 79°54'16").

Temperature exceeds the stockable trout water criterion (21°C) in two of eight measurements in data from station 4ATKR009.30. Temperature exceedances are 23°C (6/04/2002) and 25 °C (8/08/2001). Station 4ATKR000.69 (Attachment A station) reports three of 56 meaurements exceed the Class V temperature criterion although Fully Supporting from assessed data. Exceedances occur on 7/22/1999 (23°C), 6/13/2000 (22°C) and 8/08/2001 (23°C). The segment remains impaired for temperature due to exceedances upstream (Category 5C).

An 11.90 mile portion of the segment is a 'Water of Concern' based on results from Citizen station 4ATKR-1-SOS and sediment analysis. The single Citizen 2001 Modified method survey reports 'Unacceptable' overall conditions or a high probability for adverse conditions to the benthic community. Sediment analysis reveals exceedances of the Consensus Based Probable Effects Concentrations (PEC) screening values (SV) [MacDonald et al.2000] for sediment.

Stations 4ATKR000.17 and 4ATKR000.69 report excursions of the sediment SVs in 1999 and 2002 WQS sediment collections respectively reported as Observed Effects. Sediment results from two samples at each station follow:

4ATKR000.69
1999 Sediment PEC SV exceedances for:
Metals parts per million (ppm)
TKR(A) Lead (Pb SV 128) at 244
TKR(A) Silver (Ag SV 2.6) at 2.7

Organics parts per billion (ppb)
TKR(A) Chlorodane (SV 17.6) at 84
TKR(B) Chlorodane at 18
TKR(A) DDT (SV 62.9) at 86
TKR(A) Total PCB (SV 676) at 941
TKR(A) Total PAH (SV 22800) at 34359
TKR(A) Acenaphthlyene (SV 121) at 185
TKR(A) Acenaphthene (SV 170) at 276
TKR(A) Phenanthrene (SV 1170) at 5072
TKR(A) Anthracene (SV 845) at 1594
TKR(A) Fluoranthene (SV 2230) at 5066
TKR(B) Fluoranthene at 3652
TKR(A) Pyrene (SV 1520) at 6062
TKR(B) Pyrene at 3101
TKR(A) Benz(a)anthracene (SV 1050) at 2464
TKR(B) Benz(a)anthracene at 1310
TKR(A) Chrysene (SV1290) at 1752
TKR(A) Benzo(a)pyrene (SV 1450) at 1763
TKR(A) Dibenz(a,h)anthracene (SV 318) at 327.

4ATKR000.17
2002 Sediment PEC SV exceedances for:
Metals (ppm)
Q34-1 Pb (SV 128) at 117
Q34-2 Pb (SV 128) at 127

Organics (ppb)
Q34-1 Chlorodane (SV 17.6) at 30
Q34-2 Chlorodane (SV 17.6) at 26
Q34-1 DDD (SV 28) at 33

Fact Sheets for Category 5 Waters

Q34-2 Benzo(a) Pyrene (SV 1450) at 1485.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban, Unknown

Recreational Use
The source of the fecal coliform bacteria impairment is believed to be urban nonpoint source pollution and possible episodic sanitary sewer overflows from the mouth of Tinker Creek upstream to approximately river mile 12.58 in Botetourt County (Daleville Quad) near the Roanoke Gas Company. Agricultural nonpoint source pollution is the believed source of impairment from approximately river mile 12.58 to the headwaters of Tinker Creek in Botetourt County.

Aquatic Life Use
The source of the temperature exceedances are believed to be from natural solar radiation. Exceedances are recorded in a largely urban drainage.

The source of the sediment metal and organics exceedances are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke, Roanoke City

STREAM NAME: Carvin Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L05R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.35 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream of I-81, at an unnamed tributary.

RIVER MILE: 5.35

LATITUDE: 37.36333 **LONGITUDE:** -79.95224

DOWNSTREAM LIMIT:

DESCRIPTION: Carvin Cr. mouth on Tinker Cr.

RIVER MILE: 0.00

LATITUDE: 37.31944 **LONGITUDE:** -79.92953

The segment begins just upstream of I-81 at the mouth of an unnamed tributary and extends downstream to the mouth of Carvin Creek on Tinker Creek. The entire segment is on the Roanoke Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The Bacteria TMDL Study for the Tinker Creek drainage is complete with anticipated U.S. Environmental Protection Agency (EPA) approval by spring 2004.

Station 4ACRV005.58 (Plantation Road -Rt. 115) finds fecal coliform bacteria exceeds in one sample at 600 cfu/100 ml. The exceedance is in excess of the instantanteous criterion of 400 cfu/100 ml.

Two of seven fecal coliform bacteria results exceed the current 400 cfu/100 ml instantaneous criterion at station 4ACRV001.88. Exceedances are 500 and 1100 cfu/100 ml. The station is located in Brookside Park off Rt. 623.

A 1997 special study station, 4ACRV000.28 (Plantation Rd Rt. 115), found exceedances of the 200 n/100 ml fecal coliform bacteria geometric mean criterion in two of two calculations derived from special study data (SS 975101). 1997 instantaneous criterion exceedances of the former 1000 cfu/100 ml occur in two of seven observations at 5400 and >8000 cfu/100 ml; an additional basis for the 2002 Impaired Waters Listing. The data for this station are older than 5 years.

IMPAIRMENT SOURCE: NPS - Urban / Residential

Recreational Use
Urban nonpoint source runoff is the believed source of the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Botetourt, Roanoke, Roanoke City

STREAM NAME: Glade Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L05R-03

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 12.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Glade Cr. headwaters in Botetourt County.

RIVER MILE: 12.61

LATITUDE: 37.39750 **LONGITUDE:** -79.81741

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Glade Cr. on Tinker Cr.

RIVER MILE: 0.00

LATITUDE: 37.27694 **LONGITUDE:** -79.90896

The segment begins in the Glade Creek headwaters on the Stewartsville Quad and extends downstream to its confluence with Tinker Creek at river mile 0.83. The segment ends on the Roanoke Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Temperature (2002) - 6.86 mi.

Recreational Use
The Bacteria TMDL Study for the Tinker Creek drainage is complete with anticipated U.S. Environmental Protection Agency (EPA) approval by spring 2004.

Station 4AGLA004.39 located on Layman Road (Rt. 606) finds fecal coliform bacteria exceed the 400 cfu/100 ml instantaneous criterion in eight of eight analyses. The exceedances range from 790 cfu/100 ml to greater than 16000. Two of two Escherichia coli (E. coli) observations exceed the instantaneous criterion of 235 cfu/100 ml at 240 and greater than 800.

4AGLA000.20 located on the Walnut Avenue Bridge in Vinton finds three of nine instantaneous criterion exceedances of 400 cfu/100 ml for fecal coliform bacteria from ambient collections. Exceedances range from 600 to 9200 cfu/100 ml. One of three E. coli samples exceed the 235 instantaneous criterion at greater than 800 cfu/100 ml.

Nonsupport of the recreational use is found from 1997 special study data (SS 975101). The data for these stations are older than 5 years with fecal coliform geometric mean exceedances (200 cfu/100 ml) at each station. Instantaneous criterion exceedances were the basis for the original 1998 5.75 mile Impaired Waters Listing. Special Study stations are:

4AGLA000.20 - Walnut Avenue Bridge - Vinton
4AGLA001.60 - Berkeley Rd (Rt. 653)
4AGLA004.39 - Layman Rd (Rt. 606)
4AGLA005.75 - Webster Rd (Rt. 738)
4AGLA008.10 - Rt. 723

Station 4AGLA008.10 has one of two calculations exceed the fecal coliform bacteria geometric mean.

Fact Sheets for Category 5 Waters

Aquatic Life Use
There are no current data available other than that from the originial 2002 Impaired Waters Temperature Listing. A 1997 special study station 4AGLA008.10, SS 975101, records three exceedances from seven measurements of the 20°C temperature criterion for this Class VI natural trout water. The temperature exceedances occur in the months of June (20.7°C), July (21.7°C) and August (21.8°C). The 6.86 mile segment lies in the upper portion of the Glade Creek mainstem. The segment extends from the mouth of Coyner Spring Branch (37°20'07" / 79°51'31" upstream to the Glade Creek headwaters (37°20'06" / 79°51'31"). The waters remain impaired for temperature (Category 5C).

A downstream portion of Glade Creek from the mouth of Cook Creek on down to the Glade Creek confluence with Tinker Creek is a 'Water of Concern' based on results of citizen benthic data. Two single survey stations indicate a high probability of adverse conditions to the benthic community and are reported as Observed Effects. They are 4AGLA-2-SOS- Bio and 4AGLA-SOS where 2002 Modified survey Methods are employed (Category 3C).

IMPAIRMENT SOURCE: NPS - Urban, Unknown

Recreational Use
The source of the fecal coliform bacteria impairment is believed to be primarily urban nonpoint source runoff and possible episodic sanitary sewer overflows.

Aquatic Life Use
The source of the temperature exceedances are believed to be naturally occurring from solar radiation.

The source of degraded benthic conditions observed in citizen data are unknown. However urban nonpoint source runoff is the likely source.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke, Roanoke City

STREAM NAME: Lick Run

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L05R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.51 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Near Shaffer's crossing rail yard.

RIVER MILE: 8.51

LATITUDE: 37.33536 **LONGITUDE:** -79.99689

DOWNSTREAM LIMIT:

DESCRIPTION: Mouth of Lick Run on Tinker Cr.

RIVER MILE: 0.00

LATITUDE: 37.27972 **LONGITUDE:** -79.91861

The upper limit is near Shaffers Crossing rail yard and headwaters from along I-581 on downstream to the mouth of Lick Run on Tinker Creek at river mile 1.41. The 1996, 1998 and 2002 Impaired Waters segment has expanded by 5.01 miles with the 2004 List. The entire segment is on the Roanoke Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The Bacteria TMDL Study for the Tinker Creek drainage is complete with anticipated U.S. Environmental Protection Agency (EPA) approval by spring 2004.

Station 4ALCK002.17 Located in Washington Park, Roanoke City, finds fecal coliform bacteria exceed the 400 cfu/100 ml instantaneous criterion in three of three samples. Exceeding values are 790, 1300 and 9200 cfu/100 ml. Two of three Escherichia coli (E. coli) samples exceed the 235 cfu/100 ml instantaneous criterion. Exceeding values are 420 and greater than 800 cfu/100 ml.

The impaired segment brackets an ambient and 1997 special study station at the Norfolk Southern parking lot bridge (4ALCK000.38). Fecal coliform bacteria exceed the instantaneous criterion of 400 cfu/100 ml in 19 of 33 samples based on ambient collections at 4ALCK000.38.

1997 special study data from 4ALCK000.38 (SS 975101) reveals exceedances of the fecal coliform bacteria geometric mean criterion of 200 cfu/100 ml. Two of two calculations exceed the criterion as derived from special study data. These data as well as instantaneous criterion exceedances are the basis for the 1996, 1998 and 2002 Impaired Waters Listing.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The source is urban nonpoint source runoff and possible episodic sanitary sewer overflows.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Botetourt

STREAM NAME: Laymantown Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L05R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.08 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream of Rt. 657 at pond.

RIVER MILE: 2.08

LATITUDE: 37.36194 **LONGITUDE:** -79.85048

DOWNSTREAM LIMIT:

DESCRIPTION: Laymantown Cr. mouth on Glade Cr.

RIVER MILE: 0.00

LATITUDE: 37.33667 **LONGITUDE:** -79.85654

The segment begins just upstream of the Rt. 657 Bridge at a small pond. The segment ends at the mouth of Laymantown Creek on Glade Creek. The entire segment is on the Stewartsville Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The Bacteria TMDL Study for the Tinker Creek drainage is complete with anticipated U.S. Environmental Protection Agency (EPA) approval by spring 2004.

No current data are available for this site within the 2004 Assessment data window. A 1997 special study station 4ALAY000.37 (Rt. 460 Bridge - near Blue Ridge) found exceedances of the fecal coliform bacteria geometric mean criterion of 200 cfu/100 ml in two of two calculations derived from the special study data (SS 975101). These data are older than five years. A total of seven samples were collected, none exceed the former instantaneous criterion of 1000 cfu/100 ml. Four of the seven samples would exceed the current 400 cfu/100 ml instantaneous criterion with exceedances ranging from 500 to 800 cfu/100 ml. The recreational use impairment remains.

IMPAIRMENT SOURCE: NPS - Urban / Residential

Recreational Use
Urban/Residential nonpoint source runoff is believed to be the source of the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Roanoke

STREAM NAME: Back Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.92 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Rt. 220 near Red Hill.

RIVER MILE: 9.92

LATITUDE: 37.18033 **LONGITUDE:** -79.93440

DOWNSTREAM LIMIT:

DESCRIPTION: Back Cr. mouth on the Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.22528 **LONGITUDE:** -79.84753

The Back creek segment begins just downstream of Rt. 220 near Red Hill and extends downstream to the mouth of Back Creek on the Roanoke River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4ABAA002.61, located on the Rt. 660 Bridge at the U.S. Geologial Survey gaging station, finds fecal coliform bacteria exceeds the 400 cfu/100 ml instantaneous criterion in three of 19 samples. Exceeding observations are 500, 2400 and 3700 cfu/100 ml.

IMPAIRMENT SOURCE: NPS- Agriculture / Urban / Wildlife

Recreational Use
Contributing sources are believed to include Agricultural activities, Urban nonpoint source and possible wildlife contributions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.58 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters-end of perennial section

RIVER MILE: 8.30

LATITUDE: 37.26917 **LONGITUDE:** -79.74972

DOWNSTREAM LIMIT:

DESCRIPTION: Beaverdam Cr. impounded waters

RIVER MILE: 2.72

LATITUDE: 37.21389 **LONGITUDE:** -79.74972

The segment begins at the upstream limit of perennial stream in the headwaters and extends downstream to the impounded waters of Beaverdam Creek at river mile 2.78. The segment spans the Stewartsville, Irving, Goodview and Hardy Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The 1999 Federal Consent Decree includes 4ABDA003.63 as a 1998 Attachment B station for fecal coliform bacteria. The station exceeded the former 1000 cfu/100 ml instantaneous criterion in 3 of 23 samples (13%) in 2002 and is 303(d) Listed.

Nonsupport of the recreational use continues at 4ABDA003.63 (Off Rt. 757) with exceedances of the current fecal coliform bacteria instantaneous criterion of 400 cfu/100 ml. Two of 18 observations exceed the criterion at 1400 and greater than 8000 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban

Recreational Use
The source of fecal coliform bacteria is believed to be a mix of urban and agricultural nonpoint source runoff. Wildlife contributions are also possible sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Green Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L08R-01

ASSESSMENT CATEGORY: 5C/4A

SEGMENT SIZE: 3.93 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Perennial headwaters of Green Cr.

RIVER MILE: 3.93

LATITUDE: 37.10209 **LONGITUDE:** -80.09027

DOWNSTREAM LIMIT:

DESCRIPTION: Green Cr. mouth on S.F. Blackwater R.

RIVER MILE: 0.00

LATITUDE: 37.05361 **LONGITUDE:** -80.08493

Green Creek's perennial headwaters begin the segment that extends downstream to its mouth on the South Fork of Blackwater River. The entire segment is on the Callaway Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (1998), Temperature (2002)

Recreational Use
The Bacteria Total Maximum Daily Load (TMDL) Study and allocations for the South Fork of the Blackwater River is complete. Green Creek is tributary to the South Fork and is included in the TMDL Study and allocations. The segment is therefore Category 4A for bacteria with the U.S. Environmental Protection Agency (EPA) approval of the study on 02/02/2001. The Implementation Plan for the Blackwater River drainage is also complete as of 8/23/2001. Ultimately the TMDL Study and allocations will be incorporated into the 303(e) Water Quality Management Plans. The entirety of the approved study and allocations and Implementation Plan can be viewed at http://www.deq.state.va.us.

The South Fork Blackwater River segment is originally based on data from a 319 funded special study (SS 925102) and ambient bacteria collections. The impaired segment, initially 303(d) Listed in 1996, found abundant fecal coliform bacteria counts failed to support the recreational use by exceedances of both the existing geometric mean (200 cfu/100 ml) and former instantaneous criterion of 1000 cfu/100 ml. Green Creek was originally 303(d) Listed in 1998.

Station 4AGCR000.01 (Rt. 739 Bridge at Algoma) finds two of 10 fecal coliform bacteria test results in excess of the current 400 cfu/100 ml instantaneous criterion. Exceedances are 700 and 1000 cfu/100 ml. No Escherichia coli (E. Coli) bacteria collections have been made. The waters do not support the recreational use.

Aquatic Life Use
The 2002 temperature impairment remains as 4AGCR000.01 reveals two of 15 temperature measurements exceeding the Class VI natural trout water criterion of 20°C. Each exceedance is at 23°C occuring on 7/11/2001 and 21°C on 9/18/2002. The aquatic life use is not supported as a result (Category 5C).

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: NPS - Agriculture - 1998, Unknown

Recreational Use
Bacteria source tracking utilized in the TMDL study demonstrates that wildlife is the dominant contributor of fecal coliform bacteria with agriculture second. Direct deposition at baseflow is the critical condition.

Aquatic Life Use
The source of temperature exceedances are not known other than natural solar radiation. There are no known sources of heat that would contribute to the exceedances.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: North Fork of the Blackwater River Drainage

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L08R-03

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 12.25 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of the N.F. Blackwater R

RIVER MILE: 12.25

LATITUDE: 37.16278 **LONGITUDE:** -80.05773

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of North and South Forks

RIVER MILE: 0.00

LATITUDE: 37.02472 **LONGITUDE:** -80.02676

The segment begins approximately 12.25 miles upstream in the North Fork headwaters on the Bent Mt. Quad. The segment ends on the Callaway Quad at the North Fork's confluence with the South Fork at the head of the Blackwater River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (1996) - 12.25 mi., General Standard (Benthic) - 3.26 mi.

Recreational Use
The North Fork of the Blackwater River Bacteria Total Maximum Daily Load (TMDL) Study and allocations are complete. The waters are therefore Category 4A for bacteria with the US Environmental Protection Agency (EPA) approval of the study on 03/09/2001. The TMDL Study applies to the entire North Fork drainage. Ultimately the TMDL Study and allocations will be incorporated into the 303(e) Water Quality Management Plans. The Implementation Plan is complete (8/23/2001) and incorporates the N.F. Blackwater River. The entirety of the approved TMDL Study allocations and Implementation Plans can be viewed at http://www.deq.state.va.us.

The North Fork Blackwater River segment is originally based on a 319 funded special study (SS 925102) data and ambient fecal coliform bacteria sample collections. The impaired segment, initially 303(d) Listed in 1996, found abundant fecal coliform bacteria counts failed to support the recreational use by exceedances of both the existing geometric mean (200 cfu/100 ml) and former instantaneous criterion of 1000 cfu/100 ml.

Monitoring continues at station 4ABNR000.40 where 18 of 29 fecal coliform bacteria analyses exceed the current instantaneous criterion of 400 cfu/100 ml. Maxima range from 575 cfu/100 ml to greater than 8000. Escherichia coli (E. coli) exceed the 235 cfu/100 ml instantaneous criterion in 13 of 20 observations. Exceeding values range from 350 to greater than 800 cfu/100 ml. Wildlife is a major source for FC via TMDL Bacteria Source Tracking (BST). The segment does not support the recreational use.

Aquatic Life Use
Contravention of the General Standard remains 303(d) listed as the benthic community is moderately impacted at 4ABNR000.40 and slightly impacted at 4ABNR001.53 from Rapid Biological Protocol II (RBP II) surveys. The impaired benthic community extends 3.26 miles upstream form the confluence of the North and South Forks of the Blackwater River- Category 5D. The General Standard (Benthic) impairment is not addressed in the EPA approved Bacteria TMDL Study.

Fact Sheets for Category 5 Waters

A General Standard (Benthic) TMDL Study has been conducted with an anticipated approval by the U. S. EPA in early 2004. The 3.26 mile segment remains Category 5A until federal approval has been granted. The segment brackets biological stations at 4ABNR000.40 (Rt. 740 Bridge SW of Retreat, VA) and 4ABNR001.53 (Rt. 738 Bridge).

Station 4ABNR000.40 reports a RBP II five year average Spring score 56.01 and Fall score 52.33 from 8 surveys. The instream habitat (substrate) at this site has been impacted by fine sediment. The riparian zone vegetation has been removed and stream banks are highly eroded due to unrestricted cattle access to the stream.

Station 4ABNR001.53 finds from three RBP II Spring surveys an average score of 85.92. Moderate impairment from a single 2000 survey occurs where the benthic community includes several pollution tolerant taxa with Chironomid midge fly larvae (tolerant of sediment and low dissolved oxygen) being the dominant organism. 2001 and 2002 surveys indicate no impairment each with a spring score of 90.48.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife, NPS - Agriculture

Recreational Use
Bacteria source tracking utilized in the TMDL study demonstrates that wildlife is the dominant contributor of fecal coliform bacteria with agriculture second. Direct deposition at baseflow is the critical condition.

Aquatic Life Use
The believed source of the General Standard (Benthic) impairment is nonpoint source runoff from agricultural activity, lack of riparian vegatation and stream bank erosion/modification.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Blackwater River Drainage

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L08R-04

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 43.83 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Confluence of N.F./S.F. Blackwater R.

RIVER MILE: 60.16

LATITUDE: 37.02472 **LONGITUDE:** -80.02676

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Smith Mountain Lake.

RIVER MILE: 20.46

LATITUDE: 37.06250 **LONGITUDE:** -79.76962

The upstream limit of the segment is at the confluence of the North and South Forks of the Blackwater River (Callaway Quad). The segment's end is at the backwaters of Smith Mountain Lake. (Redwood Quad).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (1996), General Standard (Benthic 1998) - 5.63 mi.

Recreational Use
Bacteria Total Maximum Daily Load (TMDL) Studies and allocations are complete for the Upper, Middle and Lower Blackwater River drainages. These studies incorporate tributary streams that lie within the boundaries of VAW-L08R and VAW-L10R. The waters are Category 4A for bacteria with the US Environmental Protection Agency (EPA) approval of the Upper Blackwater Study on 03/09/2001, the Middle on 12/04/2001 and the Lower on 04/27/2001. The Implementation Plan is complete as of 8/23/2001. Ultimately the TMDL Study allocations will be incorporated into the 303(e) Water Quality Management Plans. The entirety of the approved studies with allocations and the Implementation Plan can be viewed at http://www.deq.state.va.us.

The Blackwater River segment is originally based on a 319 funded special study (SS 925102) data and ambient fecal coliform bacteria sample collections. The impaired segment, initially 303(d) Listed in 1996, found abundant fecal coliform bacteria counts failed to support the recreational use by exceedances of both the existing geometric mean (200 cfu/100 ml) and former instantaneous criterion of 1000 cfu/100 ml.

Exceedances of the 400 cfu/100 ml instantaneous criterion for fecal coliform bacteria continue at station 4ABWR061.20 (Rt. 641 Bridge) with 20 of 30 samples exceeding. Nineteen of 29 samples exceed at 4ABWR054.81 (Rt. 734 Bridge). Station 4ABWR045.80 (Rt. 812 Bridge) continues to report 17 exceedances from 38 samples and station 4ABWR032.32 (Rt. 122 Bridge at the stream gaging station) reports criterion excursions in 11 of 20 samples. Monitoring continues at station 4ABWR019.75 (Rt. 834 Bridge or Brooks Mill Bridge) where 15 of 59 samples exceed. 4ABWR019.75 is located within VAW-L12L. The maximum fecal coliform bacteria count at each station is greater than 8000 cfu/100 ml.

Escherichia coli bacteria (E. coli) results from the sites above show exceedances of the 235 cfu/100 ml instantaneous criterion. The results for each site are 4ABWR061.20 exceeds in 13 of 18 samples; 4ABWR054.81 in 19 of 29; 4ABWR045.80 in 8 of 20 and 4ABWR032.32 in 6 of 20. No E. coli collections are made at 4ABWR019.75. Maximums at each sampled site are greater than 800 cfu/100 ml.

Fact Sheets for Category 5 Waters

A 2004 addition to the original bacteria 39.70 mile impairment is a 4.13 mile segment on Foul Ground Creek. The segment begins at the confluence of the Foul Ground Creek headwaters (37°01'45" / 79°47'28") and extends downstream to its inundation on the Blackwater River in Smith Mountain Lake (37°03'03" / 79°45'26").

Station 4AFGC002.52 located on the Rt. 834 Bridge finds five of 11 fecal coliform bacteria samples exceed the 400 cfu/100 ml instantaneous criterion. Exceeding values range from 500 cfu/100 ml to greater than 8000.

Tributary ambient and TMDL data from the North and South Forks of the Blackwater River, Green, Little and Teels Creeks also report exceedances of the instantaneous fecal coliform and E. coli bacteria criteria. These tributary segments are described in separate fact sheets.

Aquatic Life Use
A General Standard (Benthic) TMDL Study nears completion with an anticipated U.S. EPA approval in early 2004. The original 1996 General Standard benthic impairment was based on Green Creek (Blue Ridge) as a reference site. The reference site for the Blackwater River mainstem stations is now in the Pigg River drainage (transitional Blue Ridge to Piedmont). The Pigg River reference site is believed to more closely reflect conditions in the Blackwater River mainstem.

The original 1996 303(d) Listed benthic impaired waters extend from the confluence of the North and South Forks of the Blackwater River on downstream of the Rt. 921 Bridge approximately 1.3 miles at the confluence of an unnamed tributary (25.29 miles). The impaired segment is shortened with the 2004 Integrated Report based on improved condtions at 4ABWR049.73 and 4ABWR045.80 through Rapid Bioassessment Protocol II (RBP II) benthic surveys. The US Enviromental Protection Agency approved the partial de-listing on January 27, 2004 via the 'Pro-Active Approach'. The General Standard (Benthic) impairment is now a distance of 5.63 miles- Category 5D.

The 2004 General Standard (Benthic) impairment extends from the confluence of the North and South Forks of the Blackwater River downstream to the mouth of Maple Branch. A total of 5.63 miles. Station 4ABWR061.20 finds only slight impairment. Rapid Biological Protocol II (RBP II) survey scores for 2000 are: Spring 52.17 and Fall 78.26. The 2002 Spring score is 76.19. Five year seasonal averages are Spring 60.56 and Fall 66.29. Water quality in this reach is affected by NPS pollution from dairy operations, primarily the North Fork of the Blackwater River. Habitat degradation in the form of sediment deposition and riparian vegetation removal occurs at this sight as a result of agricultural practices. This area was affected by several drought years during the 2004 assessment period. Less runoff of nonpoint source pollution during low rainfall periods potentially resulted in an improvement in the benthic community. Additionally, recent installation of agricultural best management practices in the watershed have contributed to improved water quality. A 5.63 mile portion of the overall segment remains impaired (Category 5D) as at least two consecutive 'not impaired' (NI) RBP II surveys must be observed before delisting may occur [2004 Assessment Guidance]. The 5.63 mile segment will become a Category 4A water upon U.S. EPA approval of the General Standard (Benthic) TMDL Study and allocations.

Overall 19.66 miles are 2004 de-listed for the General Standard (Benthic) impairment. Recent installation of agricultural best management practices have contributed to improved water quality conditions. A separate de-list fact sheet describes the partially de-listed segment, RBP II survey data and installation of best management practices within the watershed.

A 20.68 mile section is also a 'Water of Concern' for exceedances found in total phosphorus (TP) data. Station 4ABWR054.81 reports four of 29 TP samples exceed the screening value (SV) of 0.20 mg/l. Exceedances range from a low of 0.23 mg/l to a high of 0.82. The Water of Concern extends from the confluence of the North and South Forks of the Blackwater River downstream to the Town of Rocky Mount water intake on the Blackwater River. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife, NPS - Agriculture

Recreational Use
Direct deposition at baseflow is the critical condition in the Blackwater River. Bacteria source tracking utilized in the studies show wildlife as the dominant contributor of fecal coliform bacteria in the upper and middle portions of the drainage with agriculture second. The Lower Blackwater is more of a mix of land use activity and upstream contributions.

Aquatic Life Use
The 1998 source of the General Standard (Benthic) impairment is nonpoint source runoff from agricultural activity. The shortened segment was 1998 listed and remains listed for General Standard (benthic) impairments. The Blackwater drainage lies both in the Blue Ridge and Piedmont ecoregions.

The source of total phosphorus is believed to be contributions from agricultural activities.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Little Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L08R-05

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 7.61 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: West of the Helm community off Rt. 693.

RIVER MILE: 7.61

LATITUDE: 37.07667 **LONGITUDE:** -79.96890

DOWNSTREAM LIMIT:

DESCRIPTION: Little Cr. mouth on the Blackwater R.

RIVER MILE: 0.00

LATITUDE: 37.04750 **LONGITUDE:** -79.90941

The segment begins just west of Helm off Rt. 693 and extends to the Little Creek mouth on the Blackwater River. The entire segment is on the Boones Mill Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2002), General Standard (Benthic 2002)

Recreational Use
The Middle Blackwater River Bacteria Total Maximum Daily Load (TMDL) Study and allocations are complete (Category 4A for Bacteria). The Implementation Plan is also complete as of 8/23/2001. Little Creek is tributary to the Blackwater River and is included in this bacteria TMDL Study. The segment is therefore Category 4A for bacteria with the U.S. Environmental Protection Agency (EPA) approval of the Middle Blackwater Study on 12/04/2001. Ultimately the TMDL Study and allocation scenarios will be incorporated into the 303(e) Water Quality Management Plans. The entirety of the approved TMDL Study with allocations and the Implementation Plan can be viewed at http://www.deq.state.va.us.

The Blackwater River segment is originally based on a 319 funded special study (SS 925102) data and ambient fecal coliform bacteria sample collections. The impaired segment, initially 303(d) Listed in 1996, found abundant fecal coliform bacteria counts failed to support the recreational use by exceedances of both the existing geometric mean (200 cfu/100 ml) and former instantaneous criterion of 1000 cfu/100 ml. Little Creek is initially 303(d) Listed in 2002.

Monitoring continues at 4ALLE005.22 (Rt. 697 Bridge) where 19 of 29 fecal coliform bacteria samples exceed the current instantaneous criterion of 400 cfu/100 ml. Exceeding values range from 500 cfu/100 ml to 3800.

Fifteen Escherichia coli (E. coli) samples exceed the 235 cfu/100 ml instantaneous criterion from a total of 17 collections. The exceeding values range from 280 to greater than 800 cfu/100 ml. The segment remains impaired for the recreational use.

Aquatic Life Use
A biological Rapid Bioassessment Protocol II (RBPII) survey reports moderate impacts to the benthic community. The aquatic life use is not supported due to contravention of the General Standard for aquatic life (Category 5A). The General Standard (benthic) impairment is not addressed in the EPA approved Middle Blackwater Bacteria TMDL Study. The General Standard (Benthic) impairment is a 2002 303(d)

Fact Sheets for Category 5 Waters

Listing.

Three RPB II surveys conducted in the spring produce two moderate and one slightly impaired result at station 4ALLE005.22. RBP II scores are 60.0 in 2000, 47.62 in 2001 and 57.14 in 2002. The average score for the station is 54.92. The benthic community in Little Creek has consistently been less diverse than the reference site and was dominated by Hydropsychid caddisfly larvae in the summer and Chironomid midge larvae in the spring samples. The assemblages collected at this site indicate excessive organic matter, excessive nutrients, embedded substrates and removal of riparian buffers.

These waters are also a 'Water of Concern' based on excursions of the 0.20 mg/l total phosphorus screening value (SV) at 4ALLE005.22. Data collections record seven of 29 observations in excess of the SV resulting in 'Observed Effects'. Exceedances occur in 1999, 2000 and 2001 with a maximum value of 0.36 mg/l in April 2000. Total phosphorus maxima range from 0.21 to 0.36 mg/l.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife, NPS - Agriculture

Recreational Use
Bacteria source tracking utilized in the TMDL study demonstrates that wildlife is the dominant contributor of fecal coliform bacteria with agriculture second. Direct deposition at baseflow is the critical condition.

Aquatic Life Use
Agricultural nonpoint source runoff is the believed source of the General Standard (benthic) impairment and total phosphorus excursions.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Teels Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L08R-06

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 4.6 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Perennial headwaters of Teels Cr.

RIVER MILE: 4.60

LATITUDE: 37.09417 **LONGITUDE:** -79.96687

DOWNSTREAM LIMIT:

DESCRIPTION: Teels Cr. mouth on Little Creek.

RIVER MILE: 0.00

LATITUDE: 37.05778 **LONGITUDE:** -79.91817

The perennial headwaters of Teels Creek begin the segment that ends at the mouth of Teels Creek on Little Creek. The entire segment is on the Boones Mill Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2002), General Standard (Benthic 2002)

Recreational Use
The Middle Blackwater River fecal coliform bacteria Total Maximum Daily Load (TMDL) Study with allocations is complete. Teels Creek is tributary Little Creek then onto the Blackwater River and is included in the study. The segment is therefore Category 4A for Bacteria with the US Environmental Protection Agency (EPA) approval of the Middle Blackwater Study on 12/04/2001. The Implementation Plan is complete as of 8/23/2001. Ultimately the TMDL Study will be incorporated in the 303(e) Water Quality Management Plans. The entirety of the approved study with allocations and the Implementation Plan can be viewed at http://www.deq.state.va.us.

The Blackwater River segment is originally based on a 319 funded special study (SS 925102) data and ambient fecal coliform bacteria sample collections. The impaired segment, initially 303(d) Listed in 1996, found abundant fecal coliform bacteria counts failing to support the recreational use by exceedances of both the existing geometric mean (200 cfu/100 ml) and former instantaneous criterion of 1000 cfu/100 ml. Teels Creek is originally 303(d) Listed in 2002.

Fecal coliform bacteria observations reveal continued exceedance of the existing 400 cfu/100 ml instantaneous criterion. Station 4ATEL001.02 (Rt. 697 Bridge) finds 23 of 29 fecal coliform bacteria analyses exceed the instantaneous criterion. Exceedances range from 500 cfu/100 ml to greater than 8000.

Station 4ATEL001.02 also reports Escherichia coli (E. coli) bacteria exceed the 235 cfu/100 ml instantaneous criterion in 14 of 17 analyses. The maximum exceedance is greater than 800 and the lowest 260 cfu/100 ml. The segment remains impaired for the recreational use.

Aquatic Life Use
The aquatic life use is impaired for 4.60 miles. The impairment is based on biological monitoring at 4ATEL001.02 from four Rapid Biological Protocol II (RBP II) surveys. Overall moderate benthic impairment 4ATEL001.02 is the result of three spring and one fall survey

with an overall average score of 63.88. 1999 and 2000 spring surveys score 47 with a 2002 survey at 90.48. The 2002 score may be related to reduced runoff as a result of drought conditions. However the assemblages collected at this site indicate excessive organic matter, and embedded substrates. Habitat surveys also indicate impacts from sediment deposition, eroded banks and removal of riparian buffers. The benthic impairment is a 2002 addition to this segment.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife, NPS - Agriculture

Recreational Use
Bacteria source tracking utilized in the TMDL study demonstrates that wildlife is the dominant contributor of fecal coliform bacteria with agriculture second. Direct deposition at baseflow is the critical condition.

Aquatic Life Use
The believed source of the impairment is agricultural activity in the drainage.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Maggodee Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L09R-01

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 20.21 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Rt. 613 Bridge

RIVER MILE: 20.21

LATITUDE: 37.14583 **LONGITUDE:** -80.00995

DOWNSTREAM LIMIT:

DESCRIPTION: Maggodee Cr. mouth on Blackwater R.

RIVER MILE: 0.00

LATITUDE: 37.05194 **LONGITUDE:** -79.82739

The upstream limit is Rt. 613 Bridge near the intersection with Rt. 726 where the North and South Forks of Maggodee Creek join. The downstream limit is at the mouth of Maggodee Creek on the Blackwater River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, General Standard (Benthic) - 7.38 mi.

Recreational Use
The Maggodee Creek Bacteria Total Maximum Daily Load (TMDL) Study with allocations is complete. The study incorporates tributary streams that lie within the boundaries of watershed VAW-L09R. The waters are Category 4A for bacteria with the U.S. Environmental Protection Agency (EPA) approval of the Maggodee Creek Study on 04/27/2001. The entirety of the approved study with allocations can be viewed at http://www.deq.state.va.us.

Maggodee Creek was originally listed in 1996 based on a 319 funded special study (SS 925102) and ambient sample collections. Abundant fecal coliform bacteria counts failed to support the recreational use by exceedances of both the geometric mean (200 n/100 ml) and former instantaneous criterion of 1000 n/100 ml.

Fecal coliform and Escherichia coli (E. coli) bacteria continue to cause nonattainment of the recreational use. Stations 4AMEE009.86 (Rt. 635 Bridge), 4AMEE007.85 (Rt. 687 Bridge above Mollie Br.), 4AMEE004.90 (Rt. 697 Bridge) and 4AMEE002.38 (Rt. 698 Ford) all record exceedances of the current instantaneous criterion of 400 cfu/100 ml. The recreational use is not supported due to fecal coliform exceedances at the following stations; 11 of 20 samples exceed at 4AMEE009.86, eight of 19 at 4AMEE007.85, 12 of 15 at 4AMEE004.90 and station 4AMEE002.38 records one of six exceedances. Monitoring at 4AMEE002.38 is discontinued as of 4/06/2000 due to lack of access. All but 4AMEE002.38 record fecal coliform values in excess of 2000 cfu/100 ml.

Escherichia coli (E. coli) bacteria collections produce the following exceedances of the 235 cfu/100 ml instantaneous criterion: Station 4AMEE009.86- seven of 16 samples with exceedances ranging from 280 to greater than 800 cfu/100 ml. Station 4AMEE007.85 eight of 17 and an exceedance range from 240 to greater than 800 cfu/100 ml. And Station 4AMEE004.90 nine of 17 observations exceed. The range of exceedance is from 310 cfu/100 ml to greater than 800.

Aquatic Life Use

Fact Sheets for Category 5 Waters

Non-support of the aquatic life use is originally based on Rapid Bioassessment Protocol II surveys (RBP II) conducted at 4AMEE002.38. The station is no longer accessible and is moved to 4AMEE000.70 (Below Rt. 122 Bridge). Four RBP II surveys find moderate impacts to the benthic community largely due to sedimentation. The aquatic life use impairment is a 2002 addition that spans 7.38 miles from the Piedmont Mill dam downstream to Maggodee Creek confluence with the Blackwater River in Franklin County. The Maggodee Creek Bacteria TMDL study did not address the General Standard (Benthic) impairment.

Excursions of the 0.20 mg/l total phosphorus screening value (SV) cause 14.82 miles of Maggodee Creek to be a 'Water of Concern' for the aquatic life use. Exceedances are found in three stations along Maggodee Creek. Stations include: 4AMEE04.90 (Rt. 697 Bridge), 4AMEE007.85 (Rt. 687 Bridge), 4AMEE009.86 (Rt. 635 Bridge).

4AMEE004.90 has three of 21 samples and 4AMEE007.85 two of 19 exceeding the screening value. The maximum values are 0.37, 0.60 and 4.57mg/l at 4AAMEE004.90. Station 4AMEE007.85 maximums are 0.24 and 0.83 mg/l. Two of 20 samples exceed at 4AMEE009.86 (the exceedance rate is not above 10.5%). Maximum values are 0.22 and 0.63 mg/l. The total phosphorus 'Observed Effect' extends from the Boones Mill STP downstream to the Maggodee Creek mouth on the Blackwater River.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban, NPS - Agriculture

Recreational Use
Bacteria source tracking utilized in the TMDL study show agriculture and wildlife as the major contributors of fecal coliform bacteria in the Maggodee Creek drainage.

Aquatic Life Use
The source of the General Standard (Benthic) impairment is believed to be mainly from agricultural nonpoint source pollution.

Total phosphorus contributions are believed to be primarily the result of nonpoint source agricultural activities in this 'Water of Concern'.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford, Franklin

STREAM NAME: Smith Mountain Lake - Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L12L-02N

ASSESSMENT CATEGORY: 5C/4C

SEGMENT SIZE: 5308 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upstream of Beckys Cr. mouth on Roanoke R.

RIVER MILE: 173.34

LATITUDE: 37.13000 **LONGITUDE:** -79.65476

DOWNSTREAM LIMIT:

DESCRIPTION: Blackwater R. confluence on the Roanoke R.

RIVER MILE: 164.84

LATITUDE: 37.04194 **LONGITUDE:** -79.59429

The segment begins above the Beckys Creek mouth (Goodview Quad) on the Roanoke River and extends downstream 8.50 miles to the confluence of the Blackwater River (Smith Mtn. Dam Quad).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH / Dissolved Oxygen (Bottom)

Aquatic Life Use
Station 4AROA167.34 is located with in this segment at Buoy 12R.

Surface Layer: Station 4AROA167.34 reports three of 27 measurements in excess of the alkaline maximum 9.0 Standard Units (SU). Each exceedance is measured at 9.1 SU (Category 5C).

Bottom layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. Station 4AROA167.34-BL records 149 of 454 measurements below the minimum criterion. The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen impairment remains.

The Carlson Trophic State Index (TSI) is used to determine the cause of the dissolved oxygen impairment eg. natural or anthropogenic in nature. The following are the index scores from three stations where CA = chlorophyll (a), TP = total phosphorus and SD = seechi disk (transparancy).

4AROA167.34-TL CA [36.34] TP [44.72] SD [44.78].

TSI scores below 60 indicate a natural aging process in the reservoir while above 60 indicates man's activities on the land may be influencing the natural aging of the reservoir. The data above, primarily SD, indicates a natural aging process for the this segment of the Roanoke River portion of Smith Mountain Lake (Category 4C).

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: Unknown, Natural / Stratification

Aquatic Life Use
The exact source of the pH alkaline exceedance is not known but is believed due to natural conditions created in reservoirs.

Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Informational note: Smith Mountain Lake is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.1.; NEW-1). The Water Quality Management Planning (WQMP) Regulation also lists Smith Mountain Lake as water quality limited for phosphorus (9 VAC 25-720-80 B. Segment classification).

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford, Franklin

STREAM NAME: Smith Mountain Lake - Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L12L-03

ASSESSMENT CATEGORY: 5A/5C/4C

SEGMENT SIZE: 2871 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Falling Cr. mouth on the Roanoke R.

RIVER MILE: 188.91

LATITUDE: 37.23250 **LONGITUDE:** -79.84753

DOWNSTREAM LIMIT:

DESCRIPTION: Upstream of Beckys Cr. mouth on Roanoke R.

RIVER MILE: 173.34

LATITUDE: 37.13000 **LONGITUDE:** -79.65476

The segment begins at the Falling Creek mouth and extends downstream 15.57 miles to upstream of the Beckys Creek confluence on the Roanoke River. The segment spans the Hardy and Goodview Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, pH (Surface- 2002) / Dissolved Oxygen (Bottom- 2002)

The segment brackets mainstem lake stations 4AROA183.64 at the mouth of Beaverdam Creek, 4AROA180.21 at the confluence with Indian Creek and 4AROA175.63 at Hales Ford Bridge.

Fish Consumption Use
1998 fish collections at 4AROA175.63-TL find polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) in tissue from Striped Bass. Fish tissue results for four sizes of Striped Bass are 58.0, 84.7, 107.0 and 198.0 ppb. A total of 44 fish represent three species: Striped Bass (35), Smallmouth Bass (4) and Gizzard shad (5).

1999 fish collections find no exceedances of the WQS TV from a total of 26 fish. Species represented are Largemouth Bass, Bluegill, Carp and Redhorse Sucker.

2002 collections find exceedances of the WQS PCB TV in two of three sizes of Striped Bass at 64 and 219 ppb from a total of 24 fish. Species represented are Striped Bass (10), Largemouth Bass (5), Carp (4) and Gizzard Shad (5).

There is no Virginia Department of Health (VDH) Advisory as tissue concentrations are below the VDH action level of 600 ppb. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us/water/

Aquatic Life Use
Top layer: Two stations report exceedances of the pH range criterion 6.0-9.0 Standard Units (SU) in the surface waters of Smith Mountain Lake resulting in the impairment of the aquatic life use. All exceedances were above the 9.0 SU alkaline range. Exceedances of the criterion occur at 4AROA183.64-TL, 4AROA180.21-TL and 4AROA175.63-TL. Five of 28 pH measurements exceed the criterion at 4AROA183.64-TL with exceedances ranging from 9.1 to 9.9 SU. And four of 28 at 4AROA180.21-TL exceeding values ranging from 9.1 to 9.8 SU. Station 4AROA175.63-TL records two of 28 measurements exceeding the criterion, but are fully supporting (<10.5 percent). These

results are categorized as 5C.

Bottom layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. 4AROA183.64-BL reports 158 excursions from 240 measurements, 4AROA180.21 159 of 314 and 4AROA175.63 exceeds the minimum in 147 of 342. The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen impairment remains.

The Carlson Trophic State Index (TSI) is used to determine the cause of the dissolved oxygen impairment eg. natural or anthropogenic in nature. The following are the index scores from three stations where CA = chlorophyll (a), TP = total phosphorus and SD = seechi disk (transparancy).

4AROA183.64-TL CA [56.63] TP [49.15] SD [56.78].
4AROA180.21-TL CA [53.53] TP [46.35] SD [56.32].
4AROA175.63-TL CA [47.33] TP [41.50] SD [52.28].

TSI scores below 60 indicate a natural aging process in the reservoir while above 60 indicates man's activities on the land may be influencing the natural aging of the reservoir. The data above, primarily SD, indicates a natural aging process in this portion of Smith Mountain Lake- Category 4C.

These waters are a 'Water of Condern based on exceedance of total phosphorus and sediment screening values (SV). Total phosphorus exceedances of the 0.05 mg/l reservoir SV are found at 4AROA183.64-BL and 4AROA180.21-BL causing the waters to be reported as having an 'Observed Effect'. Eight of 43 samples exceed the threshold at 4AROA183.64-BL and five of 41 at 4AROA180.21-BL. Station 4AROA183.64.05-BL exceeding values range from 0.06 to 0.17 mg/l. 4AROA180.21-BL maxima range from 0.06 to 0.10 mg/l. It is important to note that no exursions of the chlorophyll (a) SV of 0.05 mg/l are found from 24 samples at each station.

An excursion of the Consensus Based Probable Effects Concentration (PEC) [MacDonald et al., 2000] sediment screening value (SV) is found at 4AROA175.63-BL. A 1999 ambient sediment collection reports lead (Pb) at 263 ppb in excess of the PEC SV of 128 ppb.

IMPAIRMENT SOURCE: Unknown, Natural / Stratification

Fish Consumption Use
The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Aquatic Life Use
The exact source of the pH alkaline exceedance is not known but is believed due to natural conditions created in reservoirs.

Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Total phosphorus sources are believed to be a mix of nonpoint source contributions from upstream urban areas (VAW-L04R) and marginal agricultural activity in the immediate drainage (VAW-L07R) to Smith Mountain Lake.

Informational Note: Smith Mountain Lake is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.1.; NEW-1). The Water Quality Management Planning (WQMP) Regulation also lists Smith Mountain Lake as water quality limited for phosphorus (9 VAC 25-720-80 B. Segment classification).

The exact source of the sediment metal contamination is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford, Franklin, Roanoke

STREAM NAME: Smith Mountain Lake - Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L12L-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 378 - Acres

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Back Creek mouth on Roanoke River (795 ft. pool elevation)

RIVER MILE: 195.00

LATITUDE: 37.22528 **LONGITUDE:** -79.84753

DOWNSTREAM LIMIT:

DESCRIPTION: Falling Cr. mouth on Roanoke R. SML

RIVER MILE: 188.91

LATITUDE: 37.23250 **LONGITUDE:** -79.78214

The segment begins at the mouth of Back Creek on the Roanoke River at the dead end of Rt. 618 and extends downstream to the mouth of Falling Creek on the Roanoke River, 6.09 miles in length. The entire segment is on the Hardy Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Fish Tissue - PCBs (2002) - 378 acres; VDH Advisory 2003, Dissolved Oxygen (Bottom 2002)

The segment brackets lake stations 4AROA196.05 McVeigh Ford, 4AROA192.94 just upstream of the Rt. 634 (Hardy Road) Bridge and 4AROA192.55 at the Rt. 634 (Hardy Road) Bridge (surface sample collections from Bridge).

Recreational Use
Surface layer: Fecal coliform bacteria continue to cause the segment to only partially support the recreational use. Station 4AROA196.05-TL records four of 28 samples in excess of the 400 cfu/100 ml fecal coliform bacteria instantaneous criterion. Exceeding values range from 500 to 4900 cfu/100 ml. Station 4AROA192.94-TL finds three of 23 samples with exceeding values ranging from 500 to 4900 cfu/100 ml. And 4AROA192.55-TL records 13 out of 56 samples exceeding the instantaneous criterion with exceedances ranging from 500 to greater than 8000 cfu/100 ml. The segment remains 303(d) Listed as Category 5A.

Fish Consumption Use
The Virginia Department of Health (VDH) issued a Fish Consumption Advisory on October 20, 2003. The advisory states to eat no more than one eight-ounce meal per month of flathead catfish from the advisory area (Niagara Dam to Buoy R78, ~2 miles downstream of Hardy Ford Bridge in Smith Mountain Lake). These fish can travel far distances. It is also advisable that people limit consumption of flathead catfish caught from the entire lake. 2002 fish tissue collections are the basis for the advisory. Information on the VDH Flathead Catfish Advisory is available at http://www.vdh.state.va.us.

The entire DEQ fish tissue impairment extends from near Dixie Caverns - VAW-L03R (37°15'07" / 080°10'20") on downstream through watershed VAW-L04R into Smith Mountain Lake VAW-L12L (37°13'57" / 079°50'51") approximately one mile below the Hales Ford Bridge. The total mileage for the DEQ fish consumption impairment is 50.01 miles or 28.35 Roanoke River miles and 3249 lake acres.

This Fact Sheet presents information on the reservoir portion of the VDH Advisory. The riverine Fact Sheet and information is found at VAW-L04R-03. The VDH Flathead Catfish Consumption Advisory is encompassed by the overall DEQ WQS TV fish consumption use

impairment. The VDH Advisory extends from Niagara Dam downstream to Buoy R78 in Smith Mountain Lake incorporating 3.35 Roanoke River miles and approximately 378 lake acres.

1999 fish tissue collections at 4AROA196.05-TL reveal polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) in four of five species from a total of 40 fish. They are: Largemouth Bass - 74, Carp - 124, Gizzard Shad- 386, Redhorse Sucker - 90 and Bluegill -26 ppb.

2002 collections at Station 4AROA196.05 report from a total of 41 fish representing six species exceedances of the WQS PCB TV of 54 ppb for four species. They are: Largemouth Bass at 71, three sizes of Flathead Catfish at 1117, 1267, and 1446, Gizzard Shad at 229 and two sizes of Golden Redhorse Suckers at 67 and 74 ppb each. Flathead Catfish tissue values are above the VDH 600 ppb level of concern.

These waters do not support the fish consumption use and is categorized 5A. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us/water/

Aquatic Life Use
Bottom layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. Depth profiles at 4AROA192.55 were not conducted and stations 4AROA196.05 and 192.94 were not stratified. However exceedances of the minimum criterion are found as described below. The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen 303(d) Listing is categorized 5A in 2004.

The waters were not stratified primairly due to the depth of the reservoir at the following sites. The entire water column data are therefore combined at each site. Dissolved oxygen did not exceed the minimum criterion in greater than 10.5 percent of the samples. However excursions did occur at 4AROA196.05 in one of 56 measurements and at 4AROA192.94 in two of 70 measurements.

The Carlson Trophic State Index (TSI) is used to determine the cause of the dissolved oxygen excursions eg. natural or anthropogenic in nature. The following are the index scores from the three stations where CA = chlorophyll (a), TP = total phosphorus and SD = seechi disk (transparancy).

4AROA196.05-TL CA [39.90] TP [65.85] SD [64.94].
4AROA192.94-TL CA [61.33] TP [60.75] SD [65.66].
4AROA192.55-TL CA [66.32] TP [63.89] SD [No Readings].

TSI scores below 60 indicate a natural aging process in the reservoir while above 60 indicates man's activities on the land may be influencing the natural aging of the reservoir. The data above, primarily SD, indicates this segment is influence by man's activities on the land and is speeding up the natural process. As a result the waters are categorized 5A.

Total phosphorus exceedances of the 0.05 mg/l threshold for reservoirs are found at 4AROA196.05-TL, 4AROA192.94-TL and 4AROA192.55-TL causing the waters to be 'Waters of Concern'. Eleven of 28 total phosphorus samples exceed 0.05 mg/l at 4AROA196.05-TL and nine of 23 at 4AROA192.94-TL. Station 4AROA192.55 records 31 of 60 samples exceeding the threshold.

Station 4AROA196.05-TL exceeding values range from 0.06 to 0.22 mg/l. 4AROA192.94-TL maxima range from 0.06 to 0.11 mg/l. Exceedances range from 0.06 to 0.20 mg/l at 4AROA192.55-TL. These results are reported as Observed Effects. No chlorophyll (a) excursions are found from 24 samples each at 4AROA196.05 or 4AROA192.94. One exceedance of the chlorophyll (a) 50 µg/l SV is found from 12 samples at 4AROA192.55 at 88 µg/l.

IMPAIRMENT SOURCE: NPS - Urban / Sewage Overflows, Unknown, Anthropogenic Influence

Recreational Use
The source is believed to be primarily from upstream urban nonpoint source contributions (VAW-L04R) and marginal agricultural activity in proximity of the upper reaches of Smith Mountain Lake.
Fish Consumption Use The exact source(s) of the PCB contamination is unknown.

Fish Consumption Use
The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. The VDH Catfish Advisory is based on 2002 fish tissue collections.

PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Aquatic Life Use
Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification. Nutrient input from upstream nonpoint source and sewage overflows may be contributing to the impairment.

The total phosphorus source is believed to be primarily from upstream urban nonpoint source contributions, sewage overflows (VAW-L04R) and marginal agricultural activity in proximity of the upper reaches of Smith Mountain Lake.

Fact Sheets for Category 5 Waters

Informational Note: Smith Mountain Lake is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.1.; NEW-1). The Water Quality Management Planning (WQMP) Regulation also lists Smith Mountain Lake as water quality limited for phosphorus (9 VAC 25-720-80 B. Segment classification).

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Smith Mountain Lake - Crazy Horse Camp Ground

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L12L-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.23 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Crazy Horse Camp Ground and Marina.

RIVER MILE:

LATITUDE: 37.06778 **LONGITUDE:** -79.64833

DOWNSTREAM LIMIT:

DESCRIPTION:

RIVER MILE:

LATITUDE: **LONGITUDE:**

The segment begins and ends at the Crazy Horse Camp Ground Beach and Marina area.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Category 5A - Crazy Horse Camp Ground and Marina is located on an unnamed tributary to the Blackwater River. The VDH issued a beach closure at the facility for one week each in June and July 2000 noting a recurrence of bacterial contamination is likely. The facility is located off Route 601 at 37°04'04" / 79°38'54" on the Moneta SW Quad. This is a new 2004 Listing (VAW-L12LR-05).

IMPAIRMENT SOURCE: VDH Beach Closure

Recreational Use
The exact source is not known. Possible contributing sources include residential urban nonpoint source (to include on site treatment systems), marina pump out, agriculture and wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin, Pittsylvania

STREAM NAME: Smith Mountain Lake - Blackwater River, Bull Run,

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L12L-05N

ASSESSMENT CATEGORY: 5A/4A/4C

SEGMENT SIZE: 6195 - Acres

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Backwaters of Blackwater R. in SML (795 ft. pool elevation)

RIVER MILE: 18.22

LATITUDE: 37.06250 **LONGITUDE:** -79.76989

DOWNSTREAM LIMIT:

DESCRIPTION: Blackwater R. confluence on Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.04417 **LONGITUDE:** -79.66262

The segment begins at the Smith Mountain Lake backwaters of the Blackwater River and extend downstream 18.22 miles to the Blackwater River mouth on the Roanoke River. The 2004 segment now encompasses Bull Run and Cool Branch. The 2004 segment spans the Redwood, Moneta SW and Smith Mountain Dam Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (1998) - 349 acres, Fish Tissue - PCBs (2002) - 2104 acres, Dissolved Oxygen (Bottom 2002)

Monitoring stations discussed below are all in Franklin County. Stations on the Blackwater River 4ABWR019.75 (Rt. 834 - Brooks Mill Bridge), 4ABWR017.42 (Buoy 50), 4ABWR010.92 (Buoy No. 11B - Old Buoy No.), 4ABWR010.55 (Buoy No. 23), 4ABWR002.50 (Near mouth of Blackwater River) and tributary stations 4ABSA000.62 (confluence of Little Bull Run) and 4ACOA000.60 (~0.6 miles upstream of Cool Branch mouth).

Recreational Use
The free flowing Lower Blackwater River fecal coliform bacteria Total Maximum Daily Load (TMDL) Study and allocation scenario is complete. The segment is therefore Category 4A for bacteria with the US Environmental Protection Agency (EPA) approval of the study and allocations on 04/27/2001. Additional bacteria TMDL studies and allocations on the Blackwater drainage are complete and US EPA approved. The entirety of the approved study and allocations can be viewed at http://www.deq.state.va.us.

The original 1998 segment extending from the Blackwater River headwaters into Smith Mountain Lake became listed based on a 319 funded special study (SS 925102) and ambient sample collections. Abundant fecal coliform bacteria counts failed to support the swimming use by exceedances of both the geometric mean (200 n/100 ml) and the former instantaneous criterion of 1000 cfu/100 ml.

Top layer: Fecal coliform bacteria cause 4.37 miles or 349 acres of the upper Blackwater River arm do not support the recreational use. Monitoring continues at station 4ABWR019.75 where ambient data show 15 of 59 samples exceed the current 400 cfu/100 ml instantaneous criterion. Downstream only one of 24 fecal coliform bacteria samples exceed at 4ABWR017.42-TL. No exceedances of the 235 cfu/100 ml Escherichia coli (E. coli) instantaneous criterion are found from three samples. The waters from the backwaters of the Blackwater River downstream to near the 4-H Camp (37°03'03.16" / 079°43'48.35") however remain impaired for the recreational use. These waters are categorized 4A with the US EPA approval of the Lower Blackwater Bacteria TMDL Study and allocations and additional bacterial TMDL studies in the drainage.

Fact Sheets for Category 5 Waters

Fish Consumption Use
Fish tissue collections from 1998 and 1999 produce results that require further collections to substantiate the degree of use support in this 13.18 mile or 2104 acre portion of the overall segment. The fish consumption portion of the overall segment extends from the backwaters of the Blackwater River downstream to the mouth of Gills Creek (37°02'49.06" / 079°39'56.69").

Fish tissue collections reveal the following results from two stations 4ABWR019.75 and 4ABWR010.92. 1998 fish collections at 4ABWR010.92 find polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic WQS screening value (SV) of 54 parts per billion (ppb) in tissue from three Stripped Bass. PCB values are 70.5, 70.2 and 99.0 ppb. 2002 fish tissue finds no excursions of PCBs from Largemouth Bass (11 ppb), Black Crappie (1 ppb) or Carp (14 ppb) from a total of 17 fish. 1999 collections at 4ABWR010.92 report no exceedances from Carp, Redhorse Sucker, Gizzard Shad, Bluegill or Largemouth Bass. The highest 1999 PCB concentration occurs in Carp tissue at 7.36 ppb. No Stripped Bass were captured during either sampling event.

Station 4ABWR019.75 There have been no new tissue collections at this site since the 2002 303(d) Listing. However data utilized for the 2002 listing are from 1993 tissue collections finding PCBs in excess of the WQS based TV for PCBs in a Redhorse Sucker at 68.5 and a Carp 68.2 ppb.

Based on these results the waters do not support the fish consumption use. There is no Virginia Department of Health (VDH) Advisory as tissue concentrations are below the VDH action level of 600 ppb. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us/water/

Aquatic Life Use
Bottom layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall at 4ABWR017.42-BL, 4ABWR010.55-BL and 4ABWR002.50-BL. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs.

A total of 29 dissolved oxygen measurements exceed the minimum criterion from 48 measurements at 4ABWR017.92. Station 4ABWR010.55-BL records 95 of 288 measurements below the minimum and 4ABWR002.50-BL records 142 of 446. The 2002 dissolved oxygen impairment remains.

The Carlson Trophic State Index (TSI) is used to determine the cause of the dissolved oxygen impairment eg. natural or anthropogenic in nature. The following are the index scores from three stations where CA = chlorophyll (a), TP = total phosphorus and SD = seechi disk (transparancy).

Blackwater River (4659 acres or 18.22 miles)
4ABWR017.92-TL CA [53.66] TP [53.20] SD [62.77].
4ABWR010.55-TL CA [38.22] TP [38.51] SD [46.74].
4ABWR002.50-TL CA [35.23] TP [37.35] SD [43.20].

Bull Run (1186 acres or 5.80 miles)
4ABSA000.62-TL CA [37.66] TP [38.51] SD [44.57].

Cool Branch (350 acres or 1.83 miles)
4ACOA000.60-TL CA [35.10] TP [38.51] SD [42.84].

TSI scores below 60 indicate a natural aging process in the reservoir while above 60 indicates man's activities on the land may be influencing the natural aging of the reservoir. The data above, primarily SD, indicates the upper portion of the Blackwater, 349 acres or 4.37 miles, may be affected man's activities on the land and speeding up the natural process. The downstream Blackwater, Bull Run and Cool Branch portions of Smith Mountain Lake TSIs show a more natural aging process within the reservoir and are categorized 4C.

The upper portion of the Blackwater is categorized 4C based on the CA score being below 60 and the SD score slightly above the 60 TSI. The 62.77 score may reflect turbitity as well as biomass.

The lower portion of the Blackwater River is a 'Water of Concern' based on excursion of the Consensus Based Probable Effect Concentration (PEC) screening value (SV) [MacDonald et al., 2000]. Station 4ABWR002.50 records a 1998 maximum value of 54.64 parts per million (ppm) for nickel (Ni) in excess of the PEC SV of 48.6 ppm. The 5.04 mile or 2555 acre segment extends from the mouth of Gills Creek downstream to the Blackwater River confluence with the Roanoke River.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban / Wildlife, Unknown, Natural / Stratification

Recreational Use
The source of the impairment is a combination of agricultural, residential and wildlife contributions from upstream watersheds VAW-L08R, VAW-L09R and VAW-L10R.

Fish Consumption Use
The exact source(s) of the PCB contamination is unknown.

Fact Sheets for Category 5 Waters

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Aquatic Life Use
Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Informational note: Smith Mountain Lake is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.1.; NEW-1). The Water Quality Management Planning (WQMP) Regulation also lists Smith Mountain Lake as water quality limited for phosphorus (9 VAC 25-720-80 B. Segment classification).

The exact source of the sediment nickel contamination is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford

STREAM NAME: Beaverdam Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L12L-06N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 185 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Backwaters of Beaverdam Cr.

RIVER MILE: 2.80

LATITUDE: 37.21472 **LONGITUDE:** -79.74992

DOWNSTREAM LIMIT:

DESCRIPTION: Beaverdam Cr. mouth on Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.19222 **LONGITUDE:** -79.72771

The segment begins in the backwaters of Beaverdam Creek and extends 2.80 miles downstream to its confluence with the Roanoke River. The lake segment is on the Hardy and Goodview Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen (Bottom)

Aquatic Life Use
Bottom layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth.

No measurements at depth are available for Beaverdam Creek. However exceedances of the minimum criterion are believed to occur and are therefore listed. The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen 303(d) Listing remains and the segment categorized 5C.

IMPAIRMENT SOURCE: Natural / Stratification

Aquatic Life Use
Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Informational Note: Smith Mountain Lake is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.1.; NEW-1). The Water Quality Management Planning (WQMP) Regulation also lists Smith Mountain Lake as water quality limited for phosphorus (9 VAC 25-720-80 B. Segment classification).

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford, Campbell, Pittsylvania

STREAM NAME: Leesville Lake - Roanoke River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L13L-01N

ASSESSMENT CATEGORY: 5C/4C

SEGMENT SIZE: 2055 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Pigg & Roanoke R.

RIVER MILE: 156.65

LATITUDE: 37.00556 **LONGITUDE:** -79.48118

DOWNSTREAM LIMIT:

DESCRIPTION: Leesville Dam

RIVER MILE: 143.85

LATITUDE: 37.09278 **LONGITUDE:** -79.40261

The upstream limit of the segment is at the confluence of the Pigg and Roanoke Rivers downstream 12.80 miles to Leesville Dam. The segment spans the Smith Mountain Dam and Leesville Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH - 407 acres / Dissolved Oxygen (Bottom) - 2055 acres

Aquatic Life Use
Top layer: The waters exceed the WQS pH criterion range of 6.0 - 9.0 Standard Units (SU) from the Old Womans Creek mouth downstream to Leesville Dam, a distance of 2.20 miles or 407 acres. Station 4AROA140.66-TL (Leesville Dam) records three of 18 pH measurements exceeding the alkaline criterion. Two of the exceeding values are 9.1 SU found in June and August of 1999. The remaining excursion 9.3 SU occurs in August 2000. The aquatic life use is not supported for 2.20 miles or 470 acres of the lower portion of Leesville Lake as a result- Category 5C.

The Carlson Trophic State Index (TSI) is used to determine the cause of the dissolved oxygen excursions eg. natural or anthropogenic in nature. The following are the index scores form two stations where CA = chlorophyll (a), TP = total phosphorus and SD = seechi disk (transparancy).

4AROA140.66-TL CA [44.73] TP [41.14] SD [48.86].
4AROA145.34-TL CA [46.86] TP [41.50] SD [50.28]

TSI scores below 60 indicate a natural aging process in the reservoir while above 60 indicates man's activities on the land may be influencing the natural reservoir aging process. All scores are fully supporting indicating the natural aging of the reservoir.

Bottom layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters at stations 4AROA140.66 and 4AROA145.34. Exceedances occur in the late spring, summer and early fall.

Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. Station 4AROA145.34-BL (Ramp near Bed/Cam Co. line) records 14 of 85

measurements below the minimum criterion and 4AROA140.66-BL records 63 of 132. The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The cause of the 2002 dissolved oxygen 303(d) Listing is now assessed based on the Carlson Trophic Index noted above. All TSI scores are below 60 indicating a natural reservoir aging process (Category 4C).

IMPAIRMENT SOURCE: Unknown, Natural / Stratification

Aquatic Life Use
The exact source of the pH alkaline exceedance is not known but is believed due to natural conditions created in reservoirs.

Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Pittsylvania

STREAM NAME: Leesville Lake - Pigg River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L13L-02

ASSESSMENT CATEGORY: 5A/4C

SEGMENT SIZE: 154 - Acres

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Backwaters of Leesville Lake on the Pigg R.

RIVER MILE: 3.06

LATITUDE: 36.98861 **LONGITUDE:** -79.51589

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Pigg and Roanoke R.

RIVER MILE: 0.00

LATITUDE: 37.00528 **LONGITUDE:** -79.48122

The segment extends from the backwaters of Leesville Lake on the Pigg River downstream to the Pigg River confluence with the Roanoke River. The segment spans the Sandy Level, Pittsville and Leesville Lake Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Dissolved Oxygen (Bottom- 2002)

Recreational Use
Fecal coliform bacteria cause the segment to not support the recreational use. The segment incorporates station 4APGG003.29 (Rt. 605 Bridge). Four of 18 samples exceed the 400 cfu/100 ml instantaneous criterion. The range of exceeding values is from 500 cfu/100 ml to greater than 8000- Category 5A.

Aquatic Life Use
Station 4APGG003.29 located in the immediate backwaters of Leesville Lake reports a Carlson Trophic Index (TSI) score of 65.82 for total phosphorus. Station 4AROA153.59, located downstream of the Pigg River confluence in the reservoir, reports TSI scores of chlorophyll (a) (CA) [44.26], TP [47.35] and seechi disk (SD) [59.30]. The SD reading is indicative of turbidity as well as algal biomass. No reservoir bottom layer data (below the thermocline) are reported. However the parameter of preference in this situation is chlorophyll (a) with a TSI score of 44.26, well below the 60 TSI. Therefore the segment is Categorized 4C as per guidance.

Only one excursion of the free flowing total phosphorus screening value (SV) of 0.20 mg/l is found in the data at 4APGG003.29. Compared to the reservoir total phosphorus (TP) SV of 0.05 mg/l six of 18 samples exceed. Resulting in an 'Observed Effect' for the reservoir and a 'Water of Concern' for continued monitoring.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife, Natural / Stratification

Recreational Use
The believed source of fecal coliform bacteria is primarily agricultural nonpoint source runoff. Wildlife contributions are possible in this mostly rural watershed.

Aquatic Life Use

Fact Sheets for Category 5 Waters

Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Pittsylvania

STREAM NAME: Old Womans Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.86 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters-end of perennial section

RIVER MILE: 8.43

LATITUDE: 36.97417 **LONGITUDE:** -79.39528

DOWNSTREAM LIMIT:

DESCRIPTION: Old Womans Cr. mouth on Roanoke R.

RIVER MILE: 3.57

LATITUDE: 37.06194 **LONGITUDE:** -79.40472

The upstream limit of this segment is the creek's headwaters. The downstream limit is at the inundation of Old Woman's Creek at Leesville Lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The 1999 Federal Consent Decree includes 4AOWC005.36 as a 1998 Attachment B station. The station is 2002 303(d) Listed as exceedances of the former WQS 1000 cfu/100 ml criterion are 13.6%; three of 22 exceedances.

Station 4AOWC005.36 is located on the Rt. 760 Bridge in Pittsylvania County. The recreational use is not supported due to exceedance of the current 400 cfu/100 ml instantaneous criterion. Fecal coliform bacteria exceedances are found in three of 17 samples. Exceeding values range from 800 to 6000 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Agriculture/Wildlife

Recreational Use
The source of fecal coliform bacteria is believed to be a possible mix of agricultural and wildlife nonpoint source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Pigg River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 35.06 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: South Prong Pigg R. mouth on the Pigg R.

RIVER MILE: 77.95

LATITUDE: 36.97153 **LONGITUDE:** -80.04379

DOWNSTREAM LIMIT:

DESCRIPTION: ~ Ten miles downstream of Rocky Mt. STP.

RIVER MILE: 42.89

LATITUDE: 36.98250 **LONGITUDE:** -79.78292

The segment begins at the mouth of the South Prong Pigg River on the Pigg River extending downstream of the Rocky Mount STP to an unnamed tributary to the Pigg River upstream of the community of Gladehill. The segment spans the Rocky Mount and Gladehill Quads.

Note: The 2002 listed segment is extended upstream in 2004 to the mouth of the South Prong Pigg River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The segment is extended upstream from the confluence of Storey Creek on the Pigg River continuing on upstream to the mouth of the South Prong Pigg River. A total of 35.06 miles are impaired with the 2004 addition of 13.38 miles to the 2002 impaired miles (21.68). The extension of the segment is based on additional data described below.

Three stations along the Pigg River find the recreational use impaired due to exceedance of the 400 cfu/100 ml instantaneous criterion. Station locations are: 4APGG074.87 - Rt. 908 Ford, 4APGG068.49 - Rt. 756 Bridge and 4APGG052.73 - Rt. 713 Bridge.

Four of nine fecal coliform bacteria samples exceed at Station 4APGG074.87. Exceedance values range from 600 cfu/100 ml to greater than 8000. Station 4APGG068.49 reports three of nine exceedances ranging from 600 to 2000 cfu/100 ml. The recreational use is not supported. Fecal coliform bacteria cause impairment at station 4APGG052.73 as well where 15 of 57 samples exceed the instantaneous criterion. Fecal coliform exceedances range from 700 cfu/100 ml to greater than 8000.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban / Wildlife

Recreational Use
Contributing sources are believed to be from agricultural activities, wildlife and episodic urban nonpoint events.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Storey Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L14R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.6 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Intersection of Rt. 40 & Rt. 748

RIVER MILE: 11.60

LATITUDE: 36.93000 **LONGITUDE:** -80.03851

DOWNSTREAM LIMIT:

DESCRIPTION: Storey Cr. mouth on the Pigg River

RIVER MILE: 0.00

LATITUDE: 36.96361 **LONGITUDE:** -79.90908

The upper limit is west of Ferrum near the intersection of Rt. 40 and Rt. 748, perennial headwaters (Ferrum Quad). The downstream limit is the mouth of Storey Creek on the Pigg River (Rocky Mount Quad).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The segment does not support the recreational use. Nonsupport is due to fecal coliform bacteria exceedances of the 400 cfu/100 ml criterion at two stations 4ASDA009.79 (Rt. 623 above Ferrum STP), 4ASDA009.77 (off Rt. 864 below Ferrum STP). 4ASDA009.79 reports 13 exceedances from 24 observations and 4ASDA009.77 records 13 out of 37. Both stations range of exceedance is from 500 cfu/100 ml to greater than 8000. A third station 4ASDA007.24 (Rt. 40 Bridge near Ferrum) records one exceedance from eight observations at 4700 cfu/ 100 ml. These data are insufficient to assess [Assessment Guidance 2004].

Aquatic Life Use
A 9.61 mile 'Water of Concern' extends from the Ferrum Water & Sewerage Authority outfall (36°55'36.24 / 080°00'35.56) downstream to the Storey Creek mouth on the Pigg River. Total phosphorus screening value exceedances result in an 'Observed Effect' in these waters.

Upstream station 4ASDA009.79 found no total phosphorus exceedances from 25 samples. Station 4ASDA009.77 records 16 exceedances of the 0.20 mg/l total phosphorus screening value from 38 samples. Maxima range in values from 0.30 to 4.30 mg/l (November 1998). 4ASDA009.77 is located downstream of the Ferrum Water & Sewerage Authority's outfall on Storey Creek. An additional downstream station 4ASDA007.24 also finds TP SV exceedances. The SV range of exceedance is from 0.25 mg/l to 0.35 in five of nine samples.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban / Wildlife

Recreational Use
The source is believed to be a mix of agricultural, wildlife and urban nonpoint source runoff around the Ferrum area. Infiltration/Inflow problems have been noted in the Ferrum area. A Consent Order requires the Ferrum Water & Sewerage Authority to correct these problems.

Fact Sheets for Category 5 Waters

Aquatic Life Use
The source of the total phosphorus is believed from the Ferrum Water & Sewerage Authority's STP on Storey Creek.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin

STREAM NAME: Big Chestnut Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L15R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.88 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Little Chestnut Cr. conflunce with Big Chestnut Cr.

RIVER MILE: 12.88

LATITUDE: 36.89528 **LONGITUDE:** -79.82917

DOWNSTREAM LIMIT:

DESCRIPTION: Big Chestnut Cr. mouth on the Pigg R.

RIVER MILE: 0.00

LATITUDE: 36.93083 **LONGITUDE:** -79.73730

Big Chestnut Creek from the confluence of Little Chestnut Creek downstream to its confluence with the Pigg River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4ACNT001.32, located on the Rt. 715 Bridge, finds fecal coliform bacteria exceed the 400 cfu/100 ml instantaneous criterion in two of 17 samples. The exceedances are 600 and 2300 cfu/100 ml. The recreational use is not supported.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
Agricultural activities and wildlife are believed to be the major contributing sources for the bacteria impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin, Pittsylvania

STREAM NAME: Snow Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.98 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Snow Br./Ditto Br. Confluence.

RIVER MILE: 10.98

LATITUDE: 36.87722 **LONGITUDE:** -79.68745

DOWNSTREAM LIMIT:

DESCRIPTION: Snow Cr. mouth on Pigg R.

RIVER MILE: 0.00

LATITUDE: 36.92917 **LONGITUDE:** -79.60123

The upstream limit of this segment is the Ditto Branch confluence on Snow Creek. The segment end is at the mouth of Snow Creek on the Pigg River. The segment spans the Penhook and Sandy Level Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The 1999 Federal Consent Decree includes 4ASNW000.60 as a 1998 Attachment B station. Fecal coliform bacteria are 303(d) listed in 2002 and again in 2004. The 2002 assessment reports five of 22 samples in excess of the former 1000 cfu/100 ml instantaneous criterion. An exceedance rate of 22 percent.

The 2004 assessment finds three of 17 samples exceed the current 400 cfu/100 ml instantaneous criterion at station 4ASNW000.60, Kirby Ford Bridge. The exceedance range is from 1500 cfu/100 ml to greater than 8000.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The source(s) of fecal coliform bacteria is believed to be from agricultural activities and wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Franklin, Pittsylvania

STREAM NAME: Pigg River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 28.92 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Big Chestnut Cr. mouth on the Pigg R.

RIVER MILE: 32.99

LATITUDE: 36.93083 **LONGITUDE:** -79.73730

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Leesville Lake

RIVER MILE: 4.07

LATITUDE: 36.98861 **LONGITUDE:** -79.51589

The segment extends from the mouth of Big Chestnut Creek on the Pigg River (RM 32.99) downstream to the backwaters of Leesville Lake(RM 4.07). The segment spans the Penhook and Sandy Level Quads.

Note: This segment now incorporates the former TMDL ID of VAW-L16R-01 (15.54 miles) initially listed in 2002.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bacteria cause the segment to not support the recreational use based on data from two stations along the Pigg River. Station 4APGG030.62 (Rt. 646, Fralin Bridge) found seven of 27 samples exceeding the 400 cfu/100 ml instantaneous criterion in 2002 and again in 2004. And downstream station 4APGG003.29 (Rt. 605 Bridge) finds four of 18 samples exceed the instantantaneous criterion. Exceedance at this station has occurred since 1998. Each station reports exceeding values ranging from 500 cfu/100 ml to greater than 8000.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The believed source(s) of fecal coliform bacteria is primarily agricultural nonpoint source runoff and wildlife contributions from this mostly rural watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford

STREAM NAME: Goose Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.79 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of North and South Forks of Goose Cr.

RIVER MILE: 41.82

LATITUDE: 37.37005 **LONGITUDE:** -79.69999

DOWNSTREAM LIMIT:

DESCRIPTION: Bore Auger Cr. mouth on Goose Cr.

RIVER MILE: 35.03

LATITUDE: 37.30898 **LONGITUDE:** -79.66283

The segment begins at the confluence of the North and South Forks of Goose Creek extending downstream to the mouth of Bore Auger Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Located on the Rt. 755 Bridge station 4AGSE037.78 finds fecal coliform bacteria exceeds in three of 18 analyses. Each exceedance, 500, 700 and 4800 cfu/100 ml, is in excess of the 400 cfu/100 ml instantaneous criterion. The recreational use is not supported.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban / Wildlife

Recreational Use
Possible sources of the fecal coliform bacteria are urban and agricultural nonpoint source runoff as well as wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford

STREAM NAME: Goose Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.28 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Rocky Br. mouth on Goose Cr.

RIVER MILE: 27.07

LATITUDE: 37.27170 **LONGITUDE:** -79.60415

DOWNSTREAM LIMIT:

DESCRIPTION: Stony Fork Cr. confluence on Goose Cr.

RIVER MILE: 19.79

LATITUDE: 37.20419 **LONGITUDE:** -79.57901

Goose Creek from the mouth of Rocky Branch downstream to the confluence of Stony Fork Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The 1999 Federal Consent Decree includes 4AGSE022.55 as a 1998 Attachment B station for fecal coliform bacteria. The station is not 2002 303(d) listed as the 2002 exceedance rate is 8 percent where two of 23 analyses exceed the former 1000 cfu/100 ml instantaneous criterion. The 2004 fecal coliform bacteria assessment finds nonsupport as described below.

The segment brackets station 4AGSE022.55 at the Rt. 24 Bridge. Fecal coliform bacteria are found in excess of the current instantaneous criterion of 400 cfu/100 ml in two of 18 observations. Each exceedance is 800 and 3100 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
Contributing sources are believed to be from agricultural activities and wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford, Campbell, Pittsylvania

STREAM NAME: Goose Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L22R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.04 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Crab Orchard Cr. mouth on Goose Cr.

RIVER MILE: 10.04

LATITUDE: 37.16167 **LONGITUDE:** -79.48052

DOWNSTREAM LIMIT:

DESCRIPTION: Goose Cr. mouth on Roanoke (Staunton) R.

RIVER MILE: 0.00

LATITUDE: 37.11694 **LONGITUDE:** -79.38384

The upstream limit of this segment is at the Rt. 626 bridge crossing Crab Orchard Creek. The downstream limit is Goose Creek's mouth on the Roanoke River. The segment spans the Huddleston and Leesville Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
The segment does not support the recreational use. Exceedances of the fecal coliform bacteria criterion are found at station 4AGSE000.20 where three of 18 observations exceed the 400 cfu/100 ml instantaneous criterion. Values in excess of the criterion are 1100, 2700 and 6700 cfu/100 ml. The station is located at the Rt. 630 Bridge in Campbell County.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The source of fecal coliform bacteria is believed to be agricultural nonpoint source runoff. Wildlife contributions are possible in this mostly rural watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford

STREAM NAME: Little Otter River

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L26R-01

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 27.03 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Rt. 680 Cobbs Mountain

RIVER MILE: 27.03

LATITUDE: 37.37583 **LONGITUDE:** -79.60824

DOWNSTREAM LIMIT:

DESCRIPTION: Little Otter R. mouth on the Big Otter R.

RIVER MILE: 0.00

LATITUDE: 37.27444 **LONGITUDE:** -79.40525

The upper limit is west of Rt. 680 at Cobbs Mountain on the Peaks of Otter Quad. The downstream limit is the mouth of the Little Otter River on the Big Otter River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (1996) - 27.03 mi., Fish Tissue - PCBs (2002) - 14.36 mi., General Standard (Benthic 2002) - 5.72 mi.

Recreational Use
The Little Otter River Bacteria Total Maximum Daily Load (TMDL) Study and allocations is complete. The segment is therefore Category 4A for bacteria with the US Environmental Protection Agency (EPA) approval of the study on 02/02/2001. The entirety of the approved study and allocations can be viewed at http://www.deq.state.va.us.

The 1996/1998/2002 303(d) Listing basis for fecal coliform bacteria are ambient collections showing contravention of the former 1000 cfu/100 ml fecal coliform criterion in greater than 10 and 25 percent of the samples collected. The segment, although delisted with the US EPA TMDL Study approval (Category 4A), remains impaired for the recreational use for 27.03 miles. 2004 Assessment results are described below.

The total impaired segment includes stations 4ALOR021.92 (Rt. 838 Bridge), 4ALOR018.96 (Rt. 122 Bridge north of the intersection of Routes 122 and 211), 4ALOR014.75 (Rt. 718 Bridge above Bedford STP), 4ALOR010.78 (Rt. 460 Bridge- ambient sampling discontinued in June 1996) and 4ALOR008.64 (Rt. 784 Bridge).

Fecal coliform bacteria cause nonsupport of the recreational use for 12.67 miles in the upper portions of the segment extending from the headwaters downstream to the Bedford STP outfall. Two fecal coliform bacteria collections at 4ALOR021.92 both exceed the current 400 cfu/100 ml instantanteous criterion. Each exceeding value is 3300 cfu/100 ml and greater than 160,000. Station 4ALOR018.96 records two exceedances from two samples. Each exceedance is 4900 cfu/100 ml and greater than 160,000. Sixteen of 60 samples exceed the instantaneous criterion at 4ALOR014.75 with an excursion range from 450 cfu/100 ml to greater than 8000.

Fecal coliform bacteria cause nonsupport in the lower portion of the Little Otter for 14.36 miles. Downstream of the Bedford STP station 4ALOR014.33 records two of two samples exceeding the instantaneous criterion with values ranging from 1100 to greater than 160,000 cfu/100 ml. Station 4ALOR10.78 records two exceedances from two samples at 1700 cfu/100 ml and greater than 160,000. Station

4ALOR008.64 reports 23 of 52 samples exceeding the 400 cfu/100 ml instantaneous criterion. Exceeding values range from 500 to 28,000 cfu/100 ml.

Fish Consumption Use
Fish tissue collections at 4ALOR007.94 find polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) from two species; Carp 68.30 and Smallmouth Bass 54.8 ppb. Other sampled species record PCBs in Redhorse Sucker 28.50 and Redbreast Sunfish 8.21 ppb both below the WQS TV. The waters do not support the fish consumption use for 14.36 miles from the Bedford STP (37°19'47" / 079°27'50") downstream to the Little Otter confluence with the Big Otter River. The fish consumption use impairment is a 2002 addition to the 303(d) Listing and remains in the 2004 Listing. No Virginia Department of Health fish consumption advisory is issued for this segment.

Aquatic Life Use
Station 4ALOR014.33 finds moderate impacts to the biota below the Bedford STP and Johns Creek confluence with the Little Otter River. The waters are impaired for 5.72 miles. The segment begins at the Bedford STP outfall (excluding the mixing zone) and extends downstream to the mouth of Poorhouse Creek (37°17'51" / 079°27'21"). The aquatic life use General Standard (Benthic) impairment is a 2002 addition to the 303(d) Listing.

The downstream portion of the Little Otter River is a 'Water of Concern' for 14.36 miles due to exceedance of the 0.20 mg/l total phosphorus screening value (SV). The segment brackets station 4ALOR008.64. Total phosphorus exceedances at station 4ALOR008.64 finds 29 of 56 samples exceed the SV. The maxima range from 0.3 to 1.50 mg/l resulting in an 'Observed Effect'. The 'Water of Concern' extends from the Bedford STP outfall (excluding the mixing zone) downstream to the Little Otter confluence with the Big Otter River.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban, NPS - Agriculture / Urban, NPS - Agriculture / Urban

Recreational Use
The TMDL Study lists impairment sources as pasture land and direct deposition from cattle as the primary contributors. Wildlife is also noted as a secondary contributor.

Fish Consumption Use
The exact sources of the PCB contamination are unknown.

The Virginia Department of Health (VDH) action level for PCBs is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment.

Aquatic Life Use
The General Standard (Benthic) impairment is believed due to urban storm runoff and sewage overflows along Johns Creek.

Total phosphorus exceedances are believed due to point source as well as nonpoint source urban runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Bedford, Bedford City

STREAM NAME: Johns Creek

HYDROLOGIC UNIT: 03010101

TMDL ID: VAW-L26R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.13 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Near headwaters in Bedford City.

RIVER MILE: 2.13

LATITUDE: 37.33889 **LONGITUDE:** -79.49389

DOWNSTREAM LIMIT:

DESCRIPTION: Johns Creek mouth on the Little Otter R.

RIVER MILE: 0.00

LATITUDE: 37.32833 **LONGITUDE:** -79.46364

The segment begins near the headwaters of Johns Creek and extends downstream to its confluence with the Little Otter River. The segment spans the Bedford and Goode Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Aquatic Life Use
The segment brackets biological station 4AJHN000.01, near the Johns Creek confluence with the Little Otter River. The original 2002 Benthic results show moderate impact to the benthic community from a total of three Rapid Bioassessment Protocol II (RBP II) surveys. The 2004 assessment also reports moderate impairment from two spring RBP II surveys; RBP II scores of 73.68 in 1999 and 35.00 in 2000. Despite the spring 1999 higher score the survey found the total number of taxa and total individuals were low with pollution tolerant taxa dominant. The segment remains impaired for the General Standard benthic impairment.

IMPAIRMENT SOURCE: NPS - Urban

Aquatic Life Use
The impairment source is believed to be primarily urban nonpoint source pollution. The impairment source is urban pump station overflows and with possible agriculture nonpoint source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Patrick

STREAM NAME: Dan River

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L42R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 9.81 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Squirrel Cr. mouth on the Dan River

RIVER MILE: 178.18

LATITUDE: 36.61528 **LONGITUDE:** -80.45149

DOWNSTREAM LIMIT:

DESCRIPTION: VA-NC State line - after return from NC

RIVER MILE: 168.37

LATITUDE: 36.54944 **LONGITUDE:** -80.42193

The segment extends from the VA-NC State Line upstream to the Squirrel Creek mouth on the Dan River off Route 631 in Patrick County. The entire segment is on the Claudville Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
The basis for the original 2002 temperature Listing is due to exceedance of the 21°C temperature criterion for this stockable trout water (WQS Class V) in three of 19 measurements at station 4ADAN169.57. The exceedances are 21.5 °C (1996), 21.2 °C (1997) and 23.6 °C (1998), all occuring in the month of July. The last sample taken is May 2000. The 2004 assessment finds one of 11 measurements exceeding the temperature criterion. The segment therefore remains impaired for temperature (Category 5C) and thus does not support the aquatic life use. The station is located north of the VA-NC State line on the Rt. 645 Bridge.

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The impairment is believed to result from solar radiation as there are no known sources of heat in the area.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Patrick

STREAM NAME: South Mayo River

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L43R-01

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 25.79 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: ~0.3 miles upstream of Wilson Cr. mouth on South Mayo R.

RIVER MILE: 38.21

LATITUDE: 36.63956 **LONGITUDE:** -80.34245

DOWNSTREAM LIMIT:

DESCRIPTION: Spoon Cr. mouth on South Mayo R.

RIVER MILE: 12.42

LATITUDE: 36.56778 **LONGITUDE:** -80.10586

The upper limit is 0.3 miles upstream of the Wilson Creek mouth (near Dobyns) on the South Mayo River and extends downstream to the confluence of Spoon Creek on the South Mayo River.

Note: The 5.77 mile 1998 segment is expanded by 20.02 miles in 2004 as the result of additional data collection.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Temperature (2004) - 4.46 mi.

Recreational Use
The South Mayo River Bacteria TMDL Flow Duration Study with load allocations is complete. U.S. EPA approved the study on 02/27/2004 (would be Category 4A for Bacteria). The TMDL Study and allocations can be viewed at http://www.deq.state.va.us. Additional data collection causes the original 5.77 mile segment to be expanded 20.02 miles.

The original 5.77 mile 1998 fecal coliform bacteria impairment began at the mouth of Russell Creek extending downstream to the mouth of Spoon Creek on the South Mayo River. The 1998 impairment is based on fecal coliform bacteria data producing a greater than 10 percent exceedance rate of the former 1000 cfu/100 ml instantaneous criterion at station 4ASMR016.09 (Rt. 700 Bridge at the USGS gaging station). Additional data collection and the current 400 cfu/100 ml instantaneous criterion causes the 2004 expansion upstream from two stations 4ASMR033.98 (Rt. 787 Bridge West of Stuart) and 4ASMR027.44 (Rt. 681 Bridge South of Stuart). 2004 Assessment results of these data are presented below.

Station 4ASMR033.98 is a 1999 Federal Consent Decree Attachment B station for fecal coliform bacteria. The station is not 2002 listed as there are no exceedances of the former 1000 cfu/100 ml criterion from 19 samples in 2002.

Station 4ASMR033.98 finds fecal coliform bacteria exceedance of the 400 cfu/100 ml instantaneous criterion in five of 20 samples. Exceeding values range from 500 to 1200 cfu/100 ml. This station was fully supporting of the former criterion in the 2002 assessment.

Two of nine fecal coliform bacteria samples exceed the 400 cfu/100 ml instantaneous criterion with values of 1400 and 1700 cfu/100 ml at station 4ASMR027.44. And the original 1998 impaired listing station 4ASMR016.09 records exceedances in five of 26 samples. The exceeding values range from 500 cfu/100 ml to greater than 16,000.

Fact Sheets for Category 5 Waters

Aquatic Life Use
The 2004 Assessment records temperature excursions of the Class VI, natural trout water criterion of 20°C. Station 4ASMR033.98 finds two of 19 temperature measurements exceeding the criterion- Category 5C. Each exceedance is 22°C occuring on 07/20/1998 and 08/28/2001.

The temperature impairment is a 2004 addition to the South Mayo River mainstem extending from upstream of the Wilson Creek mouth (36°38'22" / 80°20'33"), river mile 38.21, downstream to the end of the WQS natural trout section located just upstream of the Town of Stuart water intake (36°38'19" / 80°17'26") at river mile 33.75. The entire 4.46 mile impairment is on the Stuart Quad.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban / Wildlife, Unknown

Recreatonal Use
Urban, Agricultural and wildlife nonpoint sources are believed to be the primary contributing sources to the impairment.

Aquatic Life Use
Source unknown. There are no known sources of heat other than solar radiation to contribute to the temperature impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Patrick

STREAM NAME: Spoon Creek

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L44R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.64 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Unnamed tributary to Spoon Cr. (southeast of Patrick Springs (36° 37' 02" / 80° 09' 45").

RIVER MILE: 7.64

LATITUDE: 36.61718 **LONGITUDE:** -80.16239

DOWNSTREAM LIMIT:

DESCRIPTION: Spoon Cr. mouth on South Mayo R.

RIVER MILE: 0.00

LATITUDE: 36.56778 **LONGITUDE:** -80.10586

Spoon Creek mainstem from an unnamed tributary to Spoon Creek (southeast of Patrick Springs @ 36° 37' 02" / 80° 09' 45") downstream to its confluence with the South Mayo River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4ASOO003.12 (Route 832 Bridge) records three of 16 fecal coliform bacteria samples in excess of the 400 cfu/100 ml instantaneous criterion. Exceeding values range from 500 to 700 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Henry, Patrick

STREAM NAME: South Mayo River

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L45R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.86 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Spoon Cr. mouth on South Mayo R.

RIVER MILE: 11.17

LATITUDE: 36.56778 **LONGITUDE:** -80.10586

DOWNSTREAM LIMIT:

DESCRIPTION: South Mayo River at VA/NC State Line.

RIVER MILE: 0.31

LATITUDE: 36.54227 **LONGITUDE:** -79.99253

South Mayo River mainstem from the mouth of Spoon Creek downstream to the Virginia / North Carolina State Line. The segment spans the Spencer and Price Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Two of 16 fecal coliform bacteria samples exceed the 400 cfu/100 ml instantaneous criterion at station 4ASMR004.14. Exceeding values range from 500 to 6800 cfu/100 ml. Station 4ASMR004.14 is located on the Route 695 Bridge.

Fish Consumption Use
These waters are a 'Water of Concern' due to the exceedance of the 15 parts per billion (ppb) WQS tissue value for the Polyaromatic Hydrocarbon Benzo(a) pyrene [Guidance Table 6(a)]. The exceedance is found in one species, Redbrest Sunfish at 78 ppb and results in an 'Observed Effect' for the segment.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The exact source(s) of the fecal coliform bacteria exceedance is not known but is believed to be a result of nonpoint source runoff from agriculture and/or wildlife.

Fish Consumption
The exact source(s) of Benzo(a) pyrene are not known.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Henry, Patrick

STREAM NAME: North Mayo River

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L46R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 22.46 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Laurel Br. and Polebridge Cr.

RIVER MILE: 22.63

LATITUDE: 36.68933 **LONGITUDE:** -80.11552

DOWNSTREAM LIMIT:

DESCRIPTION: VA/NC State Line.

RIVER MILE: 0.17

LATITUDE: 36.54228 **LONGITUDE:** -79.98794

The segment begins at the confluence of Laurel Branch and Polebridge Creek extending downstream to the Virginia / North Carolina State Line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4ANMR002.60 is a 1999 Federal Consent Decree Attachment B station for fecal coliform bacteria. The station is not 303(d) Listed in 2002 as only one exceedance of the former 1000 cfu/100 ml instantaneous criterion is found from 21 samples. The 2002 exceedance rate is 5 percent.

Two stations 4ANMR020.13 located on the Route 626 Bridge and 4ANMR002.60 both find excursions of the current 400 cfu/100 ml instantaneous criterion for fecal coliform bacteria. 4ANMR020.13 reports three of nine samples exceeding the criterion at 500, 600 and 1000 cfu/100 ml. 4ANMR002.60 finds three exceedances from 25 samples at 500, 600 and 1100 cfu/100 ml. The waters do not support the recreational use.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The exact source(s) of the fecal coliform bacteria exceedance is not known but is believed to be a result of nonpoint source runoff from agriculture and/or wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Henry

STREAM NAME: Horse Pasture Creek

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L47R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.27 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of an unnamed tributary East of Route 696 (36°39'38" / 80°00'55").

RIVER MILE: 7.27

LATITUDE: 36.66058 **LONGITUDE:** -80.01534

DOWNSTREAM LIMIT:

DESCRIPTION: Horse Pasture Cr. confluence with North Mayo R.

RIVER MILE: 0.00

LATITUDE: 36.57875 **LONGITUDE:** -79.99038

The upper limit of the segment is at the confluence of an unnamed tributary East of Route 696 (36°39'38" / 80°00'55") downstream to the mouth of Horse Pasture Creek on the North Mayo River. The segment spans the Spencer and Price Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4AHRN004.93 reports five of 17 fecal coliform bacteria samples exceeding the 400 cfu/100 ml instantaneous criterion. The range of exceedance is from 600 to 2000 cfu/100 ml. Station 4AHRN004.93 is located on the Route 695 Bridge.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The exact source(s) of the fecal coliform bacteria exceedance is not known but is believed to be a result of nonpoint source runoff from agriculture and/or wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Patrick

STREAM NAME: Smith River

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L50R-01

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 9.2 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Rich Run mouth on the Smith R.

RIVER MILE: 79.20

LATITUDE: 36.74083 **LONGITUDE:** -80.29633

DOWNSTREAM LIMIT:

DESCRIPTION: Widgeon Creek mouth on the Smith R.

RIVER MILE: 70.00

LATITUDE: 36.80083 **LONGITUDE:** -80.21704

The segment begins at the mouth of Rich Run on the Smith River and extends downstream to the mouth of Widegon Creek on the Smith River. The segment spans the Woolwine and Charity Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2004), Temperature (2002)

Recreational Use
The recreational use is not supported based on fecal coliform bacteria results from station 4ASRE075.69. Four of 28 observations exceed the 400 cfu/100 ml instantaneous criterion. Excursions range from 600 to 900 cfu/100 ml. The station is located on the Route 708 Bridge in Patrick County. The bacteria impairment is a 2004 addition to the segment (Category 5A).

Aquatic Life Use
Exceedance of the WQS Class VI 20°C temperature criterion for this natural trout water occurs in nine of 28 measurements at station 4ASRE075.69. The range of exceedance is from 21 to 24°C all occuring in the summer months. Excursions are found primarily during the 1999-2002 drought. The temperature impairment originally listed in 2002 is based on 4ASRE075.69 data where three of 20 measurements exceed the criterion (Category 5C).

Supplemental Information: US Geological Survey station 02071510 records two of eight exceedances of the 20°C criterion, although outside the 2004 assessment data window (1998-2002). The excursions are from July 18 (23°C) and August 15 (24°C) 1995. The station is located 1.19 miles upstream of any known potential source of heat at the Rt. 615 crossing.

IMPAIRMENT SOURCE: NPS - Wildlife / Residential, Unknown

Recreational Use
Confirmed sources of fecal coliform bacteria are not known. Nonpoint Source runoff / direct deposit from wildlife or some agricultural practices may be contributing to the impairment.

Aquatic Life Use
The exact source of the temperature exceedances is unknown. Temperature exceedances are believed to be due to solar radiation based

on the rarity of excursions and the time of year in which they occur. Although outside the 2004 assessment data window (1998-2002) US Geological Survey station 02071510 data from July and August 1995 indicate a natural occurrence.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Floyd, Franklin

STREAM NAME: Rennet Bag Creek

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L51R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 11.16 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Rennet Bag Creek headwaters.

RIVER MILE: 13.36

LATITUDE: 36.89278 **LONGITUDE:** -80.23759

DOWNSTREAM LIMIT:

DESCRIPTION: Rennet Bag Creek inundation at Philpott Reservoir.

RIVER MILE: 2.20

LATITUDE: 36.86750 **LONGITUDE:** -80.11663

Rennet Bag Creek from its headwaters downstream to its inundation at Philpott Reservoir. The segment spans the Endicott, Charity and Philpott Reservoir Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Station 4ARBC005.44 records two exceedances from six temperature measurements (Category 5C). Temperature excursions of the WQS Class V (stockable trout) 21 °C and Class VI (natural trout) 20 °C criteria occur in the summer months of August 1999 at 26.4 °C and June 2000 at 23.3 °C. Station 4ARBC005.44 is located on Rt. 43 west of Endicott in the WQS 9.04 mile natural trout water section. Class V stockable trout waters are 2.12 miles.

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
A confrimed source for temperature exceedances is not known but is believed due to solar radiation based on the time of year in which they occur.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Henry, Patrick

STREAM NAME: Blackberry Creek

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L52R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.82 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters of Blackberry Cr.

RIVER MILE: 14.82

LATITUDE: 36.75694 **LONGITUDE:** -80.13710

DOWNSTREAM LIMIT:

DESCRIPTION: Blackberry Cr. mouth on Smith R.

RIVER MILE: 0.00

LATITUDE: 36.75028 **LONGITUDE:** -79.97854

This segment begins at the headwaters of Blackberry Creek (RM 13.63) and extends downstream to Blackberry Creek's mouth on the Smith River. The segment includes an unnamed tributary from the north. The mouth of the unnamed tributary is at 36° 44' 38" / 80° 03' 07". The segment spans the Charity, Sanville, Martinsville West and Bassett Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Exceedance of the former fecal coliform instantaneous criterion of 1000 cfu/100 ml instantaneous criterion and the geometric mean of 200 cfu/100 ml cause the segment to not support the recreational use in 2002. Ambient station 4ABRY000.05, a 1999 Federal Consent Decree station is 2002 listed with an exceedance rate of 15 percent from three of 20 samples. Exceedance of the current fecal coliform bacteria 400 cfu/100 ml instantaneous criterion and the geometric mean continue to show nonsupport. Escherichia coli (E. coli) exceed the 235 cfu/100 ml instantaneous criterion as well. No geometric means for E. coli are calculated as collections are monthly only.

Special monitoring of Blackberry Creek began in the fall of 1999 after complaints from local residents regarding sewer service in the Blackberry drainage. Listed below are the monitored sites showing instantaneous excursions / with total sample collections and geometric mean calculation exceedances / with total calculations for fecal coliform bacteria. Instantaneous E. coli exceedances follow. One ambient fixed site 4ABRY000.05 is included with the non-fixed sites below. Unnamed tributaries comprise 1.19 miles of the overall segment.

Fecal coliform bacteria results:
2000W0034C Blackberry Cr. at Rt. 57A Bridge - 10/27 instant; 2/2 geomean.
2000W0034E Blackberry Cr. American Legion Bridge - 14/26 instant; 2/2 geomean.
4ABRY000.05 Blackberry Cr. American Legion Bridge - 4/20 instant.
2000W0034F Blackberry Cr. above Rt. 698 Bridge - 13/27 instant; 2/2 geomean.
2000W0034G Blackberry Cr. at Rt. 676 Bridge - 8/26 instant; 1/2 geomean.
2000W0034H Blackberry Cr. at end of Rt. 677 - 6/26 instant; 0/2 geomean.
2000W0034I Blackberry Cr. at Rt. 832 Bridge - 12/27 instant; 2/2 geomean.
2000W0034J Blackberry Cr. at Rt. 687 Bridge - 8/21 instant; 2/2 geomean.
2000W0034L Blackberry Cr. at Microfilm Road - 7/26 instant; 1/2 geomean.

Fact Sheets for Category 5 Waters

2000W0034M UT (unnamed tributary) above confluence w/Blackberry Cr. - 1/24 instant; 0/1 geomean.
2000W0034O Blackberry Cr., UT below Westwood Lagoon - 19/24 instant; 1/1 geomean.
2000W0034P Blackberry Cr., UT immediately above Westwood Lagoon - 11/25 instant; 1/1 geomean.
2000W0034R Blackberry Cr. along Rt. 779 - 15/24 instant; 1/1 geomean.
2000W0034S Blackberry Cr., UT above Rt. 832 Bridge - 4/15 instant; 1/1 geomean.
2000W0034T Blackberry Cr., UT above Westwood Rt. 1226 - 7/19 instant; 0/1 geomean.
2000W0034U Blackberry Cr., UT below Westwood Lagoon - 14/19 instant.
2000W0034V Blackberry Cr., UT below Westwood Lagoon - 11/19 instant.

Escherichia coli (E. coli) bacteria results:
2000W0034C Blackberry Cr. at Rt. 57A Bridge - 5/21 instant.
2000W0034E Blackberry Cr. American Legion Bridge - 7/20 instant.
4ABRY000.05 - None collected.
2000W0034F Blackberry Cr. above Rt. 698 Bridge - 10/21 instant.
2000W0034G Blackberry Cr. at Rt. 676 Bridge - 2/20 instant.
2000W0034H Blackberry Cr. at end of Rt. 677 - 3/20 instant.
2000W0034I Blackberry Cr. at Rt. 832 Bridge - 7/21 instant.
2000W0034J Blackberry Cr. at Rt. 687 Bridge - 5/15 instant.
2000W0034L Blackberry Cr. at Microfilm Road - 8/19 instant.
2000W0034M UT (unnamed tributary) above confluence w/Blackberry Cr. - 1/19 instant.
2000W0034O Blackberry Cr., UT below Westwood Lagoon - 12/19 instant.
2000W0034P Blackberry Cr., UT immediately above Westwood Lagoon - 7/20 instant.
2000W0034R Blackberry Cr. along Rt. 779 - 8/20 instant.
2000W0034S Blackberry Cr., UT above Rt. 832 Bridge - 1/11 instant.
2000W0034T Blackberry Cr., UT above Westwood Rt. 1226 - 6/15 instant.
2000W0034U Blackberry Cr., UT below Westwood Lagoon - 9/19 instant.
2000W0034V Blackberry Cr., UT below Westwood Lagoon - 8/19 instant.

IMPAIRMENT SOURCE: PS / NPS - Urban

Recreational Use
The source of fecal coliform bacteria is believed to be mainly from minor municipal point sources and urban (residential) nonpoint source runoff. There is only minimal agricultural activity in the drainage.

The Henry County Public Service Authority (Receiver) has taken over the operation of former privately held treatment works in the drainage. Application for a Rural Housing Authority Grant for interceptor construction has been made. Interceptor construction in the drainage will remove of most of the existing small treatment works outfalls. Construction originally anticipated to begin in the fall of 2002 has been delayed due to easement aquisition.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Henry

STREAM NAME: Smith River

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L53R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.95 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Reed Creek mouth on Smith R.

RIVER MILE: 34.57

LATITUDE: 36.72133 **LONGITUDE:** -79.94012

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Martinsville Power Dam

RIVER MILE: 27.62

LATITUDE: 36.65960 **LONGITUDE:** -79.89062

The segment starts at the mouth of Reed Creek on the Smith River and extends downstream to the former E. I. duPont outfall on the Smith River (backwaters of the Martinsville Power Dam). The entire segment is on the Martinsville West Quad.

Note: Station river mile incompatibility exists in Smith River station identifiers. Begining and ending river miles are relative to the stations located within the segment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4ASRE033.19 located on the Route 701 Bridge in Fieldale finds nine of 59 fecal coliform bacteria observations in excess of the 400 cfu/100 ml instantaneous criterion. Exceeding values range from 500 cfu/100 ml to greater than 8000. The recreational use is not supported as a result.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
Urban nonpoint source runoff is believed to be the source of the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Henry, Martinsville

STREAM NAME: Smith River

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L54R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.77 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Martinsville Dam

RIVER MILE: 25.11

LATITUDE: 36.66444 **LONGITUDE:** -79.88361

DOWNSTREAM LIMIT:

DESCRIPTION: Turkey Pen Br. mouth on the Smith R.

RIVER MILE: 11.34

LATITUDE: 36.56684 **LONGITUDE:** -79.77867

The segment begins at the Martinsville Dam (Martinsville West Quad) and extends downstream to the mouth of Turkey Pen Branch on the Northwest Eden Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2002), General Standard (Benthic 1998)

Recreational Use
Station 4ASRE022.71 is a 1999 Federal Consent Decree Attachment B station and was not 2002 listed as impaired. Only four of 59 samples exceed the former 1000 cfu/100 ml instantaneous criterion or an exceedance rate of 6 percent in 2002.

Station 4ASRE022.71 (Footbridge above the Martinsville STP) shows in 2004 nonsupport of the recreational use from 41 samples with eight exceedances of the current 400 cfu/100 ml instantaneous criterion. Exceeding values range from 500 to greater than 8000 cfu/100 ml. An additional 3.59 miles are added to the 2002 303(d) Listing as a result.

Stations 4ASRE021.58 (Rt. 58 Bypass Bridge, Henry Co.) and 4ASRE015.43 (Rt. 636 Bridge) both record fecal coliform bacteria exceedances of the former instantaneous criterion (2002) of 1000 n/100 ml and the current 400 cfu/100 ml instantaneous criterion (2004). Each station 4ASRE021.58 and 4ASRE015.43 find six of 35 samples exceeding the current 400 cfu/100 ml instantaneous criterion. The range of exceedance for 4ASRE021.58 is from 600 to greater than 8000 cfu/100 ml. And from 500 to 1300 cfu/100 ml at 4ASRE015.43.

Aquatic Life Use
4ASRE026.04 (below Martinsville Dam formerly coded 4ASRE026.38) and 4ASRE015.43 (Rt. 636 Bridge) both find slight or no impairment to the benthic community from Rapid Biological Protocol II (RBP II) methods. However the entire 1998 303(d) Listed segment remains impaired as data are insufficient for de-listing two portions of the Smith for contravention of the General Standard. A minimum of two consecutive RBP II surveys crossing seasons must show no impairment to the biota.

Insufficient data do not allow a partial delisting of an upper 3.59 mile portion or a lower 4.76 mile portion of the Smith River. RBP II surveys at 4ASRE026.04 indicate loss of substrate due to hydrologic operations upstream of the site resulting in slight impairment. Three of four surveys show only slight impairment. The Martinsville Dam affects the river by periodically causing some of the stream substrate to become dewatered, thus reducing the amount of habitat available for benthic macroinvertebrate production. The Dam also affects water quality by

releasing water that is higher in temperature and lower in oxygen than it would be without the impoundment.

Station 4ASRE015.43 located on the downstream end of the original 1998 segment provides improved results as well. Three of four RBP II surveys find no impairment (2 Fall surveys 2000 and 2001) and one slight impairment to the benthic community in fall 1999. The benthic community in spring 1999 showed signs of recovery finding the best Family Biotic Index (metric based on the pollution tolerance of taxa) score at this station for the five-year assessment window (1998-2002).

RBP II surveys find the benthic community moderately impacted causing nonsupport of the aquatic life use representing 5.42 miles of the overall 13.77 mile 1998 segment. This portion of the Smith River incorporates Rapid Biological Assessment Protocol II (RBP II) stations 4ASRE22.30 (below the Martinsville STP), 4ASRE019.00 (above the Marrowbone Creek mouth). A 1998 Corbicula study indicate that chlorides may have an impact on the benthos. Chlorides have been greatly reduced as a result of plant closings in the area since the 1998 study.

Industrial plant closings in the Martinsville / Henry County area have resulted in the closurer of the Upper Smith River Henry County PSA wastewater treatment facility. Wastewater will be transported to the Martinsville STP. Greatly reduced influent chloride levels from industrial inputs to the Martinsville STP are anticipated with subsequent reductions of chlorides in the effluent. Improved benthic conditions are anticipated as a result.

IMPAIRMENT SOURCE: NPS - Urban, PS / NPS - Urban, Power Dam Releases

Recreational Use
Urban nonpoint source runoff is the believed source of the fecal coliform bacteria impairment.

Aquatic Life Use
The source of the benthic impairment is believed to be a mix of municipal point source and possible urban nonpoint source runoff. Releases from or lack of releases from Hydostructures upstream cause dewatering or scouring immediately downstream affecting habitat.

Large reductions in industrial wastewater treated at the Martinsville STP and Henry County Lower Smith River STP are the result of plant closings. Wastewater from the former Upper Smith River facility are now flowing to the Martinsville City wastewater treatment facility. Improving benthic conditions are anticipated as a result.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Henry

STREAM NAME: Marrowbone Creek

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L55R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.33 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Henry Co. PSA WTP

RIVER MILE: 4.33

LATITUDE: 36.60306 **LONGITUDE:** -79.87113

DOWNSTREAM LIMIT:

DESCRIPTION: Marrowbone Cr. mouth on Smith R.

RIVER MILE: 0.00

LATITUDE: 36.61333 **LONGITUDE:** -79.82277

This segment begins at the Henry County PSA Water Treatment Plant on Marrowbone Creek and extends downstream to Marrowbone Creek's mouth on the Smith River. The entire segment is on the Northwest Eden Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4AMRR000.02 is a 1999 Federal Consent Decree Attachment B station. The segment is 2002 303(d) listed for fecal coliform bacteria where five of 23 samples exceed the former 1000 cfu/100 ml instantaneous criterion (1996 to 2000 data window).

Four of 29 observations exceed the current fecal coliform bacteria instantaneous criterion of 400 n/100 ml at 4AMRR000.02 (Rt. 642 Bridge). The range of exceeding values is 2000 to greater than 8000 cfu/100 ml. The recreational use is not supported.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The source of fecal coliform bacteria is believed to be urban nonpoint source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Henry

STREAM NAME: Leatherwood Creek

HYDROLOGIC UNIT: 03010103

TMDL ID: VAW-L56R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.34 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Martinsville intake.

RIVER MILE: 8.34

LATITUDE: 36.68167 **LONGITUDE:** -79.77945

DOWNSTREAM LIMIT:

DESCRIPTION: Leatherwood Cr. mouth on Smith R.

RIVER MILE: 0.00

LATITUDE: 36.61444 **LONGITUDE:** -79.79188

This segment begins at the Martinsville City intake on Leatherwood Creek and extends downstream to the mouth of Leatherwood Creek on the Smith River. The segment spans the Martinsville East and Northwest Eden Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 4ALWD002.54 is a 1999 Federal Consent Decree Attachment B station. The segment is 2002 303(d) listed for fecal coliform bacteria where three of 23 samples exceed the former 1000 cfu/100 ml instantaneous criterion (1996 to 2000 data window).

Exceedances of the fecal coliform bacteria instantaneous criterion are found at station 4ALWD002.54. Three of 18 observations exceed the current 400 cfu/100 ml instantaneous criterion. Exceeding values range from 600 to 6200 cfu/100 ml. The station is located at the Rt. 650 Bridge in Henry County.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban

Recreational Use
The source of fecal coliform bacteria is believed to be a mix of urban and agricultural nonpoint source runoff. Wildlife contributions are also possible.

Fact Sheets for Category 5 Waters

RIVER BASIN: Roanoke/Yadkin River Basins

CITY/COUNTY: Carroll

STREAM NAME: Lovills Creek

HYDROLOGIC UNIT: 03040101

TMDL ID: VAW-M02R-01N

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 1.79 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Above the Route 686 crossing.

RIVER MILE: 9.08

LATITUDE: 36.57556 **LONGITUDE:** -80.63907

DOWNSTREAM LIMIT:

DESCRIPTION: VA / NC State Line.

RIVER MILE: 7.29

LATITUDE: 36.55833 **LONGITUDE:** -80.63318

Lovills Creek mainstem from just above the Route 686 crossing downstream to the VA / NC State Line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Four of 14 temperature measurements at station 4BLOV007.92 (Rt. 687 Bridge Off Rt. 686 at Cana) exceed the 21°C WQS Class V (stockable trout water) criterion. Exceeding temperature values range from 23 to 25°C (Category 5C).

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The water temperature exceedances are believed due to natural conditions. There are no known sources of heat other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth, Washington

STREAM NAME: South Fork Holston River

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.34 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Rowland Creek confluence

RIVER MILE: 98.31

LATITUDE: 36.76889 **LONGITUDE:** -81.57528

DOWNSTREAM LIMIT:

DESCRIPTION: Grosses Creek confluence

RIVER MILE: 89.97

LATITUDE: 36.74361 **LONGITUDE:** -81.68806

This segment of South Fork Holston River is between Rowland Creek, just east of Thomas Bridge, and Grosses Creek, at Loves Mill. The community of St. Claire Bottom lies within this segment of the river. Route 650 parallels this segment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

There are both ambient water quality and biological monitoring stations at 6CSFH097.42. The biologist rate this site as a moderately impaired station. There were 9 bacteria violations in 53 samples. An ambient station at 6CSFH093.01 has 4 violations of 10 samples for bacteria. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown, Unknown

The sources are unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth

STREAM NAME: South Fork Holston River

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O01R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.37 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 107.41

LATITUDE: 36.76440 **LONGITUDE:** -81.37890

DOWNSTREAM LIMIT:

DESCRIPTION: Barton Creek confluence

RIVER MILE: 116.78

LATITUDE: 36.75940 **LONGITUDE:** -81.50480

This segment begins in the headwaters and extends to Barton Creek. The river flows along Route 670 and through the communities of Sugar Grove, Roberts Mill, Teas and Quebec in Smyth County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6CSFH110.45 with 6 bacteria violations out of 10 samples.

IMPAIRMENT SOURCE: Unknown

The sources are unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Washington

STREAM NAME: South Fork Holston River

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.58 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Rush Creek confluence

RIVER MILE: 87.32

LATITUDE: 36.71620 **LONGITUDE:** -81.74950

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of South Holston Lake

RIVER MILE: 73.74

LATITUDE: 36.65330 **LONGITUDE:** -81.88760

This segment begins at the Rush Creek confluence just south of Friendship at the Route 733 bridge. The end of the segment is a the backwaters of South Holston Lake. This segment flows parallel to Route 91 to the west and Route 605 to the east. The communities of Groseclose Corner and Drowning Ford Station are within the watershed.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6CSFH75.61 that has 7 bacteria violations out of 54 samples. This section is also a 'Water of Concern' for benthic macroinvertebrate bioassement data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The sources are unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth

STREAM NAME: Middle Fork Holston River

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.15 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Dutton Branch confluence

RIVER MILE: 54.88

LATITUDE: 36.88944 **LONGITUDE:** -81.34639

DOWNSTREAM LIMIT:

DESCRIPTION: Snaveley Branch confluence

RIVER MILE: 50.73

LATITUDE: 36.87472 **LONGITUDE:** -81.40417

This Middle Fork Holston River segment is defined upstream by its confluence with Dutton Branch in Groseclose and downstream by the mainstem confluence with Snaveley Branch. This segment is in Smyth County and is very close to the headwaters of Middle Fork Holston River. This segment is parallel to Route 11.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient monitoring station, 6CMFH053.36, has 8 of 43 samples exceeding the fecal coliform standard.

IMPAIRMENT SOURCE: NPS - Agriculture/Urban

Increasing development at the Interstate exit in this reach may be the source of the fecal coliform violations. There is also agricultural land uses in this reach. This site was listed in Part 4 on the 1998-303(d) Report .

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth

STREAM NAME: Middle Fork Holston River

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.3 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Snavely Branch confluence

RIVER MILE: 50.73

LATITUDE: 36.87528 **LONGITUDE:** -81.40417

DOWNSTREAM LIMIT:

DESCRIPTION: Hungry Mother Creek confluence

RIVER MILE: 40.43

LATITUDE: 36.82667 **LONGITUDE:** -81.54222

This Middle Fork Holston River segment is defined upstream by its confluence with Snavely Branch and downstream by confluence with Hungry Mother Creek in Marion. This segment is in Smyth County and is very close to the headwaters of Middle Fork Holston River. This segment is parallel to Route 11.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient monitoring station, 6CMFH045.72, has 10 of 44 samples exceeding the fecal coliform standard.

IMPAIRMENT SOURCE: NPS - Agriculture

There are agricultural land uses in this reach.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth

STREAM NAME: Hungry Mother Lake

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O04L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 108 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Hungry Mother Dam headwaters

RIVER MILE: 6.15

LATITUDE: 36.88861 **LONGITUDE:** -81.52167

DOWNSTREAM LIMIT:

DESCRIPTION: Hungry Mother Lake Dam

RIVER MILE: 4.76

LATITUDE: 36.87056 **LONGITUDE:** -81.52333

The lake from its headwaters to the dam is included in this segment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Stations on Hungry Mother Lake include, sediment and fish tissue samples at 6CHUN005.24, lake monitoring stations at 6CHUN004.76, 6CHUN005.24 and 6CHUN006.13. The low DO data was in the bottom layer at station 6CHUN004.76BL and low pH measurements were in the top layer at station 6CHUN006.13. This section is also a 'Water of Concern' for exceedances found from DDT data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown but may be due to natural lake processes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth

STREAM NAME: Middle Fork Holston River

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12.48 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Hungry Mother Creek confluence

RIVER MILE: 40.43

LATITUDE: 36.82639 **LONGITUDE:** -81.54250

DOWNSTREAM LIMIT:

DESCRIPTION: Sulphur Spring Creek confluence

RIVER MILE: 27.95

LATITUDE: 36.79444 **LONGITUDE:** -81.68500

The entire mainstem of Middle Fork Holston River in this watershed is part of the segment. It extends from Hungry Mother Creek confluence to Sulphur Spring Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e. Coli

The ambient monitoring station, 6CMFH033.40, has fecal violations in 15 of 56 samples. A special study station, 6CMFH033.40, had DDT concentrations in fish tissue above the human health screening values. This section is also a 'Water of Concern' for exceedances found from DDT sediment data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report. Biological monitoring station, 6CMFH032.39, was not impaired.

IMPAIRMENT SOURCE: NPS - Agriculture

The source for fecal coliform violations is probably agriculture. This area is in a wide flood plain with agricultural land use activities predominating. It is recommended that at second study be undertaken to determine the extent and source of these pollutants. The threatened pollutant sources is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Washington

STREAM NAME: Middle Fork Holston River

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O05R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.87 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Byers Creek confluence

RIVER MILE: 17.03

LATITUDE: 36.74083 **LONGITUDE:** -81.80139

DOWNSTREAM LIMIT:

DESCRIPTION: Downstream of Neff to PWS

RIVER MILE: 10.16

LATITUDE: 36.70194 **LONGITUDE:** -81.86056

Middle Fork Holston River from Byers Creek confluence downstream to rivermile 12.06 is part of this segment. This includes Mock Mill and Neff communities.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

A biological monitoring station, 6CMFH011.31 is rated moderately impaired based on three sampling events between 1998 and 2000. An ambient station at 6CMFH013.21 has 8 of 57 fecal coliform violations.

IMPAIRMENT SOURCE: Unknown, NPS - Agriculture

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth, Washington

STREAM NAME: Middle Fork Holston River

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O05R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.12 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Sulphur Springs Creek confluence

RIVER MILE: 27.15

LATITUDE: 36.79444 **LONGITUDE:** -81.68500

DOWNSTREAM LIMIT:

DESCRIPTION: Byers Creek confluence

RIVER MILE: 17.03

LATITUDE: 36.73694 **LONGITUDE:** -81.79500

Middle Fork Holston River from Sulphur Spring Creek downstream to Byers Creek confluence. The segment begins west of Chilhowie near Route 107 and crosses the county line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient station at 6CMFH026.00 has 19 of 50 fecal coliform violations.

IMPAIRMENT SOURCE: Chilhowie STP

Town of Chilhowie STP is directly above this segment and may be a contributing source to the violations. The plant was upgraded, increasing the flow and improving fecal coliform controls. It began operation in July 2001. While the plant was being upgraded, upsets were observed. The fecal coliform source may also be due to agriculture land uses.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Washington

STREAM NAME: South Fork Holston Lake

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O06L-00

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1810 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Upper End of Lake

RIVER MILE: 72.30

LATITUDE: 36.65472 **LONGITUDE:** -81.90361

DOWNSTREAM LIMIT:

DESCRIPTION: Tennessee State Line

RIVER MILE: 62.85

LATITUDE: 36.59472 **LONGITUDE:** -82.01194

The lake segment includes the upper end of the lake to the Tennessee State Line. The lake begins above the confluence of South Fork and Middle Fork Holston Rivers.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Lake monitoring stations are 6CSFH062.93, 6CSFH066.16 and 6CSFH070.80. At station 6CSFH066.16, aquatic life use is not supported due to low dissolved oxygen in 70 of 119 measurements..

IMPAIRMENT SOURCE: Natural Conditions

The dissolved oxygen violations in the bottom layer of the lake are probably due to anaerobic conditions that occur in lake bottoms.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Washington

STREAM NAME: Wolf Creek

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.69 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Town Creek confluence

RIVER MILE: 7.66

LATITUDE: 36.68583 **LONGITUDE:** -81.98083

DOWNSTREAM LIMIT:

DESCRIPTION: backwaters South Holston Lake

RIVER MILE: 0.97

LATITUDE: 36.62639 **LONGITUDE:** -81.98306

The segment extends from the confluence with Town Creek, just south of Abingdon, to the the backwaters of South Holston Lake. Milage has been adjust downwards by about 1 mile in 2004 to reflect an NHD correction.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform (2004)

Biological sampling in this reach, 6CWLF004.10 is moderately impaired. At station 6CWLF001.18, there were 6 bacteria violations in 18 samples. This section is also a 'Water of Concern' for exceedances found from PCB data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Agriculture/Urban, Animal Feeding Operations, Residential Districts

The source of benthic impairment may be agricultural and urban nonpoint sources. Bacteria exceedences may be due to the same sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Bristol, Washington

STREAM NAME: Beaver Creek

HYDROLOGIC UNIT: 06010102

TMDL ID: VAS-O07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.46 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Route 611 Bridge

RIVER MILE: 28.73

LATITUDE: 36.70917 **LONGITUDE:** -82.04500

DOWNSTREAM LIMIT:

DESCRIPTION: Tennessee State line

RIVER MILE: 15.27

LATITUDE: 36.59472 **LONGITUDE:** -82.18583

The segment extends from the Route 611 bridge near the headwaters of Beaver Creek to the state line. Beaver Creek flows through the City of Bristol. Milage changes from 1998 list are due to NHD corrections as to the location of the upstream point.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption - Not Supporting (2004)

IMPAIRMENT CAUSE: Total Fecal Coliform, General Standard (Benthic, lead), Fish Tissue (PCB)

Biological station, 6CBEV023.99 is moderately impaired. The habitat assessment is an observed effect in ADB segment BEV02A94. Sediment analysis at 6CBEV015.27 indicates that lead exceeds the ER-M guideline value. EPA added Beaver Creek to the 1998 TMDL list because of lead. During TMDL study in this watershed, ambient water quality monitoring stations had bacteria violations. Analysis showed 20 of 25 samples at 6CBEV015.27 violated the bacteria standard, 8 of 9 samples at 6CBEV015.62, 3 of 9 samples at 6CBEV016.59, 6 of 9 samples at 6CBEV017.15, 3 of 9 samples at 6CBEV017.96, 5 of 9 at 6CBEV019.21, 5 of 15 at 6CBEV020.82, 13 of 24 at 6CBEV020.86, and 5 of 9 at 6CBEV022.29

IMPAIRMENT SOURCE: NPS - Urban, NPS - Agriculture

Beaver Creek flows through an intense agricultural area as well as being an urban stream as it crosses the state line. Both of these land uses contribute to water quality impacts. The TMDL study for Beaver Creek impairments is underway and due to be completed in April 2004.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth

STREAM NAME: Lick Creek

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.63 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lynn Camp Creek confluence

RIVER MILE: 5.63

LATITUDE: 36.98944 **LONGITUDE:** -81.43417

DOWNSTREAM LIMIT:

DESCRIPTION: North Fork Holston River confluence

RIVER MILE: 0.00

LATITUDE: 36.96083 **LONGITUDE:** -81.49056

Lick Creek is a tributary to North Fork Holston River. This segment extends from its confluence Lynn Camp Creek to North Fork Holston River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

A biological monitoring site, 6CLIB003.64 was rated moderately impaired using RPB II protocol. An ambient water quality monitoring station at 6CLIB000.08 has 2 bacteria violations in 9 samples.

IMPAIRMENT SOURCE: Unknown, Animal Feeding Operations - NPS

This watershed has a potential for agricultural impacts as well as silvacultural impacts. Sources of benthic impacts are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth

STREAM NAME: North Fork Holston River

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.84 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Saltville above Olin Matheson Plant site

RIVER MILE: 85.4

LATITUDE: 36.89083 **LONGITUDE:** -81.74944

DOWNSTREAM LIMIT:

DESCRIPTION: Robertson Branch confluence

RIVER MILE: 83.56

LATITUDE: 36.88667 **LONGITUDE:** -81.77000

This segment of the mainstem of North Fork Holston River begins in Saltville and ends at the confluence of Robertson Branch, which is the watershed boundary. The segment brackets the closed Olin Matheson Plant.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: VDH Health Advisory (Mercury)

Mercury contamination of the fish tissue in North Fork Holston River prior to 1972 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R. A sediment sample at 6CNFH097.67 had DDT.

IMPAIRMENT SOURCE: Olin Matheson Plant Site

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Bland, Tazewell

STREAM NAME: Laurel Creek

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O10R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.16 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 20.50

LATITUDE: 37.02750 **LONGITUDE:** -81.44028

DOWNSTREAM LIMIT:

DESCRIPTION: Route 16 Bridge

RIVER MILE: 14.34

LATITUDE: 37.01389 **LONGITUDE:** -81.52806

This segment of Laurel Creek extends from headwaters to Route 16 Bridge in Tazewell County. The segment is in the Jefferson National Forest.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreational Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform (2004)

The biological station, 6CLAE018.29, was rated as moderately impaired. In 2004, there is no more data to assess therefore it remains on the TMDL list, however the milage changed to correct 2002 error which included Punch and Judy Creek. An ambient water quality monitoring station at 6CLAE014.52 has 2 bacteria violations in 9 samples.

IMPAIRMENT SOURCE: Unknown, Unknown

This watershed is within the Jefferson National Forest. Silvacultural activities are the predominate land use.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth, Tazewell

STREAM NAME: Laurel Creek

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O10R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.41 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Tumbling Creek confluence

RIVER MILE: 6.41

LATITUDE: 36.97050 **LONGITUDE:** -81.62550

DOWNSTREAM LIMIT:

DESCRIPTION: North Fork Holston River confluence

RIVER MILE: 0.00

LATITUDE: 36.91850 **LONGITUDE:** -81.67350

This segment of Laurel Creek extends from Tumbling Creek confluence, below Tannersville, to downstream confluence with North Fork Holston River. This segment of Laurel Creek parallels Route 91 from Broadford to Tannersville.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

The biological station, 6CLAE001.68, was rated as slightly impaired based on visits conducted between 1995 and 1998.

IMPAIRMENT SOURCE: Unknown

Source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Washington

STREAM NAME: Hidden Valley Lake

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O11L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 90 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: headwaters

RIVER MILE: 11.81

LATITUDE: 36.96944 **LONGITUDE:** -81.79028

DOWNSTREAM LIMIT:

DESCRIPTION: Hidden Valley Lake Dam

RIVER MILE: 11.89

LATITUDE: 36.95500 **LONGITUDE:** -81.81333

Hidden Valley Lake is in Brumley Creek near the Russell and Washington County line off of Route 19.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

A station on Brumley Creek at 6CBRU010.91 has 4 of 8 DO samples lower than the standard.

IMPAIRMENT SOURCE: Natural Conditions

The source is due to natural lake processes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Washington

STREAM NAME: North Fork Holston River

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.9 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Brumley Creek confluence

RIVER MILE: 64.13

LATITUDE: 36.79167 **LONGITUDE:** -82.01611

DOWNSTREAM LIMIT:

DESCRIPTION: Cabin Creek confluence

RIVER MILE: 62.23

LATITUDE: 36.78250 **LONGITUDE:** -82.03917

This segment is the mainstem of North Fork Holston River, extending from Brumley Creek to Cabin Creek, near Brumley Gap.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - Mercury

Mercury contamination of the fish tissue in North Fork Holston River prior to 1982 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R. This segment is also threatened due to sediments detected above the guideline values for PCP and Mercury.

IMPAIRMENT SOURCE: Olin Matheson Plant Site

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site. Mercury in the sediments as well as Mercury in fish tissue is a result of this plant. The PCP source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Washington

STREAM NAME: North Fork Holston River

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O11R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14.64 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Tumbling Creek confluence

RIVER MILE: 78.77

LATITUDE: 36.86361 **LONGITUDE:** -81.83778

DOWNSTREAM LIMIT:

DESCRIPTION: Brumley Creek confluence

RIVER MILE: 64.13

LATITUDE: 36.79167 **LONGITUDE:** -82.01611

The mainstem of North Fork Holston River from Tumbling Creek to Brumley Creek is in this segment. This segment is included in a Fish Consumption segment which extends from Saltville to the Tennessee state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: VDH Health Advisory (Mercury)

Mercury contamination of the fish tissue from Olin in North Fork Holston River prior to 1982 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R.

IMPAIRMENT SOURCE: Olin Matheson Plant Site

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site. Mercury in the sediments as well as Mercury in fish tissue is a result of this plant.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Smyth, Washington

STREAM NAME: North Fork Holston River

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O11R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.79 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Robertson Branch confluence

RIVER MILE: 83.56

LATITUDE: 36.88667 **LONGITUDE:** -81.77000

DOWNSTREAM LIMIT:

DESCRIPTION: Tumbling Creek confluence

RIVER MILE: 78.77

LATITUDE: 36.86361 **LONGITUDE:** -81.83778

This segment is the mainstem of North Fork Holston River, from Robertson Branch in Saltville, to Tumbling Creek. Mileage has been decreased because of the NHD data layer.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: VDH Health Advisory (Mercury, PCB), General Standard (Benthic)

Mercury contamination of the fish tissue in North Fork Holston River prior to 1982 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R. The partially supporting aquatic life use designation is the result of a biological monitoring station, 6CNFH080.45, rated moderately impaired last sampled in 1993. No benthic data fell within the 2002 assessment window and thus is not listed as impaired for benthics in 2002-305b report. This section is also a 'Water of Concern' for exceedances found from mercury in sediment samples at 6CNFH080.43. PCB was detected in fish tissue. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Olin Matheson Plant Site, Point Source

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site. Mercury in the sediments as well as Mercury in fish tissue is a result of this source. The benthic impairment source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott, Washington

STREAM NAME: North Fork Holston River

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O12R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 34.29 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Cabin Creek confluence

RIVER MILE: 62.23

LATITUDE: 36.78250 **LONGITUDE:** -82.03917

DOWNSTREAM LIMIT:

DESCRIPTION: Cove Creek confluence

RIVER MILE: 27.94

LATITUDE: 36.65278 **LONGITUDE:** -82.38972

This segment is the mainstem of North Fork Holston River, from Cabin Creek to confluence with Abrams Creek. The segment extends the entire length of the waterbody and passes near Mongle Spring, Holston, Alum Wells, Pine Grove to Mendota. This is part of the 80.4 mile Fish Consumption segment which extends from Saltville to Tennessee State Line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: VDH Health Advisory (Mercury)

Mercury contamination of the fish tissue in North Fork Holston River prior to 1972 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O10R, VAS-O11R, and VAS-O13R. This section is also a 'Water of Concern' for exceedances found frommercury, DDT and PCP sediment data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report. Fish consumption is not supporting due to mercury exceedences in fish tissue at station, 6CNFH039.18 (ADB ID NFH01C02). An ambient station at 6CNFH059.65 (ADB ID NFH02A00) and 6CNFH060.93 benthic station in this reach had sediment hits for Mercury, DDT and PCP.

IMPAIRMENT SOURCE: Olin Matheson Plant Site

The Olin Mathiason Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff. Mercury in the sediments and fish tissue is from this plant.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott

STREAM NAME: North Fork Holston River

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.81 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Big Moccasin Creek confluence

RIVER MILE: 9.55

LATITUDE: 36.60889 **LONGITUDE:** -82.54444

DOWNSTREAM LIMIT:

DESCRIPTION: Tennessee State Line

RIVER MILE: 3.74

LATITUDE: 36.59361 **LONGITUDE:** -82.60917

This segment is the mainstem of North Fork Holston River, from Big Moccasin Creek confluence to the Tennessee State line. This portion of North Fork Holston River is south of Weber City and parallel to Route 714.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: VDH Health Advisory (Mercury), Total Fecal Coliform, General Standard (Benthic)

Mercury contamination of the fish tissue in North Fork Holston River prior to 1972 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R. Fecal coliform samples at an ambient station, 6CNFH008.78, exceed water quality standards in 8 of 52 samples. A benthic station at 6CNFH007.78 is rated moderately impaired. Mercury is considered an observed effect in this segment.

IMPAIRMENT SOURCE: Olin Matheson Plant Site, NPS - Urban, Unknown

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site. Fecal coliform violations and the benthic impairment are probably due to urban nonpoint sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott

STREAM NAME: North Fork Holston River

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 18.39 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Cove Creek confluence

RIVER MILE: 27.94

LATITUDE: 36.65278 **LONGITUDE:** -82.38944

DOWNSTREAM LIMIT:

DESCRIPTION: Big Moccasin Creek confluence

RIVER MILE: 9.55

LATITUDE: 36.60889 **LONGITUDE:** -82.54444

This segment is the mainstem of North Fork Holston River, from Abrams Creek to Big Moccasin Creek confluence, near Gate City.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: VDH Health Advisory (Mercury)

Mercury contamination of the fish tissue in North Fork Holston River prior to 1972 led to a ban on fish consumption by the Virginia Health Department. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VAS-O12R, and VAS-O13R.

IMPAIRMENT SOURCE: Olin Matheson Plant Site

The Olin Matheson Plant site is the mercury source. In 1982 actions to cleanup mercury contamination were undertaken by Olin at the direction of Virginia Agencies. EPA and Olin are collaborating on mitigation/control of nonpoint source runoff at the site.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott

STREAM NAME: Big Moccasin Creek

HYDROLOGIC UNIT: 06010101

TMDL ID: VAS-O14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.49 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Red Hill Branch confluence

RIVER MILE: 3.49

LATITUDE: 36.64278 **LONGITUDE:** -82.56500

DOWNSTREAM LIMIT:

DESCRIPTION: North Fork Holston confluence

RIVER MILE: 0.00

LATITUDE: 36.60889 **LONGITUDE:** -82.54444

The segment is on Big Moccasin Creek between Red Hill Branch confluence and North Fork Holston River confluence. The stream ends in Gate City.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

Ambient water quality monitoring station, 6CBMC002.90, had fecal coliform violations in 3 of 19 samples.

IMPAIRMENT SOURCE: NPS - Agriculture/Urban

Agriculture and pasture are the predominant land uses in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Clinch River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P01R-01

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 5.5 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lincolnshire Branch confluence

RIVER MILE: 350.60

LATITUDE: 37.13333 **LONGITUDE:** -81.50083

DOWNSTREAM LIMIT:

DESCRIPTION: Plum Creek confluence

RIVER MILE: 345.10

LATITUDE: 37.12417 **LONGITUDE:** -81.56750

The segment includes the mainstem of Clinch River from the Lincolnshire Branch confluence to the Plum Creek confluence. The station is at River Jack which is on Rt. 16 downstream of Tazewell. Clinch River flows through part of the Town of Tazewell.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform (2004)

Biological monitoring efforts, 6BCLN346.80, in June 1997 indicate moderate impairment. The biologist noted that aquatic habitat is impacted due to heavy siltation. Ambient water quality monitoring stations at 6BCLN346.60 and 6BCLN 348.00 had 3 bacteria violations of 9 samples and 2 violations of 9 samples respectively. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Urban, NPS - Agricultural

The land use upstream of this station is urban so that destabilization of the streambank may be the source of benthic impairments. Tetratech developed a sediment TMDL for Benthic impairments in April 2004 the benthic TMDL was EPA approved. A toxicity study for this segment revealed no problems. The source of fecal violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Plum Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P01R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.07 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.31

LATITUDE: 37.09890 **LONGITUDE:** -81.56310

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River confluence

RIVER MILE: 0.00

LATITUDE: 37.12430 **LONGITUDE:** -81.56770

The segment flows parallel to Route 16 from Frog Level downstream to Pisgah in Tazewell County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station at 6BPLU000.40 has 4 bacteria violations in 9 samples collected.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Clinch River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P02R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.02 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Plum Creek confluence

RIVER MILE: 345.10

LATITUDE: 37.12417 **LONGITUDE:** -81.56750

DOWNSTREAM LIMIT:

DESCRIPTION: Pounding Mill Branch confluence

RIVER MILE: 339.08

LATITUDE: 37.11070 **LONGITUDE:** -81.62710

The segment flows parallel to Route 19 from the community of Pisgah to the community of Pounding Mill.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station at 6BCLN339.53 has 6 bacteria violations in 34 samples. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Urban

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Indian Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P02R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.86 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Jackson Fork confluence

RIVER MILE: 8.86

LATITUDE: 37.15660 **LONGITUDE:** -81.70850

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River confluence

RIVER MILE: 0.00

LATITUDE: 37.08840 **LONGITUDE:** -81.76870

This segment includes the mainstem of Indian Creek from confluence with Jackson Fork to its confluence with Clinch River just east of Cedar Bluff in Tazewell County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, General Standard (Benthic)

An ambient water quality monitoring station at 6BIDI001.49 has 5 bacteria violations in 9 samples. There is a benthic station at 6BIDI003.67 which is moderately impaired based on 1997 and 1998 samples. A second biological monitoring station at 6BIDI010.25 is slightly impaired.

IMPAIRMENT SOURCE: NPS - Urban

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Middle Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: headwaters

RIVER MILE: 11.01

LATITUDE: 37.20194 **LONGITUDE:** -81.77250

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River confluence

RIVER MILE: 0.00

LATITUDE: 37.08806 **LONGITUDE:** -81.76722

Middle Creek mainstem from its headwaters to its confluence with Clinch River, just to the west of Cedar Bluff, comprises the segment. Route 67 roughly parallels Middle Creek from Richlands north. Its confluence with Clinch River occurs in Cedar Bluff in Tazewell County. The segment may be found on the Jewell Ridge and Richlands topographic maps. Middle Creek flows into Clinch River just upstream of a mussel bed. The mileage increase is a result of NHD files.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

The segment is listed because a biological monitoring station, 6BMID000.20, is severely impaired. The biologist reported, in May 1996, that there was a low density of organisms in the stream.

IMPAIRMENT SOURCE: Resource Extraction

The Middle Creek watershed land use is predominately forested with reclaimation of permitted coal sources nearly completed. A TMDL study is underway to determine the source of benthic impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Clinch River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.37 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Raven Doran Raw Water Intake

RIVER MILE: 316.53

LATITUDE: 37.09083 **LONGITUDE:** -81.82167

DOWNSTREAM LIMIT:

DESCRIPTION: Mill Creek confluence

RIVER MILE: 313.16

LATITUDE: 37.08330 **LONGITUDE:** -81.85570

The segment extends from the Raven-Doran raw water intake, just above the Town Hill Creek confluence, to the confluence with Mill Creek at the watershed boundary. Clinch River flows through the communities of Doran and Raven.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There were fecal coliform violations, 7 out of 43 samples, at station 6BCLN315.11.

IMPAIRMENT SOURCE: NPS - Urban

Fecal violations may be attributed to Urban Nonpoint Sources. The urban area is located directly on the floodplain.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Clinch River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P03R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.01 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Middle Creek confluence

RIVER MILE: 321.31

LATITUDE: 37.08840 **LONGITUDE:** -81.76800

DOWNSTREAM LIMIT:

DESCRIPTION: Raven Doran Raw Water Intake

RIVER MILE: 316.53

LATITUDE: 37.09083 **LONGITUDE:** -81.81760

The segment begins five miles above the Raven Doran Raw Water intake at the Middle Creek confluence and extends to the intake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e. Coli

There were fecal coliform violations, 3 out of 17 samples, at station 6BCLN321.13.

IMPAIRMENT SOURCE: Municipal Urbanized High Density

Fecal violations may be attributed to Urban Nonpoint Sources. The urban area is located directly on the floodplain.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell

STREAM NAME: Lewis Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.84 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Stone Branch confluence

RIVER MILE: 4.84

LATITUDE: 37.03667 **LONGITUDE:** -81.97556

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River confluence

RIVER MILE: 0.00

LATITUDE: 36.99222 **LONGITUDE:** -81.97139

Lewis Creek, from its confluence with Stone Branch to its mouth on the Clinch River comprises the segment. The stream flows through Honaker, parallel to Route 624 and 653 to the Clinch River. The confluence with Clinch River is west of Blackford in Russell County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A biological monitoring station, 6BLWS000.90, is moderately impaired based on the results of three Rapid Bioassessment Protocol 2 (RBP2) efforts. A second station was sampled at 6BLWS003.88 and ranked moderately impaired.

IMPAIRMENT SOURCE: NPS - Urban

The source of impairment is urban. Lewis Creek flows through Honaker which has dense development along the streambanks.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell

STREAM NAME: Swords Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P04R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.9 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Sulphur Spring Branch confluence

RIVER MILE: 2.90

LATITUDE: 37.07028 **LONGITUDE:** -81.92528

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River confluence

RIVER MILE: 0.00

LATITUDE: 37.03472 **LONGITUDE:** -81.91694

This segment of Swords Creek begins at Route 632, at the confluence with Sulphur Spring Branch, flows through Dye, and ends at the confluence with Clinch River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A biological monitoring station at 6BSWD000.11 is rated moderately impaired.

IMPAIRMENT SOURCE: NPS - Urban

The creek flows through populated areas so that urban nonpoint sources are suspected.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell, Tazewell

STREAM NAME: Indian Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.99 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.99

LATITUDE: 37.00140 **LONGITUDE:** -81.81530

DOWNSTREAM LIMIT:

DESCRIPTION: Little River confluence

RIVER MILE: 0.00

LATITUDE: 37.03100 **LONGITUDE:** -81.79560

This segment includes the stream from its headwaters to the confluence with Little River. It parallels Route 770 with its downstream limit in the community of Wardell.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6BIDN000.69 with 5 bacteria violations of 9 samples. Observed effect is total phosphorus in the segment.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Liberty Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P05R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Upstream of Liberty

RIVER MILE: 1.4

LATITUDE: 37.06990 **LONGITUDE:** -81.63410

DOWNSTREAM LIMIT:

DESCRIPTION: Spring

RIVER MILE: 3.4

LATITUDE: 37.05060 **LONGITUDE:** -81.65680

This segment includes the stream from the spring just downstream of the Route 608 bridge upstream to confluence with an unnamed tributary two miles upstream. The stream follows Routes 608 and 91 through the community of Liberty.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6BLIB001.89 with 5 bacteria violations of 8 samples. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell

STREAM NAME: Little River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P05R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.94 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Grays Branch confluence

RIVER MILE: 13.9

LATITUDE: 37.04180 **LONGITUDE:** -81.81950

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River confluence

RIVER MILE: 0.0

LATITUDE: 37.00200 **LONGITUDE:** -81.92660

This segment of Little River begins at Grays Branch, near the Tazewell/Russell County Line and ends at Clinch River. It parallels Route 640 to Route 641.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6BLTR000.75 with 3 bacteria violations of 23 samples. Total phosphorus is an observed effect.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Little River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P05R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.2 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Above Claypool Hill STP

RIVER MILE: 23.39

LATITUDE: 37.02190 **LONGITUDE:** -81.75130

DOWNSTREAM LIMIT:

DESCRIPTION: Laurel Creek confluence

RIVER MILE: 18.19

LATITUDE: 37.02820 **LONGITUDE:** -81.79170

This segment of Little River begins above the Claypool Hill STP and continues to Laurel Creek confluence just upstream of Wardell.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6BLTR018.19 with 2 bacteria violations of 9 samples. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Maiden Spring Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P05R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.5 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Foot of Morris Knob

RIVER MILE: 6.5

LATITUDE: 37.03050 **LONGITUDE:** -81.60190

DOWNSTREAM LIMIT:

DESCRIPTION: Little River confluence

RIVER MILE: 0.00

LATITUDE: 37.03760 **LONGITUDE:** -81.67240

This is the lower end of Maiden Spring Creek. The segment begins at an unnamed tributary south of Morris Knob to its confluence with Little River. It parallels Routes 604 and 608.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6BMSC001.53 with 2 bacteria violations of 5 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Tazewell

STREAM NAME: Maiden Spring Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P05R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.56 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Near headwaters

RIVER MILE: 25.09

LATITUDE: 37.07450 **LONGITUDE:** -81.49270

DOWNSTREAM LIMIT:

DESCRIPTION: Foot of Morris Knob

RIVER MILE: 16.53

LATITUDE: 37.03050 **LONGITUDE:** -81.60190

This segment is near the headwaters of Maiden Spring Creek parallel to Route 602 northwest of Burkes Garden.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6BMSC008.98 with 5 bacteria violations of 9 samples. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell

STREAM NAME: Big Cedar Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.89 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lebanon Raw Water Intake

RIVER MILE: 8.10

LATITUDE: 36.90111 **LONGITUDE:** -82.03528

DOWNSTREAM LIMIT:

DESCRIPTION: Glade Hollow confluence

RIVER MILE: 4.21

LATITUDE: 36.93611 **LONGITUDE:** -82.06194

The segment extends from the Lebanon raw water intake to the confluence with stream from Glade Hollow. Big Cedar Creek flows through Lebanon.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform (2004)

The benthic station at 6BBCD004.18 is moderately impaired. An ambient water quality monitoring station at 6BBCD004.18 has 3 bacteria violations in 19 samples.

IMPAIRMENT SOURCE: Unknown, Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell

STREAM NAME: Clinch River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.95 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Big Cedar Creek confluence

RIVER MILE: 282.8

LATITUDE: 36.96530 **LONGITUDE:** -82.05260

DOWNSTREAM LIMIT:

DESCRIPTION: Dumps Creek confluence

RIVER MILE: 268.85

LATITUDE: 36.93420 **LONGITUDE:** -82.19800

Clinch River segment begins at its confluence with Big Cedar Creek near the Pinnacles and extends downstream to its confluence with Dumps Creek in Carbo.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station at 6BCLN271.50 has 9 bacteria violations in 52 samples. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source of impairment is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott

STREAM NAME: Clinch River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.07 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Little Stony Creek

RIVER MILE: 238.68

LATITUDE: 36.84550 **LONGITUDE:** -82.45270

DOWNSTREAM LIMIT:

DESCRIPTION: Stanton Creek confluence

RIVER MILE: 232.61

LATITUDE: 36.79840 **LONGITUDE:** -82.51850

The segment includes mainstem Clinch River from its confluence with Little Stony Creek above Dungannon to its confluence with Staunton Creek downstream of Grays Island.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station at 6BCLN237.09 has 4 bacteria violation in 37 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell, Wise

STREAM NAME: Lick Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.48 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Headwaters including Straight Hollow

RIVER MILE: 4.83

LATITUDE: 36.99222 **LONGITUDE:** -82.26583

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River confluence

RIVER MILE: 0.00

LATITUDE: 36.90583 **LONGITUDE:** -82.29861

The segment includes mainstem of Lick Creek from its headwaters, including Straight Hollow tributary, to its confluence with Clinch River near St. Paul. Lick Creek flows through Dante, parallel with Route 63.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

Biological monitoring on Lick Creek, 6BLCC000.65 and 6BLCC005.99 indicates the stream is severely impaired. Station, 6BLCC004.49 is not impaired and station 6BLCC000.09 is moderately impaired for aquatic life use. The segment is assessed as severely impaired on the lower length and severely impaired on the upper reaches. Ambient water quality monitoring, 6BLCC000.09, has 7 bacteria violations of 18 samples. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Urban, NPS - Septage Disposal

The source is unknown, but urban sources are probably responsible in Dante. Resource extraction takes place here and may degrade stream habitat. Fecal violations are due to failing septic systems and straight pipes along the stream. A new Wastewater Treatment Plant started up in mid-1997. In February 1999, 342 connections had been made to the new plant. This should decrease fecal coliform violations.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell

STREAM NAME: Cigarette Hollow

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P10R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.08 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.08

LATITUDE: 36.97361 **LONGITUDE:** -82.26556

DOWNSTREAM LIMIT:

DESCRIPTION: Right Fork confluence

RIVER MILE: 0.00

LATITUDE: 36.97694 **LONGITUDE:** -82.28250

The entire Cigarette Hollow stream is included. This tributary confluences with Right Fork which is a tributary to Lick Creek near Dante. Route 63 runs through the community of Dante.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

Special study data in the 1998 assessment cycle linked this stream to the problems in Lick Creek. Biological monitoring site, 6BLCC000.65, data is severely impaired and ambient station data has fecal violations, 6BLCC000.09 in Lick Creek.

IMPAIRMENT SOURCE: NPS - Urban, NPS - Urban

The source of the impairment is unknown, however stream banks are intensively populated in the community of Dante. The topography offers the only flat land for urban use along the narrow stream floodplain. Another land use in this area is coal mining which may also degrade stream habitat. Fecal violations are probably attributable to the failing septic systems and straight pipes along the stream. This area is constructing collector lines and a new Wastewater Treatment Plant started up in mid-1997. In February 1999, 342 connections had been made to the new plant. This should decrease fecal coliform violations.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Dickenson, Russell

STREAM NAME: Laurel Branch

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P10R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.96 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.96

LATITUDE: 36.99972 **LONGITUDE:** -82.30861

DOWNSTREAM LIMIT:

DESCRIPTION: Lick Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.98111 **LONGITUDE:** -82.30611

The segment includes mainstem of Laurel Branch which confluences with Lick Creek near the community of Dante. Route 63 runs through the community of Dante.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

Special study data in the 1998 assessment cycle linked this stream to the problems in Lick Creek. Biological monitoring site, 6BLCC000.65, data is severely impaired and ambient station data has fecal violations, 6BLCC000.09 in Lick Creek.

IMPAIRMENT SOURCE: NPS - Urban, NPS - Urban

The source of the impairment is urban nonpoint with intensively populated floodplains in the community of Dante. Another land use in this area is coal mining which may also degrade stream habitat. Fecal violations are attributable to the raw sewage discharges from individual homes and failing septic systems along the stream. A new Wastewater Treatment Plant started up in mid-1997. Collector lines and public sewer system connections have been made to 342 homes in the upper Lick Creek drainage. The fecal violations should decrease as straight pipe discharges are corrected.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell

STREAM NAME: Right Fork

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P10R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.91 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.91

LATITUDE: 36.98944 **LONGITUDE:** -82.25444

DOWNSTREAM LIMIT:

DESCRIPTION: Lick Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.97722 **LONGITUDE:** -82.29750

The segment includes mainstem of Right Fork which is a tributary of Lick Creek. It was included in the TMDL list in 1998 as part of the Lick Creek watershed. It confluences with Lick Creek near the community of Dante on Route 63.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

Special study data in the 1997 on Right Fork Lick Creek showed fecal coliform violations and linked this stream to the problems in Lick Creek. Biological monitoring site, 6BLCC000.65, data is severely impaired and ambient station data has fecal violations, 6BLCC000.09 in Lick Creek.

IMPAIRMENT SOURCE: NPS - Urban, NPS - Urban

The source of the benthic impairment is unknown. Floodplains are intensively populated in the community of Dante. Resource extraction in the watershed may also degrade stream habitat. Fecal violations are attributable to the raw sewage discharges from individual homes and failing septic systems along the stream. A new Wastewater Treatment Plant started up in mid-1997. Collector lines and public sewer system connections have been made to 342 homes in the upper Lick Creek drainage. The fecal violations should decrease as straight pipe discharges are corrected.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Wise Lake

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P11L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 30 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Wise Lake headwaters

RIVER MILE: 1.41

LATITUDE: 36.96833 **LONGITUDE:** -82.52333

DOWNSTREAM LIMIT:

DESCRIPTION: Bear Creek (Wise) Dam

RIVER MILE: 0.69

LATITUDE: 36.96833 **LONGITUDE:** -82.53361

The lake is on a tributary to Bear Creek off Route 646, east of Wise, Virginia.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

A lake monitoring station at 6BXAR000.69 has 2 of 6 samples in the bottom layer with low DO.

IMPAIRMENT SOURCE: Natural Conditions

The source is due to natural lake processes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Guest River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P11R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.03 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Bad Branch confluence

RIVER MILE: 7.10

LATITUDE: 36.92500 **LONGITUDE:** -82.46222

DOWNSTREAM LIMIT:

DESCRIPTION: Crab Orchard Creek confluence

RIVER MILE: 4.07

LATITUDE: 36.91139 **LONGITUDE:** -82.43611

The segment includes the mainstem of Guest River from its confluence with Bad Branch to the confluence with Crab Orchard Creek. This segment flows through the town of Coeburn. The tributaries that were associated with the 1998 TMDL have been listed separately for clarity.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, Mercury, Arsenic

Ambient Water Quality Station 6BGUE006.5 has fecal coliform data showing 0 of 13 violations this assessment cycle. Samples taken by TVA in 1996 and 1997 indicated that Guest River and many of its tributaries violate the water quality standards for fecal coliform. This is part of a 1998 TMDL fecal coliform segment. At special station 6BGUE006.45, PCB, Arsenic and Mercury were detected in the fish tissue leading to a Fish Consumption partial support use assessment in 2002. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) sediment data and benthic monitoring results at 6BGUE006.50. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

Guest River is densely settled along streambanks. The DEQ has helped fund construction of a regional sewage treatment plant, Coeburn Norton Wise STP. This has improved sewage treatment for the three towns however, inflow and infiltration in collector lines has not been completely corrected and there are many small communities which do not have public sewer. Elimination of failing septic systems and correction of inflow/infiltration problems are projects that are continuing to be pursued in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Russell, Scott, Wise

STREAM NAME: Guest River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P11R-10

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.07 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Crab Orchard Creek confluence

RIVER MILE: 4.07

LATITUDE: 36.91139 **LONGITUDE:** -82.43611

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River

RIVER MILE: 0.00

LATITUDE: 36.87639 **LONGITUDE:** -82.40639

The segment includes the mainstem of Guest River from its confluence with Crab Orchard Creek to its confluence with the Clinch River. This segment flows through the Washington-Jefferson National Forest below the town of Coeburn. The tributaries that were associated with the 1998 TMDL have been listed separately for clarity.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e. Coli

USGS station shows fecal coliform violations. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Septage

The sources for these exceedences may be land disposal and septage disposal.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Machine Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P11R-11

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.18 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.16

LATITUDE: 36.90380 **LONGITUDE:** -82.57330

DOWNSTREAM LIMIT:

DESCRIPTION: Tributary confluence

RIVER MILE: 0.98

LATITUDE: 36.92200 **LONGITUDE:** -82.56100

Machine Creek is in the Jefferson National Forest. This stream flows from south to north and confluence with Guest River upstream of Tacoma. The upstream segment is defined as headwaters to an unnamed tributary.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A forest service monitoring station on Machine Creek is impaired.

IMPAIRMENT SOURCE: Acid Rain deposition

Acid rain is the suspected source of low pH.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott, Wise

STREAM NAME: Bark Camp Branch

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P12R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.03 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 3.03

LATITUDE: 36.89770 **LONGITUDE:** -82.57470

DOWNSTREAM LIMIT:

DESCRIPTION: Stony Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.87540 **LONGITUDE:** -82.57740

Bark Camp Branch is in the Glades Wildlife Management Area off of Route 890 in Wise County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Forest Service Stations 9150 and 9153 had low scores for benthic communities.

IMPAIRMENT SOURCE: Acid Rain deposition

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott

STREAM NAME: Stock Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.69 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Stock Creek Impoundment

RIVER MILE: 5.22

LATITUDE: 36.72722 **LONGITUDE:** -82.75278

DOWNSTREAM LIMIT:

DESCRIPTION: Biological Monitoring Station

RIVER MILE: 4.53

LATITUDE: 36.71833 **LONGITUDE:** -82.75000

Stock Creek flows through Mabe and near Sunbright along Route 653 and 871 to the east of Duffield in Scott County. The TMDL segment is between Sunbright and Natural Tunnel State Park off of Route 871. The segment begins downstream of the impoundment near Cyprus Foote and Mineral.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Two biological monitoring station, 6BSTO0004.73, 6BSTO005.26, are moderately impaired in the reach.

IMPAIRMENT SOURCE: Resource Extraction

This segment probably receives leachate or runoff from the Cyprus Foote and Mineral mine tailings. It is also groundwater influenced due to the limestone geology in the area and the prevalence of sinkholes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott

STREAM NAME: Stock Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.53 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Biological Monitoring Station

RIVER MILE: 4.53

LATITUDE: 36.75170 **LONGITUDE:** -82.74230

DOWNSTREAM LIMIT:

DESCRIPTION: Clinch River confluence

RIVER MILE: 0.00

LATITUDE: 36.67490 **LONGITUDE:** -82.74470

Stock Creek flows through Mabe and near Sunbright along Route 653 and 871 to the east of Duffield in Scott County. The TMDL segment begins at the biological monitoring station and ends at the Clinch River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

A biological monitoring station, 6BSTO0004.73 marks the upstream end of this reach. PCBs were detected in two species of fish, rainbow trout and brown trout.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott

STREAM NAME: Copper Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.07 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Obeys Creek confluence

RIVER MILE: 13.86

LATITUDE: 36.68120 **LONGITUDE:** -82.55490

DOWNSTREAM LIMIT:

DESCRIPTION: Lark Creek confluence

RIVER MILE: 9.79

LATITUDE: 36.66500 **LONGITUDE:** -82.61720

This segment of Copper Creek is defined at the confluence with Obeys Creek near the Route 72 and follows Route 627 downstream to Lark Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e. Coli

A USGS monitoring station, 03526000, has 2 bacteria violations in 4 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Scott

STREAM NAME: North Fork Clinch River

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P15R-00

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.58 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Cox Branch

RIVER MILE: 7.74

LATITUDE: 36.63000 **LONGITUDE:** -82.91306

DOWNSTREAM LIMIT:

DESCRIPTION: Tennessee State Line

RIVER MILE: 2.16

LATITUDE: 36.59361 **LONGITUDE:** -82.98500

This segment of North Fork Clinch River extends from its confluence with Cox Branch to the Tennessee State Line. The River segment is bracketed by the communities of Fairview and Dona.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient monitoring station, 6BNCC0-3.80, has fecal coliform violations in 2 of 15 samples.

IMPAIRMENT SOURCE: NPS - Agriculture

The source may be animal feeding operations.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: East Fork Blackwater Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P16R-00

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.82 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: North Fork Blackwater Creek confluence

RIVER MILE: 1.82

LATITUDE: 36.62833 **LONGITUDE:** -83.02500

DOWNSTREAM LIMIT:

DESCRIPTION: Blackwater Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.61250 **LONGITUDE:** -83.04694

This segment of East Fork Blackwater Creek is near Blackwater on Route 70.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A biological monitoring station, 6BBCE001.05, has been sampled three time and rated as moderately impaired.

IMPAIRMENT SOURCE: NPS - Agriculture

The source is unknown, however land uses are agricultural and may contribute to the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Blackwater Creek

HYDROLOGIC UNIT: 06010205

TMDL ID: VAS-P16R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.1 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: East Fork Blackwater Creek confluence

RIVER MILE: 8.2

LATITUDE: 36.61250 **LONGITUDE:** -83.04720

DOWNSTREAM LIMIT:

DESCRIPTION: Tennessee state line

RIVER MILE: 6.1

LATITUDE: 36.59400 **LONGITUDE:** -83.06730

This segment extends from the confluence with East Fork Blackwater Creek to the Tennessee state line. The stream parallels Route 70.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station at 6BBKW005.82 has 3 bacteria violations in 13 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown, however land uses are agricultural and may contribute to the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Callahan Creek

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.68 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Preacher Creek confluence

RIVER MILE: 1.68

LATITUDE: 36.92472 **LONGITUDE:** -82.79750

DOWNSTREAM LIMIT:

DESCRIPTION: Powell River confluence

RIVER MILE: 0.00

LATITUDE: 36.90528 **LONGITUDE:** -82.78111

The segment begins at Andover at its confluence with Preacher Creek and follows Route 78 southeast to Appalachia where it meets the Powell River. This was a 1998 segment. Its length has changed based on River Reach file measurements.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform (2004)

In 1995 there was a biological monitoring station, 6BCAL000.03, on Callahan Creek where the aquatic life use was rated as moderately impaired on 2 visits. Ambient water quality monitoring stations at 6BCAL000.03 and 6BCAL003.19 have bacteria violations in 5 of 9 and 3 of 4 samples respectively.

IMPAIRMENT SOURCE: Resource Extraction, Unknown

The source of benthic impairment may be surface mining and urban run off. Storm sewers may contribute to the bacteria violations.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Powell River

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P17R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.62 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Roaring Branch confluence

RIVER MILE: 180.83

LATITUDE: 36.88389 **LONGITUDE:** -82.78750

DOWNSTREAM LIMIT:

DESCRIPTION: near Dacota Street, Big Stone Gap

RIVER MILE: 178.21

LATITUDE: 36.88389 **LONGITUDE:** -82.78750

The Powell River segment includes the town of Big Stone Gap from its upstream limits at Roaring Branch confluence to its downstream limits which are near the end of Dakota Street in Big Stone Gap. The segment miles have changed due to NHD data files.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, General Standard (Benthic)

The Powell River ambient monitoring station, 6BPOW180.78, has violations of the fecal coliform water quality standard (11/41). A biological station at 6BPOW180.72 also shows moderate impairment in this reach. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Urban, Unknown

The segment flows through Big Stone Gap where urban land uses are the suspected source of impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Callahan Creek

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P17R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.44 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Possum Trot Hollow

RIVER MILE: 5.12

LATITUDE: 36.95580 **LONGITUDE:** -82.77890

DOWNSTREAM LIMIT:

DESCRIPTION: Preacher Creek confluence

RIVER MILE: 1.68

LATITUDE: 36.92472 **LONGITUDE:** -82.79750

The segment begins at Possum Trot Hollow on Route 600 above Stonega and ends at Andover at its confluence with Preacher Creek. This segment of Callahan Creek is above Appalachia.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

This segment has ambient water quality monitoring stations at 6BCAL000.03 and 6BCAL003.19 with 5 of 9 and 3 of 4 bacteria violations respectively.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Dark Hollow

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P17R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.32 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.32

LATITUDE: 36.89400 **LONGITUDE:** -82.76490

DOWNSTREAM LIMIT:

DESCRIPTION: Powell River

RIVER MILE: 0.00

LATITUDE: 36.88900 **LONGITUDE:** -82.78730

Dark Hollow drainage flows to Powell River between Appalachia and Big Stone Gap.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

This stream has a forest service biological monitoring station at 9113 with a low MAIS score for aquatic life.

IMPAIRMENT SOURCE: Acid Rain Deposition

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Roaring Branch

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P17R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.87 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.87

LATITUDE: 36.85610 **LONGITUDE:** -82.82620

DOWNSTREAM LIMIT:

DESCRIPTION: Powell River confluence

RIVER MILE: 0.00

LATITUDE: 36.88350 **LONGITUDE:** -82.78780

Roaring Branch flows from the west to the east to its confluence with Powell River. This segment is just above Big Stone Gap.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

This stream has a forest service biological monitoring station at 9106 with a low MAIS score for aquatic life.

IMPAIRMENT SOURCE: Acid Rain Deposition

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Big Cherry Lake

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P18L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 106 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Big Cherry headwaters

RIVER MILE: 15.71

LATITUDE: 36.86444 **LONGITUDE:** -82.67306

DOWNSTREAM LIMIT:

DESCRIPTION: Big Cherry Dam

RIVER MILE: 12.79

LATITUDE: 36.84667 **LONGITUDE:** -82.67167

The Lake is located off of Big Cherry Reservoir Road to the east of East Stone Gap.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Big Cherry was monitored in 1999 and 2000 at three stations 6BPLL012.79, 6BPLL012.99, 6BPLL013.59. Data shows there are low pH values throughout the lake and low DO values in the bottom layer.

IMPAIRMENT SOURCE: Natural Conditions

The source is due to natural lake processes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: South Fork Powell River

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.61 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Beaverdam Creek

RIVER MILE: 5.61

LATITUDE: 36.85950 **LONGITUDE:** -82.73150

DOWNSTREAM LIMIT:

DESCRIPTION: Powell River confluence

RIVER MILE: 0.00

LATITUDE: 36.87111 **LONGITUDE:** -82.74833

In 1998 this segment began at Butcher Fork confluence just to the south of Big Stone Gap and ended at the confluence with Powell River in Big Stone Gap. In 2004, the segment extends upstream an additional 1.9 miles to Beaverdam Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

The biological monitoring station at 6BPLL002.55 has moderate impairment rating in 1996 and not impaired rating in 1997. EPA added this segment to the 1998 TMDL list. In 2004, 6BPLL004.40, is rated moderately impaired, hence, the segment has been extended to include this second monitoring station. A station at 6BPLL004.49 was not impaired.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Butcher Fork

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P18R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.85 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 4.85

LATITUDE: 36.89600 **LONGITUDE:** -82.64230

DOWNSTREAM LIMIT:

DESCRIPTION: South Fork Powell River confluence

RIVER MILE: 0.00

LATITUDE: 36.87100 **LONGITUDE:** -82.74880

Butcher Fork extends from Valley Lake below Little Stone Gap to its confluence with South Fork Powell River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station at 6BBUH000.76 has 4 bacteria violations in 8 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: South Fork Powell River

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P18R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.34 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Big Cherry Reservoir

RIVER MILE: 11.95

LATITUDE: 36.84600 **LONGITUDE:** -82.67110

DOWNSTREAM LIMIT:

DESCRIPTION: Beaverdam Creek confluence

RIVER MILE: 5.61

LATITUDE: 36.85950 **LONGITUDE:** -82.73150

This segment is the upper segment of South Fork Powell River. It begins at the Big Cherry Reservoir dam and extends to confluence with Beaverdam Creek just to the east of East Stone Gap.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 6BPLL06.38 with 6 bacteria violations in 18 samples. This section is also a 'Water of Concern' for exceedances found from biological monitoring data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Powell River

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P19R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.38 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Poor Valley Creek

RIVER MILE: 168.00

LATITUDE: 36.79480 **LONGITUDE:** -82.92010

DOWNSTREAM LIMIT:

DESCRIPTION: Upper end of Public Water Supply

RIVER MILE: 161.62

LATITUDE: 36.75970 **LONGITUDE:** -82.96270

This segment of Powell River begins at Poor Valley Creek above Dryden and extends to about 1.3 miles below Clear Spring Branch to a Public Water Supply boundary.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, General Standard (Benthic)

There is an ambient water quality monitoring station located at 6BPOW165.78 with 5 bacteria violations in 46 samples. A biological monitoring station at 6BPWO166.92 is also impaired. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown, Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Lake Keokee

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 100 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Keokee Backwaters

RIVER MILE: 25.31

LATITUDE: 36.85139 **LONGITUDE:** -82.85194

DOWNSTREAM LIMIT:

DESCRIPTION: Keokee Dam

RIVER MILE: 24.66

LATITUDE: 36.84528 **LONGITUDE:** -82.86694

Lake Keokee is on top of the Mountains and is located southeast of Keokee off Route 606 and 876.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, pH

Lake monitoring stations, 6BPWL024.64 and 6BPWL025.20 have both DO and pH violations. This segment includes the entire lake. A fish tissue station at 6BPWL025.32 indicates mercury in fish tissue in two species.

IMPAIRMENT SOURCE: Natural Conditions

The source is due to natural lake processes. However, the source of mercury is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Puckett Creek

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20R-00

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.31 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: headwaters

RIVER MILE: 5.31

LATITUDE: 36.79944 **LONGITUDE:** -83.09750

DOWNSTREAM LIMIT:

DESCRIPTION: Straight Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.78139 **LONGITUDE:** -83.05750

Puckett Creek is a tributary to Straight Creek. It is near St. Charles. The entire length of Puckett Creek is included in this segment. This tributary was included in the 1996 and 1998 TMDL report.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A special study contracted by Virginia Department of Mined Land Reclamation and USCOE indicates the pH in Puckett Creek does not violate water quality standards. The segment is not as impaired as previous information indicated in the 1998 303(d) report. Since one of the tributaries, Lick Branch, has pH violations, the segment is still listed as threatened this cycle.

IMPAIRMENT SOURCE: Resource Extraction, Acid Mine Drainage

Abandoned Mined Lands may be the major source for the acid mine drainage in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: North Fork Powell River

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.03 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Straight Creek confluence

RIVER MILE: 6.03

LATITUDE: 36.77694 **LONGITUDE:** -83.05111

DOWNSTREAM LIMIT:

DESCRIPTION: Powell River confluence

RIVER MILE: 0.00

LATITUDE: 36.73670 **LONGITUDE:** -82.99980

The segment includes mainstem of North Fork Powell River from the Straight Creek confluence near the community of Pocket to the confluence with Powell River. The North Fork Powell River flows through the town of Pennington Gap. The stream segment length is 2.31 miles longer than that listed on the 1998 TMDL list.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform (2004)

Biological monitoring stations, 6BPWL005.46 and 6BPWL004.40, were rated moderately impaired in 1998. The biologist noted a high degree of embeddedness, moderate deposition and sub-optimal habitat diversity. In the 2002 assessment more recent benthic data results in a threatened designation. In 2002, a fish tissue station, 6BPWL001.62, had arsenic in the fish tissue. In 2004, an ambient water quality monitoring station at 6BPWL001.49 has 4 bacteria violations in 18 samples.

IMPAIRMENT SOURCE: Unknown, Residential

Urban nonpoint source runoff is the suspected cause of habitat impairment. Fecal coliform violations are also attributable to Urban sources. The source for arsenic in fish tissue is unknown. More study needs to be done to determine the sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Straight Creek

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.66 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Straight Creek headwaters

RIVER MILE: 6.66

LATITUDE: 36.84889 **LONGITUDE:** -83.04139

DOWNSTREAM LIMIT:

DESCRIPTION: North Fork Powell River confluence

RIVER MILE: 0.00

LATITUDE: 36.77694 **LONGITUDE:** -83.05111

This segment includes the mainstem of Straight Creek from its headwaters north of Monarch to its confluence with North Fork Powell River. This stream flows through St. Charles. The mainstem of Straight Creek was listed on the 1994 TMDL report for fecal coliform violations and 1996 TMDL report for benthic impairment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e.Coli, General Standard (Benthic)

Biological monitoring stations, 6BSTA000.11, 6BSRA000.4, 6BSRA000.54, 6BSRA001.10, 6BSRA002.48 and 6BSRA003.62 show that the stream is moderately impaired. The biologist notes that there is embeddedness and the streambank stability is poor. A special study station at 6BSRA001.34 had fish tissue date for PCB which exceeds the human health screening value. The ambient water quality monitoring station, 6BSRA001.11, has 7 bacteria violations for 17 samples. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) and nickel in sediment data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Urban, Resource Extraction

The source of the fecal coliform violations is historic raw sewerage discharges. In 2003, St. Charles STP will go off line and all sewerage is to be treated at the Pennington Gap STP. Part of this contract was also to provide public sewer to the upper reaches of the watershed. Coal mining and coal preparation plants in this watershed contribute to benthic impacts. There is acid mine drainage on tributaries to Straight Creek and abandoned mine sites which have adversely impacted aquatic habitat.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Stone Creek

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.08 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: headwaters Stone Creek

RIVER MILE: 10.08

LATITUDE: 36.78000 **LONGITUDE:** -83.12833

DOWNSTREAM LIMIT:

DESCRIPTION: Straight Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.77667 **LONGITUDE:** -83.05694

Stone Creek is outside of Pennington Gap. This segment begins at the confluence with Ely Creek and ends at its confluence with Straight Creek. This segment was included on the 1996 TMDL list as one of the Straight Creek tributaries. However, after acquisition of more data the segment has been shortened to exclude its headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring data at 6BSTC000.06, 6BSTC000.27, and 6BSTC003.27 rate this segment as moderately impaired for aquatic life uses.

IMPAIRMENT SOURCE: Resource Extraction, Acid Mine Drainage, NPS - Urban

Abandoned Mined Lands may be the major source for the acid mine drainage in the watershed. However, urban land uses also contribute to benthic impacts.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Baileys Trace

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.55 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: headwaters and tributaries

RIVER MILE: 4.55

LATITUDE: 36.82889 **LONGITUDE:** -83.09333

DOWNSTREAM LIMIT:

DESCRIPTION: Straight Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.80417 **LONGITUDE:** -83.05639

The entire length of Baileys Trace is included in this segment. The stream is near the community of St. Charles and flows to Straight Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring station results on Straight Creek, 6BSRA000.40, and best professional judgement lead to inclusion of Baileys Trace on the 1996 303(d) report. In 2004, the segment is not impaired for aquatic life based on one sampling event September 1999.

IMPAIRMENT SOURCE: Resource Extraction

Resource Extraction and abandoned mine lands are the suspected sources for impairment. There is also a large number of homes in the watershed which may contribute to the benthic impairments. More data is needed to determine the water quality of this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Ely Creek & tributaries

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.27 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: headwaters and tributaries

RIVER MILE: 3.27

LATITUDE: 36.79556 **LONGITUDE:** -83.10083

DOWNSTREAM LIMIT:

DESCRIPTION: Stone Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.76861 **LONGITUDE:** -83.10000

Ely Creek is a tributary to Stone Creek, west of Pennington Gap. The segment includes Ely Creek and tributary streams, Bean Creek and Goose Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A special study contracted by Virginia Department of Mined Land Reclamation verified that pH values are below the lower limit of water quality standards and benthics are impaired. Both chemical, physical and biological sampling points verify the impairments.

IMPAIRMENT SOURCE: Resource Extraction

Acid mine drainage is a problem in this stream. There are abandoned mine works and acid mine seeps. Iron precipitate is visible for most of the length including the Ely Creek confluence with Stone Creek. In 2003, funding from numerous sources enabled a wetland treatment facility to be constructed in this drainage. This should help improve water quality.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Gin Creek

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.61 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: headwaters and tributaries

RIVER MILE: 2.61

LATITUDE: 36.84861 **LONGITUDE:** -83.06889

DOWNSTREAM LIMIT:

DESCRIPTION: Straight Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.81694 **LONGITUDE:** -83.04944

Gin Creek is a tributary to Straight Creek and is located above St. Charles in Lee County. The entire reach of the stream is included in this segment. This was part of the Straight Creek segment listed on the 1998 303(d) report.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring station results on Straight Creek, 6BSRA000.40, and best professional judgement lead to inclusion of Gin Creek on the 1996 303(d) report. No other data is available, therefore, the segment will remain on the 303(d) list. DCR ranks this watershed high for the potential for water quality impairment.

IMPAIRMENT SOURCE: Resource Extraction

Resource Extraction and urban communities along the stream are the probable sources for impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Lick Branch

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P20R-07

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.79 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: headwaters and tributaries

RIVER MILE: 0.79

LATITUDE: 36.79278 **LONGITUDE:** -83.08444

DOWNSTREAM LIMIT:

DESCRIPTION: Puckett Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.78917 **LONGITUDE:** -83.07056

Lick Branch is a tributary to Puckett Creek and is located near St. Charles. The segment includes the entire length of the stream as well as any headwater tributaries. This segment was included in the 1996 TMDL list as part of Straight Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A special study contracted by Virginia Department of Mined Land Reclamation and USCOE verified that pH values are below the lower limit of water quality standards. This segment was included in 1996 and 1998 TMDL lists as part of the Straight Creek segment based on a biological station on Straight Creek and best professional judgement.

IMPAIRMENT SOURCE: Resource Extraction

Abandoned Mined Lands may be the major source for the acid mine drainage in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: East and West Batie Creek

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.85 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: West Batie Creek spring

RIVER MILE: 0.85

LATITUDE: 36.66750 **LONGITUDE:** -83.15667

DOWNSTREAM LIMIT:

DESCRIPTION: Powell River confluence

RIVER MILE: 0.00

LATITUDE: 36.65778 **LONGITUDE:** -83.15222

The segment includes both East Batie Creek and West Batie Creek. The two originate from cave or sinkhole openings and confluence at stream mile 0.7 to become Batie Creek. Batie Creek is also included in the segment to its confluence with Powell River. The headwaters are off of Route 662 in The Cedars section of Lee County, west of Jonesville.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

The creek has been monitored as part of a special study with biological monitoring results indicating that the creek is severely impacted. Dissolved oxygen profiles on this stream also show a violation of stream standards.

IMPAIRMENT SOURCE: NPS - Solid Waste

This region of Lee County, known as The Cedars, is a karst area. The source of dissolved oxygen violations is nonpoint related. U.S. Fish and Wildlife, along with partners, are funding a project to reduce the amount of sawdust at a sawmill by using it as a soil amendment to clean the sawmill sinkhole of the sawdust.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Wallen Creek

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P22R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.03 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Lone Branch confluence

RIVER MILE: 2.03

LATITUDE: 36.61530 **LONGITUDE:** -83.17680

DOWNSTREAM LIMIT:

DESCRIPTION: Powell River confluence

RIVER MILE: 0.00

LATITUDE: 36.63420 **LONGITUDE:** -83.17278

This segment of Wallen Creek runs from the confluence with Lone Branch near Route 612 to the confluence with Powell River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

There is a biological monitoring station, 6BWAL001.57, with inconclusive data. The reports fluctuate between not impaired and moderately impaired. In 1999 and 2000 the biologist rated this station slightly impaired. The current assessment (2004) rates the segment as fully supporting the aquatic life use.

IMPAIRMENT SOURCE: NPS - Agriculture

The source is probably forestry and agriculture. DCR recognizes agriculture and forestry as landuses of potential impact in the watershed. More date is needed to determine the water quality in this stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Lee

STREAM NAME: Powell River

HYDROLOGIC UNIT: 06010206

TMDL ID: VAS-P23R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.42 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Hardy Creek confluence

RIVER MILE: 127.50

LATITUDE: 36.64278 **LONGITUDE:** -83.24028

DOWNSTREAM LIMIT:

DESCRIPTION: Yellow Creek confluence

RIVER MILE: 119.08

LATITUDE: 36.61611 **LONGITUDE:** -83.29806

Powell River flows through Lee County. This segment begins at Hardy Creek and ends at Yellow Creek near Route 661 above the Tennessee State Line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A biological monitoring station 6BPOW120.12, show moderate impairment.

IMPAIRMENT SOURCE: Unknown

The source for impairment is unknown. The impairment may be agricultural as this is the most prevalent landuse.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: PawPaw Creek

HYDROLOGIC UNIT: 05070201

TMDL ID: VAS-Q03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.52 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Kentucky State line

RIVER MILE: 4.52

LATITUDE: 37.42833 **LONGITUDE:** -82.12417

DOWNSTREAM LIMIT:

DESCRIPTION: Knox Creek confluence

RIVER MILE: 0.00

LATITUDE: 37.44722 **LONGITUDE:** -82.05833

This segment includes the entire length of PawPaw Creek from the Kentucky State line to its confluence with Knox Creek. It is located along Route 643 north of Grundy.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

PawPaw Creek has been identified as not supporting aquatic life uses based on a RPB2 protocol at station 6APPW000.60 in 1992. It was rated severely impaired overall. There is habitat impairment.

IMPAIRMENT SOURCE: Resource Extraction

There have been NPDES dischargers from coal mining in the watershed. It is believed that this may be the source for habitat degradation. More monitoring is necessary to determine if this segment continues to be impaired.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Knox Creek

HYDROLOGIC UNIT: 05070201

TMDL ID: VAS-Q03R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 16.94 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: headwaters

RIVER MILE: 26.11

LATITUDE: 37.33722 **LONGITUDE:** -81.91389

DOWNSTREAM LIMIT:

DESCRIPTION: Kentucky State Line

RIVER MILE: 9.17

LATITUDE: 37.47111 **LONGITUDE:** -82.06417

The mainstem of Knox Creek from its headwaters to the Kentucky State line. The stream runs through Hurley and Keels in Buchanan County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform, Fish Tissue - PCBs

A benthic station previously sampled indicated this stream is moderately impaired. Because there is no recent sampling data, this stream remains on the TMDL list. An ambient water quality monitoring station at 6AKOX008.11has 12 bacteria violations in 27 samples and another station at 6AKOX014.17 hac 3 bacteria violations in 9 samples. PCB concentrations in three fish species fish tissue at 6AKOX008.11 results in failure to meet the fish consumption use.

IMPAIRMENT SOURCE: Resource Extraction, NPS - Urban, Unknown

Coal mining extraction in this watershed, as well as densely populated urban use and activities, have contributed to the degraded habitat.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Guess Fork

HYDROLOGIC UNIT: 05070201

TMDL ID: VAS-Q03R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.41 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: headwaters

RIVER MILE: 8.41

LATITUDE: 37.39870 **LONGITUDE:** -81.93180

DOWNSTREAM LIMIT:

DESCRIPTION: Knox Creek confluence

RIVER MILE: 0.00

LATITUDE: 37.43540 **LONGITUDE:** -82.03230

The entire stream reach is included in this segment, extending from headwaters to confluence with Knox Creek in Buchanan County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

A ambient water quality monitoring station, 6AGIE000.04 has 4 bacteria violations out of 9 samples.

IMPAIRMENT SOURCE: Municipal

A densely populated valley community may be the source of the bacteria violations.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Levisa Fork River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.96 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Garden Creek confluence with Levisa

RIVER MILE: 155.94

LATITUDE: 37.21250 **LONGITUDE:** -82.00639

DOWNSTREAM LIMIT:

DESCRIPTION: Dismal Creek confluence with Levisa

RIVER MILE: 151.98

LATITUDE: 37.23333 **LONGITUDE:** -82.04417

The segment is delineated by the major streams which join Levisa River. The confluence with Garden Creek marks the upstream boundary of the segment and downstream confluence with Dismal Creek marks the end of the segment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fish Tissue - PCBs, Total Fecal Coliform (2004)

The biological monitoring station, 6ALEV151.90, has not been sampled in over 5 years. However, there is no other data to suggest the situation has changed since this segment was listed. Benthic data indicates the habitat is poor due to stream embeddedness, lack of canopy and poor bank stability. Of the four sampling efforts in this segment, three were rated moderately impaired and one, December 1991, was rated severely impaired. It is recommended that monitoring should be undertaken to verify impairment. PCB was detected at a fish tissue station 6ALEV151.26. Ambient water quality monitoring stations, 6ALEV152.46 and 6ALEV156.82 both have bacteria violations, 9 of 24 and 3 of 9 respectively.

IMPAIRMENT SOURCE: Resource Extraction, NPS - Urban, Unknown

The source is due to coal mining activities and riparian zone modification. Riparian zone modification is a result of urban uses within the stream corridor. Sources for bacteria violations are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Garden Creek

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q04R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.82 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Right Fork confluence

RIVER MILE: 1.82

LATITUDE: 37.18889 **LONGITUDE:** -82.00444

DOWNSTREAM LIMIT:

DESCRIPTION: Levisa Fork River confluence

RIVER MILE: 0.00

LATITUDE: 37.21222 **LONGITUDE:** -82.00639

This includes a segment of Garden Creek from its confluence with Right Fork to the confluence with Levisa Fork River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, General Standard (Benthic)

An ambient water quality monitoring station at 6AGAR000.16 has 17 bacteria violations in 29 samples. PCBs were detected in fish tissue. Recent biological assessments indicate that there is an improvement in the severity of benthic impairment so that the segment has moderate impairment. The last three assessments have been moderately impaired at station 6AGAR000.16. This section is also a 'Water of Concern' for exceedances found from PCB and habitat assessment data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: NPS - Urban, Habitat Alteration

Land uses in the watershed, resource extraction and dense population settlement along the stream, contribute to these violations.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Levisa Fork River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q04R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.85 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters Levisa Fork River

RIVER MILE: 165.79

LATITUDE: 37.14620 **LONGITUDE:** -81.89970

DOWNSTREAM LIMIT:

DESCRIPTION: Garden Creek confluence

RIVER MILE: 155.94

LATITUDE: 37.21250 **LONGITUDE:** -82.00639

This segment extends from the headwaters of Levisa Fork River in Buchanan County to its confluence with Garden Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station at 6ALEV156.82 has 3 bacteria violations in 9 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Levisa Fork River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.08 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Dismal Creek confluence

RIVER MILE: 151.84

LATITUDE: 37.23333 **LONGITUDE:** -82.04389

DOWNSTREAM LIMIT:

DESCRIPTION: Slate Creek confluence

RIVER MILE: 143.76

LATITUDE: 37.27833 **LONGITUDE:** -82.10111

This segment of Levisa Fork River includes the mainstem from its confluence with Dismal Creek on Route 460 to confluence with Slate Creek in Grundy.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), General Standard (Fish Tissue-PCB), Total Fecal Coliform (2004)

The sediment analysis at ambient water quality monitoring station 6ALEV143.86 has effect range - median (ER-M) value exceedences for nickel. 6ALEV143.80 is a biological monitoring station in this reach with moderate impairment ratings. PCB was detected in the fish tissue of 3 species at station 6ALEV145.86 and in one species at 6ALEV151.26. Additionally an ambient water quality monitoring station at 6ALEV143.86 has 5 bacteria violations in 38 samples. This section is also a 'Water of Concern' for exceedances found from habitat assessment data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown, Unknown, Municipal

Metal sources are unknown. However, resource extraction of coal is the predominant land use in this watershed. Nickel may be due to either urban nonpoint sources or resource extraction. More research is recommended to identify a source for both nickel and PCB. Levisa Fork River flows through a dense municipal region which may account for bacteria violations.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Slate Creek

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.08 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Upper Rock House Branch confluence

RIVER MILE: 9.08

LATITUDE: 37.31810 **LONGITUDE:** -81.98060

DOWNSTREAM LIMIT:

DESCRIPTION: Levisa Fork confluence

RIVER MILE: 0.00

LATITUDE: 37.27861 **LONGITUDE:** -82.10083

This stream lies parallel with Route 83 and is delineated by its upstream confluence with Upper Rock House Branch, downstream to the mouth of the stream at Levisa Fork River. This segment is longer because of extension of upper limit from special study in 1998.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

Special Study biological monitoring stations, 6ASAT000.00, 6ASAT000.05, 6ASAT004.52, and 6ASAT007.71 were all moderately impaired in June 1998. Thus the segment has been extended from Elkins Branch upstream to Upper Rock House Branch. An ambient station, 6ASAT000.03, fecal coliform data shows violations 6 of 18 samples.

IMPAIRMENT SOURCE: NPS - Urban, NPS - Urban

The area has been mined for coal and the housing situation is typically dense on the floodplain. Abrupt elevation changes from narrow floodways to steep mountains is typical in the watershed. This increases urban impacts to the stream.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Bull Creek & Tributaries

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 16.87 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Bull Creek headwaters

RIVER MILE: 5.38

LATITUDE: 37.29222 **LONGITUDE:** -82.21889

DOWNSTREAM LIMIT:

DESCRIPTION: Levisa Fork River confluence

RIVER MILE: 0.00

LATITUDE: 37.31250 **LONGITUDE:** -82.16639

The segment of Bull Creek includes its entire length and all tributaries; Belcher Branch, Deel Fork, Burnt Poplar Fork, Big Branch, Starr Branch, Jess Fork, and Convict Hollow. Bull Creek confluences with Levisa Fork River. Bull Creek is 5.38 miles long. The remainder of the 16.9 mile segment extends to include the tributaries to Bull Creek based on the new NHD data.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

The biological monitoring station, 6ABLC002.3, sample results yield a severe impaired rating. The biologist noted that land use in this watershed was mining and forest. He also noted that trash was in the stream.

IMPAIRMENT SOURCE: Resource Extraction

Land uses indicate that resource extraction is the source of impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Levisa Fork River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q08R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.66 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Rocklick Creek confluence

RIVER MILE: 132.66

LATITUDE: 37.35528 **LONGITUDE:** -82.18972

DOWNSTREAM LIMIT:

DESCRIPTION: Kentucky State line

RIVER MILE: 130.00

LATITUDE: 37.36361 **LONGITUDE:** -82.21750

This segment begins at the confluence with Rocklick Creek near Route 645, northeast of Weller and ends at the state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), VDH Fish Consumption (PCB), Total Fecal Coliform (2004)

A biological station, 6ALEV130.29 is moderately impaired. This segment has been extended. Virginia Department of Health has posted a twelve miles segment for fish consumption due to PCB in fish tissue at stations 6ALEV134.82 and 6ALEV130.00. The fish consumption segment extends to an adjacent segment. Arsenic was also found in fish tissue. There was DDT detected in sediments. DDT and PCBs are observed effects. An ambient water quality monitoring station 6ALEV131.52 has 10 bacteria violations in 56 samples.

IMPAIRMENT SOURCE: Resource Extraction, Unknown, Municipal Density

Resource extraction, high population density and urban activities are probably sources of these concerns. The PCB source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Levisa Fork River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q08R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.35 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: River Mile 142.00

RIVER MILE: 142.00

LATITUDE: 37.29028 **LONGITUDE:** -82.12639

DOWNSTREAM LIMIT:

DESCRIPTION: Rocklick Creek confluence

RIVER MILE: 132.66

LATITUDE: 37.35528 **LONGITUDE:** -82.18972

The Fish Consumption segment is 12 miles long. It extends from Grundy, just upstream of confluence with Six and Twenty Mile Creek downstream to Rocklick Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

PCB in Fish Tissue at a special monitoring station, 6ALEV130.00, is the cause of impairment. This sample was in 1997. This section is a 'Water of Concern' for exceedances found from PCBs data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source of PCB contamination is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan

STREAM NAME: Russell Fork

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.66 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 49.48

LATITUDE: 37.05820 **LONGITUDE:** -82.04300

DOWNSTREAM LIMIT:

DESCRIPTION: Hollow Poplar Branch confluence

RIVER MILE: 40.82

LATITUDE: 37.10950 **LONGITUDE:** -82.15660

This headwater segment extends to confluence with Hollow Poplar Branch downstream of Davenport.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e. Coli

The ambient water quality monitoring station at 6ARSS41.08 has 2 bacteria violations in 10 samples and 6ARSS047.10 has 4 bacteria violations in 20 samples.

IMPAIRMENT SOURCE: Unknown

Sources are unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Dickenson

STREAM NAME: McClure River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q11R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.03 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Caney Creek confluence

RIVER MILE: 14.08

LATITUDE: 37.10778 **LONGITUDE:** -82.37972

DOWNSTREAM LIMIT:

DESCRIPTION: Road Branch confluence

RIVER MILE: 4.05

LATITUDE: 37.18230 **LONGITUDE:** -82.33670

This segment begins at the confluence with Caney Creek near McClure and extends downstream along Route 63 to Road Branch near the community of Steinman.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station, 6AMCR007.46, on Route 781 in Clinchco has 3 bacteria violations in 17 samples. This segment plus a downstream segment which ended at the Russell Fork River confluence was listed in 1994 for not supporting the swimmable use. In August 2002, the reach was delisted because data did not violate the standard. However, in the 2004 assessment, there are violations at the upstream station and the downstream station has no violations. The segment is listed again for the upper reach but not for the lower reach, based on data at 6AMCR000.2, where there are no violations of the bacteria standard. Biological stations, 6AMCR000.55 and 6AMCR000.2, are not impaired.

IMPAIRMENT SOURCE: NPS - Urban

Land uses include coal mining, forestry and dense population settlement along the floodways. Fecal coliform violations were probably attributable to urban sources.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Buchanan, Dickenson

STREAM NAME: Russell Prater Creek

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q12R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 11.27 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Headwaters at Poplar Gap

RIVER MILE: 11.27

LATITUDE: 37.24278 **LONGITUDE:** -82.15694

DOWNSTREAM LIMIT:

DESCRIPTION: Russell Fork confluence

RIVER MILE: 0.00

LATITUDE: 37.20417 **LONGITUDE:** -82.29194

Russell Prater mainstem is located along Route 83 east of Haysi and includes the length of the creek from its headwaters near Poplar Gap to its mouth at the confluence with Russell Fork.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

The segment is designated due to biological monitoring stations, 6ARPC000.80 and 6ARPC000.52. There were two samples taken in the last 5 year cycle, one sample taken in 1999, that indicated moderate impairment. The biologist observed coal mining activity and habitat degradation.

IMPAIRMENT SOURCE: Resource Extraction

The source of impairment is resource extraction. There is significant coal mining land use in this watershed which may have resulted in aquatic habitat impacts.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Dickenson

STREAM NAME: Russell Fork River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q12R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.96 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: McClure River confluence

RIVER MILE: 25.43

LATITUDE: 37.20500 **LONGITUDE:** -82.29528

DOWNSTREAM LIMIT:

DESCRIPTION: Pound River confluence

RIVER MILE: 21.64

LATITUDE: 37.24278 **LONGITUDE:** -82.32000

This segment on Russell Fork River is defined by its confluence with McClure River to the Pound River confluence. This segment is downstream of the Town of Haysi.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

In 1997 special study station, 6ARSS025.55, had fish tissue PCB exceedences of the human health screening values in four fish species. Although this date is earlier than the 2004 assessment cycle, there is no current data to suggest this can be removed from the TMDL list.

IMPAIRMENT SOURCE: Unknown

The source of PCB is unknown. A study should be conducted to determine the extent and source of this contaminant.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Dickenson

STREAM NAME: John Flannagan Reservoir

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q13L-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1143 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Pound River arm of Flannagan Dam headwaters

RIVER MILE: 8.00

LATITUDE: 37.02111 **LONGITUDE:** -82.40528

DOWNSTREAM LIMIT:

DESCRIPTION: Flannagan Dam

RIVER MILE: 0.00

LATITUDE: 37.23306 **LONGITUDE:** -82.34500

Flannagan Reservoir is northeast of Clintwood and includes the confluence of Pound River and Cranesnest River. The segment includes the entire lake.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Lake monitoring stations at 6ACNR001.03-BL, 6APNR001.82-TL,BL and 6APNR007.67-BL have low DO values. Special fish tissue station at 6APNR002.15 had Aldrin and arsenic detected. In 2002 only the Cranesnest arm of Flannagan Reservoir was listed however, with additional data, the entire Reservoir is now included in this segment.

IMPAIRMENT SOURCE: Natural Conditions

The source is due to natural lake processes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: North Fork Pound Reservoir

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q13L-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 154 - Acres

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters North Fork Pound Reservoir

RIVER MILE:

LATITUDE: 37.10410 **LONGITUDE:** -82.67340

DOWNSTREAM LIMIT:

DESCRIPTION: North Fork Pound Dam

RIVER MILE:

LATITUDE: 37.12530 **LONGITUDE:** -82.62990

This reservoir is to the east of Pound in Wise County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen

Bottom layer of lake monitoring stations 6APNK002.08-BL, 6APNK001.26-BL and 6APNK001.87-BL have dissolved oxygen violations.

IMPAIRMENT SOURCE: Natural Conditions

The source is due to natural lake processes.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: South Fork Pound River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q13R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.53 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.53

LATITUDE: 37.06190 **LONGITUDE:** -82.69820

DOWNSTREAM LIMIT:

DESCRIPTION: Pound River confluence

RIVER MILE: 0.00

LATITUDE: 37.12306 **LONGITUDE:** -82.61306

The mainstem of the River from headwater streams Phillips and Donald Creeks to confluence with the Pound River. This segment includes a portion of the town of Pound.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring station, 6APNS000.40, data ranks this site moderately impaired or severely impaired for six visits. Five most recent sample efforts 1997, 1998 and 1999 were rated moderately impaired. Low density of organisms is cited as the reason for severe impairment which put it on the 1994 TMDL list. In 1999 the biological monitoring station 6APNS004.98 is also moderately impaired and 6APNS008.73 is severely impaired. This section (ADB segment PNS01A02) is also a 'Water of Concern' for exceedances found from nickel data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Resource Extraction

Sources for benthic impairment may be due to acid mine drainage from coal mining and municipal inputs.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: North Fork Pound River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q13R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.11 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2008

UPSTREAM LIMIT:

DESCRIPTION: North Fork Pound Lake impoundment

RIVER MILE: 1.11

LATITUDE: 37.12556 **LONGITUDE:** -82.62972

DOWNSTREAM LIMIT:

DESCRIPTION: Pound River confluence

RIVER MILE: 0.00

LATITUDE: 37.12306 **LONGITUDE:** -82.61306

The North Fork Pound River mainstem from downstream of the North Fork Pound Lake impoundment to the confluence with Pound River are included in this segment. The North Fork and South Fork of Pound River confluence to form the Pound River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring results, 6APNK000.08, indicate that the stream is moderately impaired. These results include a low EPT index and moderate taxa richness scores.

IMPAIRMENT SOURCE: NPS - Urban

The source of impairment is urban. However, a secondary source may be habitat degradation due to the lake discharge being withdrawn from the bottom lake layer.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Donald Branch

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q13R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.87 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 1.87

LATITUDE: 37.04778 **LONGITUDE:** -82.72083

DOWNSTREAM LIMIT:

DESCRIPTION: South Fork Pound River confluence

RIVER MILE: 0.00

LATITUDE: 37.06306 **LONGITUDE:** -82.69806

This segment includes Donald Branch which is a headwater stream to South Fork Pound River. It begins in the mountain and confluences with Phillips Creek to form South Fork Pound River. Route 627 follows Phillips Creek to its origins just to the south of Flat Gap west of Pound, Virginia.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

There is a biological station at 6APNS008.73 with data that rates the headwaters as severely impaired.

IMPAIRMENT SOURCE: Resource Extraction

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Wise

STREAM NAME: Phillips Creek

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q13R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.14 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 2.14

LATITUDE: 37.03583 **LONGITUDE:** -82.70944

DOWNSTREAM LIMIT:

DESCRIPTION: South Fork Pound River confluence

RIVER MILE: 0.00

LATITUDE: 37.06306 **LONGITUDE:** -82.69806

This segment includes Phillips Creek which is a headwater stream to South Fork Pound River. It begins in the mountain and confluences with Donald Branch to form South Fork Pound River. Route 627 follows Phillips Creek to its origins just to the south of Flat Gap west of Pound, Virginia.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

There is a biological station at 6APNS008.73 with data that rates the headwaters as severely impaired.

IMPAIRMENT SOURCE: Resource Extraction

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Dickenson, Wise

STREAM NAME: Pound River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q13R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 16.6 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: North and South Fork Pound Rivers confluence

RIVER MILE: 35.66

LATITUDE: 37.12370 **LONGITUDE:** -82.61310

DOWNSTREAM LIMIT:

DESCRIPTION: Georges Fork confluence

RIVER MILE: 19.06

LATITUDE: 37.18100 **LONGITUDE:** -82.48290

Pound River segment begins at the confluence with South Fork Pound River and North Fork Pound River in Pound and extends downstream to Georges Fork confluence. This segment parallels Route 631 flowing through the community of Norland.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

In 1999 a sample at biological monitoring station, 6APNR028.76 was rated moderately impaired. Nickel exceedences of the sediment screening value are an observed effect.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: Tennessee/Big Sandy River Basins

CITY/COUNTY: Dickenson, Scott

STREAM NAME: Cranesnest River

HYDROLOGIC UNIT: 05070202

TMDL ID: VAS-Q14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.66 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Honeycamp Branch confluence

RIVER MILE: 15.28

LATITUDE: 37.11640 **LONGITUDE:** -82.46180

DOWNSTREAM LIMIT:

DESCRIPTION: Bartley Branch confluence

RIVER MILE: 6.62

LATITUDE: 37.17040 **LONGITUDE:** -82.40590

The Cranes Nest River segment extends from Honeycamp Branch, just downstream of Darwin to Bartley Branch northeast of Clintwood. The river flows near Route 693.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Escherichia coli (e.coli)

The station 6ACNR009.17 has 2 violations of the e.coli standard in 5 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: Big Horse Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N01R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.67 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: North Carolina State Line

RIVER MILE: 0.67

LATITUDE: 36.58770 **LONGITUDE:** -81.65070

DOWNSTREAM LIMIT:

DESCRIPTION: North Fork New River confluence

RIVER MILE: 0.0

LATITUDE: 36.59630 **LONGITUDE:** -81.64900

Tributary to North Fork New River. This segment was previously BHC01A02. Section 2, Class VI, designated natural trout waters within Jefferson National Forest.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station at 9-BHO017.70 has fecal coliform violations in 2 of 9 sampling events.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: Little Helton Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N01R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.42 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 6.85

LATITUDE: 36.60830 **LONGITUDE:** -81.50320

DOWNSTREAM LIMIT:

DESCRIPTION: North Carolina State Line

RIVER MILE: 3.43

LATITUDE: 36.57970 **LONGITUDE:** -81.47050

From VA/NC political boundary upstream to headwaters, tributary to Helton Ck. Section 2, Class VI, designated natural trout waters within Jefferson National Forest. The stream is located in Grayson County roughly parallel to Route 748.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station at 9-LHC001.92 had fecal violations in 2 of 9 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N02R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.17 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: North Carolina State line

RIVER MILE: 189.06

LATITUDE: 36.57500 **LONGITUDE:** -81.32389

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence with Bridle Creek

RIVER MILE: 181.66

LATITUDE: 36.59560 **LONGITUDE:** -81.24270

The segment begins at the North Carolina state line, includes Fields Dam, and extends downstream to the New River confluence with Bridle Creek at the Route 601 bridge. New River roughly parallels the state line in this segment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption - Fully Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, Fish Tissue (Hg)

Ambient water quality monitoring stations at 9-NEW181.66 and 9-NEW187.46 had bacteria violations in 3 of 8 and 4 of 36 samples for this assessment cycle. This section is also a 'Water of Concern' for exceedances found from mercury in fish tissue at station 9-NEW187.46. These results are reported as an 'Observed Effect' in the 2004 Integrated Report. In the ADB segment NEW02A98, sediment screening value exceedences for nickel also make this segment a "Water of Concern" and are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown, Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: Wilson Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N02R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.8 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Intersection of Route 58 and Route 875

RIVER MILE: 8.8

LATITUDE: 36.62080 **LONGITUDE:** -81.43230

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.0

LATITUDE: 36.58450 **LONGITUDE:** -81.32920

This segment parallels Route 58 from Mouth of Wilson at its confluence with New River upstream through Volney. The upstream end is near the intersection of Route 58 and Route 875 about 1.7 miles below the Wilson Creek confluence with Mill Creek in the Jefferson National Forest.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 9-WLS002.57 with 3 violations in 27 samples collected.

IMPAIRMENT SOURCE: Livestock Grazing or Feeding Operations

The area has agricultural land uses which may contribute to bacteria pollution through livestock grazing or feeding operations.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: Fox Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N03R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.67 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Mill Creek confluence

RIVER MILE: 7.67

LATITUDE: 36.67140 **LONGITUDE:** -81.39460

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.0

LATITUDE: 36.60330 **LONGITUDE:** -81.30720

The impaired Fox Creek segment begins upstream at the confluence with Mill Creek to the southeast of Jones Knob and flows southwest to confluence with New River. The segment flows to the north east of Kendrick Mountain.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

There is an ambient water quality monitoring station at 9-FXC000.84 with 4 bacteria violations in 28 samples and another station at 9-FXC003.35 with 2 violations in 9 samples collected.

IMPAIRMENT SOURCE: Livestock Grazing or Feeding Operations

The area has agricultural land uses which may contribute to bacteria pollution through livestock grazing or feeding operations.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N04R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.51 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Bridle Creek confluence

RIVER MILE: 181.66

LATITUDE: 36.59580 **LONGITUDE:** -81.24200

DOWNSTREAM LIMIT:

DESCRIPTION: Saddle Creek confluence

RIVER MILE: 180.15

LATITUDE: 36.60640 **LONGITUDE:** -81.22250

This segment begins at the watershed boundary at Bridle Creek and extends downstream to Saddle Creek. New River flows parallel to Route 58 in this segment to the east of Independence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station at 9-NEW187.46 had 4 bacteria violations for the 36 sampling events. This extends the impaired watershed from VAS-N02R-02.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: Little River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N04R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.25 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: North Carolina State line

RIVER MILE: 5.20

LATITUDE: 36.56420 **LONGITUDE:** -81.01200

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.60540 **LONGITUDE:** -81.06200

This segment begins at the state line and extends to its confluence with New River. Routes 632 and 629 flow along portions of this segment.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station 9-LVR001.34 had 4 bacteria violations in 18 samples collected in the segment.

IMPAIRMENT SOURCE: Animal Feeding Operations (NPS)

The source may be animal feeding operation non-point source.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: Peach Bottom Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N04R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.74 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Beaverdam Creek confluence

RIVER MILE: 2.74

LATITUDE: 36.59970 **LONGITUDE:** -81.11190

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.58320 **LONGITUDE:** -81.08680

The upstream limit for Peach Bottom Creek is its confluence with Beaverdam Creek at the intersections of Routes 765 and 697. The stream flows south along Route 697 to its confluence with New River near Route 700.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

Ambient water quality monitoring station 9-PBC001.12 had 3 bacteria exceedences in 8 samples. This section is also a 'Water of Concern' for exceedances found from total phosphorus (TP) data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: Elk Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N05R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.69 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Turkey Fork confluence

RIVER MILE: 10.69

LATITUDE: 36.70778 **LONGITUDE:** -81.12944

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.67167 **LONGITUDE:** -81.02944

The segment begins at its Turkey Fork confluence and continues to confluence with New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient monitoring station, 9-EKC003.78, shows 5 of 17 bacteria samples violate the water quality standard. Above this segment of Elk Creek the stream is designated stockable trout waters. The sampling station is downstream of the stockable trout waters which are between Turkey Fork and Knob Fork confluences with Elk Creek.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Carroll, Galax, Grayson

STREAM NAME: Chestnut Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N06R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 14 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Galax Intake

RIVER MILE: 14.00

LATITUDE: 36.66278 **LONGITUDE:** -80.92000

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.75944 **LONGITUDE:** -80.95556

The segment includes the mainstem of Chestnut Creek from the Galax raw water intake to the New River confluence. The segment is one mile shorter due to NHD dataset use.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreational Use -Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform (2004)

The biologist has visited 4 stations within this reach. Station 9-CST001.31 in 1996 was not impaired, 9-CST002.64 was sampled four times between 1992 and 1997, and rated moderately impaired. Biological monitoring station 9-CST010.10 has been sampled four times and rated moderately impaired in 1992 and 1993 but not impaired in 1995 and 1996. The upstream most station, 9-CST013.29, was visited three times and rated impaired in 1993 but not impaired in 1997. EPA requires two consecutive samples to be not impaired before a segment can be removed from the TMDL List, so the segment is considered impaired. An ambient station at 9-CST002.64 is impaired for recreational use with 3 bacteria violations of 15 samples. This section is also a 'Water of Concern' for exceedances found from zinc and nickel data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Resource Extraction, Unknown

The source of benthic impairment is probably due to mining activities which historically occurred in the area. Allied-Signal Gossen Mine is the former site of sulfur mining operations in an iron-pyrrhotite seam that closed in 1962. This facility has a VPDES permit to treat acid mine drainage. Bacteria violations have added another impairment to this segment based on the 2004 assessment. The source of bacteria is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Galax, Grayson

STREAM NAME: Chestnut Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N06R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.68 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Coal Creek confluence

RIVER MILE: 17.68

LATITUDE: 36.63130 **LONGITUDE:** -80.90020

DOWNSTREAM LIMIT:

DESCRIPTION: Galax Water Intake

RIVER MILE: 14.00

LATITUDE: 36.66278 **LONGITUDE:** -80.92000

The segment includes the mainstem of Chestnut Creek from the confluence with Coal Creek, near Cox Mill downstream to the Galax raw water intake. The segment is above Galax City limits.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e. Coli

An ambient station at 9-CST016.82 is impaired for recreational use with 10 bacteria violations of 36 samples.

IMPAIRMENT SOURCE: Unknown

The source of bacteria is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Grayson

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N06R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.19 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Elk Creek confluence

RIVER MILE: 151.71

LATITUDE: 36.57500 **LONGITUDE:** -81.32389

DOWNSTREAM LIMIT:

DESCRIPTION: about 3/4 miles below Town Branch confluence

RIVER MILE: 146.52

LATITUDE: 36.66460 **LONGITUDE:** -80.98240

The segment extends from the Elk Creek confluence above Riverside downstream about 3/4 miles below Town Branch confluence with New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e. Coli

Ambient water qualitymonitoring station 9-NEW148.23 had 10 bacteria violations in 55 samples collected.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Carroll

STREAM NAME: Crooked Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N07R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.04 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Cranberry Creek confluence

RIVER MILE: 11.68

LATITUDE: 36.72870 **LONGITUDE:** -80.86310

DOWNSTREAM LIMIT:

DESCRIPTION: backwaters of Byllsby Dam

RIVER MILE: 1.64

LATITUDE: 36.77900 **LONGITUDE:** -80.92170

This is the lower segment of Crooked Creek which extends from the backwaters to Byllsby Lake on New River upstream to Cranberry Creek near the bridge on Route 707 in Carroll County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station 9-CRK003.00 had 3 bacteria violations in 28 samples. This section is also a 'Water of Concern for exceedances found from PCB data in sediments and fish tissue at the same station. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Carroll

STREAM NAME: Crooked Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N07R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 10.77 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 27.93

LATITUDE: 36.62360 **LONGITUDE:** -80.81880

DOWNSTREAM LIMIT:

DESCRIPTION: Beaverdam Creek confluence

RIVER MILE: 17.16

LATITUDE: 36.70530 **LONGITUDE:** -80.82810

This is the upper segment of Crooked Creek which extends from the headwaters to its confluence with Beaverdam Creek just south of Woodlawn. The stream parallels Routes 713 and 620 in Carroll County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station 9-CRK020.79 has 2 bacteria violations in 9 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Wythe

STREAM NAME: Mill Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N08R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.64 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Route 605 Bridge

RIVER MILE: 3.64

LATITUDE: 36.88580 **LONGITUDE:** -80.96200

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.85500 **LONGITUDE:** -80.92930

Mill Creek extends upstream from Route 605 bridge south of its intersection with Route 94 in Carroll County. It extends to its confluence with New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station 9-MRN000.31 has 4 bacteria violations in 8 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Pulaski, Wythe

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N08R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.66 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Reed Creek confluence

RIVER MILE: 113.52

LATITUDE: 36.92260 **LONGITUDE:** -80.82710

DOWNSTREAM LIMIT:

DESCRIPTION: Reed Island Creek confluence

RIVER MILE: 107.86

LATITUDE: 36.93380 **LONGITUDE:** -80.74940

This segment extends between Reed Creek and Reed Island Creek confluences with New River. The River flows through the communities of Barren Springs Station and Reed Junction in Wythe and Pulaski Counties.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station 9-NEW107.51 has 6 bacteria violations in 51 samples. This section is also a 'Water of Concern' for exceedances found from Zinc data at the same station. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Carroll, Wythe

STREAM NAME: Shorts Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N08R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.75 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Downstream of Route 746 Bridge

RIVER MILE: 6.75

LATITUDE: 36.82290 **LONGITUDE:** -80.83020

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.87110 **LONGITUDE:** -80.86790

The impairment is on the lower end of Shorts Creek from downstream of Route 746 bridge to the mouth of the stream at the New River confluence. This stream is mainly in Carroll County and flows parallel to Route 52 ending at Jackson Ferry at the Shot Tower State Park.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient water quality monitoring station 9-SRT000.12 has 5 bacteria violations in 10 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Wythe

STREAM NAME: Cripple Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N09R-00

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.24 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Dry Run confluence

RIVER MILE: 20.75

LATITUDE: 36.81944 **LONGITUDE:** -81.17389

DOWNSTREAM LIMIT:

DESCRIPTION: Francis Mill Creek confluence

RIVER MILE: 14.51

LATITUDE: 36.82389 **LONGITUDE:** -81.09944

The segment begins at the confluence with Dry Run just above the community of Speedwell on Route 21 and 749 and extends to Francis Mill Creek, near the community of Cripple Creek. The Creek roughly parallels Routes 749 and 619 in Wythe County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform (2004)

A benthic station is located at 9-CPL018.37 which rates this segment as threatened. EPA added this segment to Part 1 of the 1998 TMDL list, based on two benthic samples, one is moderately impaired and the later one is not impaired. No additional sampling has occurred since 1998 but assessment guidance lists this as threatened and not impaired. An ambient water quality monitoring station, 9-CPL018.47 has 3 bacteria violations in 9 samples so this segment has a second impairment parameter in 2004.

IMPAIRMENT SOURCE: Unknown, Unknown

EPA overlisted in 1998. The 2002 305(b) assessment reports this segment as threatened and not partially impaired. More data is needed to make a determination. The source for bacteria violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Smyth, Wythe

STREAM NAME: Cripple Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N09R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.99 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 33.09

LATITUDE: 36.84270 **LONGITUDE:** -81.32270

DOWNSTREAM LIMIT:

DESCRIPTION: Blue Spring Creek confluence

RIVER MILE: 28.10

LATITUDE: 36.81220 **LONGITUDE:** -81.25690

This segment is in the headwaters of Cripple Creek downstream to Blue Spring Creek near the intersection of Routes 749 and 692 in western Wythe County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station, 9-CPL028.10 has 2 bacteria violations in 9 samples.

IMPAIRMENT SOURCE: Unknown

The source for bacteria violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Wythe

STREAM NAME: Cripple Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N09R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.09 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Dean Branch confluence

RIVER MILE: 3.09

LATITUDE: 36.85960 **LONGITUDE:** -80.98230

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.85600 **LONGITUDE:** -80.94060

This segment is from Dean Branch near the community of Porters Crossroads to New River confluence just downstream of Ivanhoe. It is the lower end of Cripple Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station, 9-CPL001.03 has 2 bacteria violations in 9 samples.

IMPAIRMENT SOURCE: Unknown

The source for bacteria violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Wythe

STREAM NAME: Slate Spring Branch

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N09R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.69 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Headwaters

RIVER MILE: 5.89

LATITUDE: 36.87120 **LONGITUDE:** -81.12390

DOWNSTREAM LIMIT:

DESCRIPTION: Cripple Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.84090 **LONGITUDE:** -81.05000

The entire stream is included in the impaired segment. This stream is in Wythe County and flows along Route 642 to Eagle Cliff.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station, 9-SPB000.1 has 7 bacteria violations in 9 samples. This section is also a 'Water of Concern' for 2 of 9 exceedances found from total phosphorus (TP) data at the same station. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source for bacteria violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Wythe

STREAM NAME: Reed Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N10R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.37 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Pine Run confluence

RIVER MILE: 33.74

LATITUDE: 36.92972 **LONGITUDE:** -81.13250

DOWNSTREAM LIMIT:

DESCRIPTION: Venrick Run confluence

RIVER MILE: 32.37

LATITUDE: 36.91472 **LONGITUDE:** -81.11944

The segment begins at the confluence with Pine Run near the Pine Ridge gap that and extends to Venrick Run. This segment of Reed Creek is in a Public Water Supply for Wythe. It flows through the small community of Petunia just to the west of Wytheville.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient station located at 9-RDC033.94 has 3 of 15 fecal coliform violations. This segment is in the public water supply for Wytheville.

IMPAIRMENT SOURCE: NPS - Agriculture

The land use is agriculture.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Wythe

STREAM NAME: Reed Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N11R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.77 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Glade Creek confluence

RIVER MILE: 9.77

LATITUDE: 36.93560 **LONGITUDE:** -80.89800

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.92290 **LONGITUDE:** -80.82800

This segment is on the lower end of Reed Creek before its confluence with New River. It flows through the community of Allison on Route 618 and 611.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, e. Coli

U.S.G.S. station 03167000 has 4 fecal violations in 12 samples and 6 e.coli violations in 12 samples on Reed Creek. This section is also a 'Water of Concern' for exceedances found from PCB sediment data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Carroll

STREAM NAME: Big Reed Island Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAS-N14R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.48 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Snake Creek confluence

RIVER MILE: 31.79

LATITUDE: 36.74410 **LONGITUDE:** -80.62850

DOWNSTREAM LIMIT:

DESCRIPTION: Bobbitt Creek confluence

RIVER MILE: 24.31

LATITUDE: 36.79870 **LONGITUDE:** -80.65080

The Snake Creek confluence is just above the Route 663 bridge on Big Reed Island Creek at the upper end of the segment. The lower end of the segment is at the confluence with Bobbit Creek just downsteam of the Route 221 bridge. The stream flows to the east of the community of Red Hill.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

An ambient water quality monitoring station 9-RIC029.23 has 2 bacteria violations in 14 samples.

IMPAIRMENT SOURCE: Unknown

The source is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Bland, Giles

STREAM NAME: Kimberling Creek

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N26R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 9.18 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Nobusiness Creek confluence

RIVER MILE: 9.18

LATITUDE: 37.17833 **LONGITUDE:** -80.96111

DOWNSTREAM LIMIT:

DESCRIPTION: Walker Creek confluence

RIVER MILE: 0.00

LATITUDE: 37.16040 **LONGITUDE:** -80.86920

In 2002, the segment began at the confluence of Nobusiness Creek and ended at confluence with Dismal Creek. These tributaries flow from Jefferson National Forest and the segment is north of Route 42, parallel to Routes 606 and 608 at the Giles County border. Data indicates the segment should extend downstream to its Walker Creek confluence. Therefore the segment is longer in 2004.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient monitoring stations at 9-KBL001.67 has 2 bacteria violations in 8 samples and 9-KBL007.29 has 6 bacteria violations in 19 samples. Station 9-KBL001.67 is closer to the confluence with Wolf Creek and is listed for the first time this assessment cycle. Thus the lower segment of Kimberling Creek is included in the TMDL segment which was initially listed in 2002.

IMPAIRMENT SOURCE: NPS - Agriculture

The landuse along the stream is predominately agricultural.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Bland

STREAM NAME: Wolf Creek

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N30R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.97 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Unnamed Tributary downstream of Carter Branch confluence

RIVER MILE: 40.06

LATITUDE: 37.14833 **LONGITUDE:** -81.24833

DOWNSTREAM LIMIT:

DESCRIPTION: Hunting Camp Creek confluence

RIVER MILE: 31.09

LATITUDE: 37.17028 **LONGITUDE:** -81.14139

This segment begins at the confluence with an unnamed tributary downstream of Carter Branch and flows along Route 614 through Grapefield to Bastian where it ends at the confluence with Hunting Camp Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

The ambient monitoring station, 9-WFC032.47, had 2 of 13 fecal coliform violations.

IMPAIRMENT SOURCE: NPS - Agriculture

The landuse along the stream is predominately agricultural.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Bland

STREAM NAME: Hunting Camp Creek

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N31R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 8.45 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Hunting Camp Creek impoundment

RIVER MILE: 8.45

LATITUDE: 37.10306 **LONGITUDE:** -81.23417

DOWNSTREAM LIMIT:

DESCRIPTION: Wolf Creek confluence

RIVER MILE: 0.00

LATITUDE: 37.17028 **LONGITUDE:** -81.14167

This segment begins at the impoundment on Hunting Camp Creek above the community of Suiter, and continues to its mouth at Wolf Creek. It flows through the community of Bastian. This segment has been extended an additional 1.21 miles on the basis of a landuse survey.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Total Fecal Coliform

The biological monitoring station, 9-HCC001.40, was sampled twice and found moderately impaired. Observed effects include sedimentation and siltation in this reach. A second station, 9-HCC000.16, was sampled once and also assessed as moderately impaired. This segment has been extended an additional 1.21 miles on the basis of a landuse survey. Ambient samples at station 9-HCC001.40 have 6 bacteria violations in 14 samples.

IMPAIRMENT SOURCE: NPS - Agriculture, NPS - Urban

The landuse along the stream is predominately pasture with erosion and sedimentation occurrences. There are also urban influences, as it flows through Bastian, that contribute to the impairment. In 2003, the sewer hook-ups were made for the new Bastian WWTP. This should alleviate some of the degradation.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Bland

STREAM NAME: Laurel Creek

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N33R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.61 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Dry Fork confluence

RIVER MILE: 1.61

LATITUDE: 37.25472 **LONGITUDE:** -81.11583

DOWNSTREAM LIMIT:

DESCRIPTION: Wolf Creek confluence

RIVER MILE: 0.00

LATITUDE: 37.24250 **LONGITUDE:** -81.10167

This segment begins at the confluence of Dry Fork at North Gap along Route 52. The segment ends at Rocky Gap at Interstate 77 at the Wolf Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform

Ambient samples at station 9-LAC00.56 have 3 bacteria violations in 14 samples.

IMPAIRMENT SOURCE: Unknown

Source of the fecal violations is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Tazewell

STREAM NAME: Bluestone River

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N36R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 6.05 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Wrights Valley Creek confluence

RIVER MILE: 27.76

LATITUDE: 37.24944 **LONGITUDE:** -81.28750

DOWNSTREAM LIMIT:

DESCRIPTION: Watershed N37R boundary

RIVER MILE: 21.71

LATITUDE: 37.28583 **LONGITUDE:** -81.31333

This is a portion of an 6.65 mile segment which extends from Wrights Valley Creek confluence, near the western Bluefield city limit, to the N37 watershed limit at Big Creek. Only 6.05 miles are in N36 the remainder are in N37.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, General Standard (Benthic), Fish Tissue - PCBs

An ambient water quality monitoring station, 9-BST023.05, has 16 fecal coliform violations in 35 samples. Additionally, a biological monitoring station, 9-BST022.27, was assessed as moderately impaired in June 1997. This section is also a 'Water of Concern' for exceedances found from PCBs in fish tissue at 9-BST021.26 and sediment exceedences for DDT and chlordane data. These results are reported as an 'Observed Effect' in the 2004 Integrated Report. The Bluestone River has been contracted for TMDL study which should be completed in April of 2004.

IMPAIRMENT SOURCE: NPS - Urban

Urban nonpoint sources, raw sewage discharges from both Bluefield STP pump station overflows and West Virginia communities are the sources of fecal coliform violations.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Tazewell

STREAM NAME: Bluestone River

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N36R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.63 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Bluefield Intake

RIVER MILE: 29.39

LATITUDE: 37.23694 **LONGITUDE:** -81.28500

DOWNSTREAM LIMIT:

DESCRIPTION: Wrights Valley Creek confluence

RIVER MILE: 27.76

LATITUDE: 37.24944 **LONGITUDE:** -81.28750

This segment extends from the confluence with Dill Springs Run, just above the water intake, to the confluence with Wrights Valley Creek in Bluefield.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, General Standard (Fish Tissue)

An ambient water quality monitoring station, 9-BST029.57, has 9 fecal coliform violations of 34 samples. A fish tissue station at 9-BST029.71 is also in this segment. Based on fish tissue PCB results, The Virginia Department of Health includes this segment in a PCB fish advisory. The Southwest Regional Office is researching possible sources of the PCB contamination through local contacts in the watershed.

IMPAIRMENT SOURCE: NPS - Urban, Unknown

There is housing all along the riverbank, thus urban nonpoint impacts are suspected as the source. Another possible source of fecal coliform violations is the golf course waterfowl population that is adjacent to the monitoring station.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Tazewell

STREAM NAME: Bluestone River

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N36R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.93 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Route 460 Bridge

RIVER MILE: 34.32

LATITUDE: 37.21750 **LONGITUDE:** -81.34750

DOWNSTREAM LIMIT:

DESCRIPTION: Public Water Intake

RIVER MILE: 29.39

LATITUDE: 37.23694 **LONGITUDE:** -81.28500

The segment begins at the Route 460 bridge just above Route 744 and extends downstream to just above the public water intake in Bluefield.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Recreational Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue, Total Fecal Coliform

A fish tissue station at 9-BST029.71, has fish tissue values above the threshold, resulting in a fish advisory from the Virginia Department of Health. This segment also is considered impaired for bacteria based on the station 9-BST029.57 which had 9 bacteria violations in 34 samples.

IMPAIRMENT SOURCE: Unknown, Unknown

Urban nonpoint impacts are suspected as the source.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Tazewell

STREAM NAME: Laurel Fork

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N37R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.91 - Miles

INITIAL LISTING: 1994 **TMDL SCHEDULE:** 2006

UPSTREAM LIMIT:

DESCRIPTION: Route 644

RIVER MILE: 2.84

LATITUDE: 37.29450 **LONGITUDE:** -81.36200

DOWNSTREAM LIMIT:

DESCRIPTION: Bluestone River confluence

RIVER MILE: 0.00

LATITUDE: 37.31222 **LONGITUDE:** -81.33444

This segment extends from Pocahontas High School, on Route 644, through Pocahontas to the confluence with Bluestone River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, General Standard (Benthic), Total Fecal Coliform

The ambient water quality monitoring station, 9-LRR002.19, has dissolved oxygen violations and 3 fecal coliform violations in 21 samples. This segment is also listed as a 'Water of Concern' for sediment exceedences of total phosphorus (TP) data. In 2002 sediment samples indicate that there are exceedences for lead, zinc, cadmium, chromium, and copper. These results are reported as an 'Observed Effect' in the 2004 Integrated Report. A biological monitoring station, 9-LRR001.39, indicates the segment is severely impaired.

IMPAIRMENT SOURCE: NPS - Urban, NPS - Urban

The source for the fecal coliform violations in this segment are urban nonpoint and overflows from the municipal collection system. Pocahontas STP has a history of operational problems and violations of their discharge limits. Resource extraction has been a major land use in the watershed for nearly a century. The biological habitat within this section is severely stressed due to both urban land uses and probably resource extraction. Channel modifications and lack of riparian zone buffers are some of the results of urban encroachment.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Tazewell

STREAM NAME: Bluestone River

HYDROLOGIC UNIT: 05050002

TMDL ID: VAS-N37R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.6 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: VAS-N37R boundary

RIVER MILE: 21.71

LATITUDE: 37.28583 **LONGITUDE:** -81.31333

DOWNSTREAM LIMIT:

DESCRIPTION: West Virginia state line

RIVER MILE: 21.11

LATITUDE: 37.29056 **LONGITUDE:** -81.30722

The segment falls in two watersheds and begins at the confluence with Wrights Valley Creek then extends to the state line across the watershed boundary of VAS-N36R and VAS-N37R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Total Fecal Coliform, Fish Tissue - PCBs, General Standard (Benthic,chlordane)

An ambient water quality monitoring station, 9-BST023.05, has fecal coliform violations. Additionally, there is a biological monitoring station, 9-BST022.27, which is assessed as moderately impaired. Also the fish consumption advisory from VDH extends to the state line from N36R at the Route 460 bridge. The segment is also a 'Water of Concern' due to DDT, PCBs and Chlordane detected in sediments. They are reported as 'Observed Effects in the 2004 integrated report.

IMPAIRMENT SOURCE: NPS - Urban, Unknown, NPS - Urban

Urban nonpoint sources and raw sewage discharges from both Bluefield STP pump station overflows and West Virginia communities are the sources of fecal coliform violations. Sources for Benthic impacts are also probably urban nonpoint. The source of PCBs in the fish tissue are unknown, however, the Southwest Regional Office is researching historic sources of PCB contamination in the watershed.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Pulaski

STREAM NAME: Claytor Lake - New River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N16L-01N

ASSESSMENT CATEGORY: 5C/4C

SEGMENT SIZE: 4139.25 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Claytor Lake backwaters.

RIVER MILE: 104.56

LATITUDE: 36.93861 **LONGITUDE:** -80.73957

DOWNSTREAM LIMIT:

DESCRIPTION: Claytor Dam.

RIVER MILE: 87.14

LATITUDE: 37.07528 **LONGITUDE:** -80.58515

The segment begins at the upstream end of the WQS public water supply PWS designation for the Pulaski County PSA and extends downstream to Claytor Dam. The segment spans the Hiwassee, Dublin and Radford South Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: pH - 1809.38 acres / Dissolved Oxygen 3975.52 acres

DEQ stations and locations are listed below. Stations ending in "TL" are surface collections and "BL" are same site collections at depth. Stations with neither suffix are surface collections.

DEQ Stations
9-NEW087.14-TL - Under Power Lines above Dam
9-NEW087.14-BL
9-NEW088.86 - Claytor Lake at Dam (2000 fish tissue & sediment)
9-NEW089.34-TL - Line Between Beach and Inlet
9-NEW089.34-BL
9-NEW092.66-TL - Dublin Water Works
9-NEW092.66-BL
9-NEW098.32-TL - Route 672 Bridge
9-NEW098.32-BL
9-NEW105.05-TL - New R. - Claytor Lake (2000 fish tissue)
9-NEW105.05-BL - (Two sediment collections only)

Aquatic Life Use
Top Layer:
Dissolved oxygen in the surface layer exceeds the minimum 4.0 mg/l criterion for Class IV waters. Surface excursions are determined using profile data above the thermocline at each station. Described below are the number of dissolved oxygen exceedances / total observations. These excursions are evaluated using the Carlson Trophic State Index described below and are categorized 4C.

9-NEW087.14-BL - 41 / 156.

Fact Sheets for Category 5 Waters

9-NEW089.34-BL - 23 / 150.
9-NEW092.66-BL - 20 / 143.
9-NEW098.32-BL - 23 / 187.

Water flows through Claytor Dam were reduced due to drought conditions (4C) from 1999 through 2002. The summer of 2002 was particularly dry (June through August). New River stream flows as measured at the US Geological Survey station 03168000 in Allisonia (upstream of Claytor Lake) records 29 days of daily mean average flows below the 7Q10 of 722 cubic feet per second (cfs) within the 92 day period. Downstream station 03171000 at Radford records 24 days below the 7Q10 of 912 cfs. 7Q10 is lowest stream flow averaged over seven consecutive days that are statistically expected to occur once every 10 climatic years.

Station 9-NEW087.14-TL with a maximum alkaline exceedance of 9.5 records five exceedances of the pH 6.0-9.0 Standard Unit (SU) range criterion from 40 measurements. Station 9-NEW089.34-TL, although fully supporting (<10.5 percent), reports 3 of 39 measurements exceeding the alkaline criterion with a maximum value of 9.30 SU. The aquatic life use is impaired based on these results- Category 5C. The believed naturally occuring impairment extends from the former Klopman (Burlington) water intake (37°04'00.71" / 80°39'13.20") downstream to the dam (37°04'31.32" / 80°35'04.86") a total of 1809.38 acres or a distance of 5.64 miles.

Bottom Layer:
Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. Depth profiles presented below record multiple dissolved oxygen measurements in excess of the criterion (# dissolved oxygen exceedances / total observations). Exceedances of the minimum criterion are believed to occur in the entirety of the segment even though dissolved oxygen measurements have not been conducted to determine the upper limit of the impairment. The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen impairment remains.

Bottom Layer
9-NEW087.14-BL - 85 / 131.
9-NEW089.34-BL - 67 / 114.
9-NEW092.66-BL - 60 / 92.
9-NEW098.32-BL - Not Stratified.

The Carlson Trophic State Index (TSI) is used to determine the cause of the dissolved oxygen impairment eg. natural or anthropogenic in nature. The following are the index scores from four stations where CA = chlorophyll (a), TP = total phosphorus and SD = seechi disk (transparancy).

New River
9-NEW087.14-TL CA [50.73] TP [45.83] SD [47.87].
9-NEW089.34-TL CA [50.85] TP [45.28] SD [49.43].
9-NEW092.66-TL CA [50.69] TP [45.28] SD [48.46].
9-NEW098.32-TL CA [52.28] TP [57.10] SD [52.78].

TSI scores below 60 indicate a natural aging process in the reservoir while above 60 indicates man's activities on the land may be influencing the natural aging of the reservoir. The data above, primarily SD, indicates a natural aging process for the New River portion of Claytor Lake- Category 4C.

The upper portion of Claytor Lake is a 'Water of Concern' based on sediment exceedances of the Consensus Based Probable Effects Concentration (PEC) [MacDonald et al., 2000] screening values (SVs) for nickel (Ni) and zinc (Zn). Station 9-NEW098.32 records sediment Ni at 49.8 parts per million (ppm) in excess of the PEC SV of 48.6. Station 9-NEW105.05 finds Zn in excess of the PEC SV of 459 ppm at 505 and 481 ppm. These results are reported as 'Observed Effects'. The 'Water of Concern' extends from the backwaters of Claytor Lake downstream to approximately 0.5 miles downstream of the end of Rt. 651 (36°59'33.78" / 80°42'56.93"). A total of 834.1 acres or 7.46 miles.

Fish Consumption Use
2000 fish collections at 9-NEW105.05-TL and 9-NEW088.86 find polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) [Table 6(a), 2004 Assessment Guidance] in tissue from carp at each station. These data are reported as 'Observed Effects'. Fish tissue results are 139 ppb at 9-NEW105.05-TL from a total of 24 fish representing four species. 9-NEW088.86 reports 223 ppb from a total of 26 fish representing four species. The entire Lake is a 'Water of Concern' based on these results.

IMPAIRMENT SOURCE: UnKnown, Natural / Stratification

Aquatic Life Use
The exact source of the pH alkaline exceedance is not known but is believed due to natural conditions created in reservoirs.

Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Informational Note: Claytor Lake (New River portion) is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.4 and A.5.; NEW-4).

Fact Sheets for Category 5 Waters

The exact source(s) of the sediment metals exceedances are unknown.

Fish Consumption Use
The exact source(s) of PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Pulaski

STREAM NAME: Claytor Lake - Peak Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N16L-02

ASSESSMENT CATEGORY: 5A/4C

SEGMENT SIZE: 323.24 - Acres

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Backwaters of Claytor Lake Peak Cr. arm.

RIVER MILE: 5.42

LATITUDE: 37.04639 **LONGITUDE:** -80.72782

DOWNSTREAM LIMIT:

DESCRIPTION: Peak Cr. mouth on New R.

RIVER MILE: 0.00

LATITUDE: 37.05056 **LONGITUDE:** -80.67164

The segment begins at Peak Creek's backwaters of Claytor Lake and ends at Peak Creek's mouth on the New River in Claytor Lake. The entire segment is on the Dublin Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, Dissolved Oxygen (Bottom 2002)

Fish Consumption Use
2000 collections at 9-PKC007.82 (Rt. 99 Bridge) and 9-PKC004.65 (Rt. 100 Bridge) each reveal polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic WQS tissue value (TV) of 54 parts per billion (ppb) [Table 6(a), 2004 Assessment Guidance] from two species. 9-PKC007.82 (VAW-N17R) from a total of 37 fish representing six species finds Smallmouth bass with 71.4 ppb. 9-PKC004.65 reports carp with 150 ppb from a total of 36 fish representing 5 species. Due to the proximity of the stations and two species found with PCBs the segment does not support the fish consumption use. The fish consumption impairment extends upstream to approximately 0.20 miles downstream of the Washington Avenue bridge in Pulaski. There is no Virginia Department of Health (VDH) Advisory as tissue concentrations are below the VDH action level of 600 ppb. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us/water/

Aquatic Life Use
Top Layer:
Dissolved oxygen in the surface layer exceeds the minimum 4.0 mg/l criterion for Class IV waters. Surface excursions are determined using profile data above the thermocline at each station. 9-PKC000.00 exceeds the minimum criterion in 22 of 145 measurements. These excursions are evaluated using the Carlson Trophic State Index described below and are categorized 4C.

Water flows through Claytor Dam were reduced due to drought conditions (4C) from 1999 through 2002. The summer of 2002 was particularly dry (June through August). New River stream flows as measured at the US Geological Survey station 03168000 in Allisonia (upstream of Claytor Lake) records 29 days of daily mean average flows below the 7Q10 of 722 cubic feet per second (cfs) within the 92 day period. Downstream station 03171000 at Radford records 24 days below the 7Q10 of 912 cfs. 7Q10 is lowest stream flow averaged over seven consecutive days that are statistically expected to occur once every 10 climatic years.

Bottom Layer:

Fact Sheets for Category 5 Waters

Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. Depth profiles at 9-PKC000.00 report 39 of 57 dissolved oxygen measurements in excess of the criterion. Exceedances of the minimum criterion are believed to occur in the entirety of the segment even though dissolved oxygen measurements have not been conducted throughout its length. The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen impairment remains.

The Carlson Trophic State Index (TSI) is used to determine the cause of the dissolved oxygen impairment eg. natural or anthropogenic in nature. The following are the index scores from 9-PKC000.00 where CA = chlorophyll (a), TP = total phosphorus and SD = seechi disk (transparancy).

9-PKC000.00-TL CA [52.10] TP [44.51] SD [49.31].

TSI scores below 60 indicate a natural aging process in the reservoir while above 60 indicates man's activities on the land may be influencing the natural aging of the reservoir. The data above, primarily SD, indicates a natural aging process for the Peak Creek portion of Claytor Lake- Category 4C.

These waters are also a 'Water of Concern' based on excursions of the Consensus Based Probable Effects Concentration (PEC) [MacDonald et al., 2000] screening values (SVs). 'Observed Effects' are reported for cooper (Cu), lead (Pb) and zinc (Zn) in parts per million (ppm) from stations 9-PKC004.65 and 9-PKC004.16. The PEC screening values are Cu- 149 ppm; Pb- 128 ppm and Zn- 459 ppm.

2000 sediment collections made in concert with fish tissue at 9-PKC004.65 report from two collections Cu results at 326 and 327 ppm and Zn at 894 and 886 ppm. Station 9-PKC004.16 1999 ambient collections find Cu at 322 and Zn at 831 ppm. And 1998 ambient collections report Cu at 610, Zn at 1470 and Pb at 230 ppm. Station 9-PKC000.00-BL reports no excursions from 1999 ambient sediment collections. 1998 sediment reveals an excursion of Zn SV at 520 ppm.

IMPAIRMENT SOURCE: Unknown, Natural / Stratification

Fish Consumption Use
The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Aquatic Life Use
Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Informational Note: Claytor Lake (Peak Creek portion) is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.4 and A.5.; NEW-5).

The exact source of the sediment metal PEC SV excursions is not known but is believed from legacy sources along the banks of Peak Creek.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Pulaski

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N16R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.81 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: Big Reed Island Cr. Confluence

RIVER MILE: 107.75

LATITUDE: 36.93472 **LONGITUDE:** -80.74990

DOWNSTREAM LIMIT:

DESCRIPTION: Claytor Lake backwaters

RIVER MILE: 106.94

LATITUDE: 36.93889 **LONGITUDE:** -80.73961

This segment of the New River is between the Big Reed Island Creek confluence, near Route 100, and the backwaters of Claytor Lake near the Wythe/Pulaski county line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2004), General Standard (Benthic 1998)

Recreational Use
Station 9-NEW107.51 located at the US Geological Survey gaging station finds six of 53 fecal coliform bacteria observations exceed the WQS instantaneous criterion of 400 cfu/100 ml. Fecal coliform excursions range from 580 to >8000 cfu/100 ml. One of six Escherichia coli bacteria (E. coli) samples exceed the WQS instantaneous criterion of 235 cfu/100 ml. The data are insufficient to assess.

One of six observations of fecal coliform also exceed the WQS instantaneous criterion at the boat landing off Rt. 693 in Allisonia at station 9-NEW106.83. These results in conjunction with 9-NEW107.51 cause the segment to not support the recreational use and is a 2004 addition to the segment.

Note: This section of the New River was contained in the 1999 Federal Consent Decree Attachment B List for fecal coliform bacteria. The 2002 Assessment found the recreational use fully supported. Station 107.51 found only three of 52 samples in excess of the former WQS fecal coliform 1000 n/100 ml instantaneous criterion. The segment was therefore not 303(d) listed in 2002.

Aquatic Life Use
A biological monitoring station, 9-NEW107.65 (near Allisonia gage), was rated as moderately impaired twice in 1994 and not impaired in 1997. Although the 1994 Rapid Biological Protocol II (RBP II) surveys are outside the assessment data window the waters remain impaired for the aquatic life use as insufficient data (one RBP II survey) do not allow a complete delisting. Additional RPB II survey data will allow for a more accurate determination of the aquatic life use support. The waters are thus 'impaired' for the aquatic life use based on the 1998 303(d) Listing and insufficient data to delist the segment. The segment is also adjusted to reflect the watershed boundary with N08R.

These waters are also a 'Water of Concern'. A 1999 (AQ) sediment collection exceeds the 2000 Consensus Based Probable Effects Concentrations (PEC) [MacDonald et al., 2000] screening value (SV) of 128 parts per million (ppm) for lead (Pb) at 129 ppm- 'Observed Effect'.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: NPS - Agricultural / Wildlife / Domestic Septage, Unknown

Recreational Use
The exact source(s) of the bacterial contaminant is/are not known, but could include agricultural nonpoint source, failing septic systems and wildlife.

Aquatic Life Use
The exact source(s) of the General Standard (benthic) impairment is unknown. Resource extraction is a historic activity upstream of the watershed and may be the source of metal values in the sediments. Quarry and gravel industries and old iron furnaces are located in the region.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Pulaski

STREAM NAME: Peak Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N17R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.46 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2010

UPSTREAM LIMIT:

DESCRIPTION: ~0.2 mi. downstream of the Washington St Bridge.

RIVER MILE: 9.88

LATITUDE: 37.04694 **LONGITUDE:** -80.77727

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Claytor Lake.

RIVER MILE: 5.42

LATITUDE: 37.04639 **LONGITUDE:** -80.72782

The segment extends upstream to approximately 0.2 miles downstream of the Washington Avenue Bridge on the Pulaski Quad. The segment ends at its inundation in Claytor Lake on the Dublin Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2002), General Standard (Benthic 1996), Fish Tissue - PCBs (2002)

A TMDL study is currently underway to develop allocation scenarios for the Recreational (Bacteria) and Aquatic Life (Benthic) Uses discussed below. The anticipated date of completion for the TMDL Study is March 2004.

Recreational Use
Exceedances of the WQS fecal coliform bacteria instantaneous criterion of 400 cfu/100 ml are found at station 9-PKC009.29 (near radio tower - Pulaski County). Seven of 18 samples exceed the criterion. Exceeding values ranged from 700 to 6300 cfu/100 ml. The recreational use impairment is a 2002 addition.

Aquatic Life Use
Benthic impairment is suspected as attributable to metals and habitat loss. The segment incorporates two Rapid Biological Protocol II (RBP II) stations 9-PKC009.29 (near radio tower - Pulaski County) and 9-PKC007.82 (Rt. 99 Bridge east of Pulaski). Both stations show moderate impact to the benthic community. An upstream biological and AQM station at the Commerce Street Bridge (9-PKC011.11) shows no impairment. Best Professional Judgment used during many benthic assessments due to the use of metrics not in the RBP II suite such as %Ephemeroptera (mayflies), % EPT (-Hydropsychidae), and %Chironomidae.

9-PKC009.29- Bio 'MI'; moderate impairment; RBP II 5 year score 48.15; 2 year score 39.92. The use of additional metrics aided in identifying declines in sensitive taxa relative to the reference station and the upper Peak Creek station (9-PKC011.11). In 2002, the reference site for the three Peak Creek Biomonitoring stations was changed to 9-PKC011.11 since that station was determined to be minimally impacted relative to the two downstream sites. Habitat in this reach has been impacted by loss of riparian vegetation and instream cover, and increased sedimentation.

9-PKC007.80- Bio 'MI'; moderate impairment RBP II 5 year score 39.65; 2 year score 53.26. As noted above BPJ was used during many assessments due to the use of metrics not in the RBP II suite of metrics. The use of additional metrics aided in identifying declines in

sensitive taxa relative to the reference station and the upper Peak Creek station (9-PKC011.11). Additionally, habitat in this reach has been impacted by the loss of riparian vegetation.

Peak Creek is also a 'Water of Concern' based on the sediment results presented below. 9-PKC009.29 records Consensus Based Probable Effects (PEC, MacDonald et al. 2000) exceedances from AQ sediment collections for lead (Pb) PEC SV of 128 ppm and zinc (Zn) PEC SV of 459 ppm. A 2000 collection finds Pb at 135 and Zn at 1280 ppm; a 1999 Zn at 320 ppm; and a 1998 Pb at 130 and Zn at 680 ppm resulting in an 'Observed Effect'.

9-PKC007.82- A WQS 2000 Sediment collection exceeds PEC SVs for the Metals: copper (Cu) PEC SV of 149 at 362 ppm and zinc (Zn) PEC SV of 459 at 1104 ppm. 9-PKC007.82 records organic exceedances for Phenanthrene (PEC SV 1170) at 3049 ppb, Fluoranthene (PEC SV 2230) at 5866 ppb, Pyrene (PEC SV 1520) at 3877 ppb, Benz (a) Anthrecene (PEC SV 1050) at 2047 ppb and Chrysene (PEC SV 1290) at 2133 ppb also resulting in an 'Observed Effect'.

Seven Rapid Biological Protocol II benthic survey results reveal no impairment to the biota at station 9-PKC011.11 (Commerce St. Bridge) even though sediment results from AQ collections reveal excursions of PEC SVs for lead (Pb) SV of 128 ppm, zinc (Zn) SV of 459 ppm, DDD SV of 28 ppb and DDE SV 31.3 ppb. Exceeding results for metals are: A 1999 Pb at 420 and Zn at 1520 ppm; a 1998 Pb at 220 and Zn at 1080 ppm; and Organics are: A 1999 DDD at 30 and DDE at 40 ppb.

Fish Consumption Use
WQS 2000 Fish collections at 9-PKC007.82 (Rt. 99 Bridge) and 9-PKC004.65 (Rt. 100 Bridge) each reveal polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic tissue value (TV) of 54 parts per billion (ppb) [Table 6(a), 2004 Assessment Guidance] from two species. 9-PKC007.82 from a total of 37 fish representing six species finds Smallmouth bass with 71.4 ppb. 9-PKC004.65 (VAW-N16L) reports carp with 150 ppb from a total of 36 fish representing 5 species. The fish consumption impairment extends to the Peak Creek arm of Claytor Lake. Station 9-PKC004.65 is in Claytor Lake (VAW-N16L). Due to the proximity of the stations and two species found with PCBs the segment is impaired for the fish consumption use.

There is no Virginia Department of Health (VDH) Advisory as tissue concentrations are below the VDH action level of 600 ppb. The fish consumption impairment is a 2002 addition to the 1998 303(d) Listing. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us/water/

IMPAIRMENT SOURCE: NPS - Urban, NPS - Urban / Legacy Industrial / Unknown, Unknown

Recreational Use
The source of the impairment is primarily urban nonpoint source pollution including agricultural, residential, commercial and industrial runoff.

Aquatic Life Use
General Standard (Benthic) impairment sources are urban nonpoint source pollution and nonpoint source runoff from an old industrial plant site along the banks of Peak Creek.

Sediment metals exceedances are believed to be nonpoint source runoff from an old industrial plant site along the banks of Peak Creek and/or other legacy sources. Upstream organic exceedances are unknown.

Fish Consumption Use
The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Montgomery, Radford

STREAM NAME: Crab Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N18R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 12 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Crab Cr. headwaters.

RIVER MILE: 12.00

LATITUDE: 37.11750 **LONGITUDE:** -80.37736

DOWNSTREAM LIMIT:

DESCRIPTION: Crab Cr. mouth on the New R.

RIVER MILE: 0.00

LATITUDE: 37.15361 **LONGITUDE:** -80.52891

The upstream limit is the Crab Creek headwaters on the Ironto Quad. The downstream limit is at the Crab Creek mouth on the New River about 1.5 mi upstream of the Rt. 114 Bridge and downstream of Radford, Virginia. The segment spans the Riner, Blacksburg and Radford North Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, General Standard (Benthic)

The TMDL Study for bacteria and benthic impairments is schedule for completion in March of 2004.

Recreational Use
Water Quality Standards (WQS) require via [9 VAC 25-260-170.A.1. Bacteria; other waters] after collection of 12 Escherichia coli (E. coli) samples only E. coli be assessed for use support in fresh water streams. E. coli sampling began February 2000. The recreational use impairment for the entirety of Crab Creek is based on E. coli. as the bacterial indicator. The WQS E. coli instantaneous criterion is 235 cfu/100 ml. Fecal coliform (FC) data below are for informational purposes only. The FC instantaneous criterion is 400 cfu/100 ml.

Located on the Rt. 111 Bridge in Christiansburg is station 9-CBC009.81. Two of three E. coli samples exceed the WQS 235 cfu/100 ml instantaneous criterion. Exceeding values are both greater than 800 cfu/100 ml. FC exceedances are found in four of eight observations. Maxima range from 600 to 3500 cfu/100 ml.

A single FC observation exceeds 400 at 2400 cfu/100 ml; Rt. 460 Christiansburg station 9-CBC008.78.

Station 9-CBC006.35 (Rt. 661 Bridge) upstream of the former Christiansburg outfall finds E. coli exceeds in eight of 16 observations. Exceeding values range from 250 to greater than 800 cfu/100 ml. Twenty of 41 fecal coliform bacteria samples exceed the criterion with maxima ranging from 500 to 11,200 cfu/100 ml.

9-CBC004.38- E. coli exceeds the instantaneous criterion in 13 of 20 observations. Exceeding values range from 380 to greater than 800 cfu/100 ml. Fecal coliform bacteria instantaneous exceedances are found in 33 of 51 samples. fecal coliform exceeding values range from 490 to greater than 2000 cfu/100 ml.

9-CBC001.00- One E. coli exceedance (320 cfu/100 ml) is found in three samples while FC exceeds in two of nine observations. Based on the upstream station (9-CBC004.38) all indications are the recreational use remains impaired in this portion of Crab Creek.

Aquatic Life Use
Benthic impairments cause failure to meet the aquatic life use. Biomonitoring at stations 9-CBC006.35, 9-CBC004.38 and 9-CBC001.00 show moderate impacts to the benthic community for the length of the segment. Rapid Biological Protocol II Method scores are:
9-CBC006.35- RBP II 5 year score 43.65. Seasonal 5 year Spring score 45.11 and Fall score 42.19.
9-CBC004.38- RBP II 5 year score 43.75. Seasonal 5 year Spring score 47.28; Fall score 41.12.
And
9-CBC001.00- RBP II 5 year score 34.75. Seasonal 5 year Spring score 28.22; Fall score 41.31.

Scores are typically better in the fall. Likely a natural seasonal effect. Pollution tolerant families are dominant in both seasons, the midge family Chironomidae in spring and the caddisfly family Hydropsychidae in fall. Agricultural and urban NPS runoff impact Crab Creek. Habitat impacts to this reach result in fine sediment deposition that causes stream substrates to become embedded, bank erosion from altered hydrology, and degraded riparian buffers due to residences, roads, and railroad tracks. An apparent nutrient enriched environment all contributes to the benthic impairment. A regional drought during 1998 and 1999 probably adds to the aforemention impacts on the benthic community, resulting in lower biological condition scores. Likewise, higher stream flows during the spring and summer of 2000 resulted in improved scores. The STP discharge above the monitoring station at 9-CBC004.38 was relocated and now discharges near the mouth of Crab creek and may be partly responsible for the improvement in scores.

Station 9-CBC004.38 also reports total phosphorus (TP) excursions of the 0.20 mg/l screening value (SV) in 14 of 51 samples. Twelve TP exceedances occur in 1998 prior to the removal of the Christiansburg STP outfall. The remaining two (at 0.3 mg/l each) occur after 1998. TP exceeding values range from 0.3 mg/l to 2.6. No exceedances of the chlorophyll (a) SV of 50 µg/l are observed. Upstream station 9-CBC006.35 (at Rt. 661 above the former Christiansburg STP outfall) finds three exceedances from 42 samples. The Christiansburg STP outfall has been moved to the New River in December 1998.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban, NPS - Agriculture / Urban

Recreational Use
Fecal coliform sources of impairment are a mix of agricultural and urban nonpoint source runoff. Mainly urban in the upper reaches of the watershed and a mix of urban and agriculture in the lower reaches of the watershed.

Aquatic Life Use
General Standard Benthic sources of impairment are a mix of agricultural and urban nonpoint source runoff from high density areas, roads and stream bank erosion. Mainly urban in the upper reaches of the watershed and a mix of urban and agriculture in the lower reaches of the watershed.

Total phosphorus exceedances are primarily due to the Christiansburg STP former outfall on Crab Creek.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Radford

STREAM NAME: Connellys Run

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N18R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.76 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Near Rt. 611, 2.76 mi. upstream of Connellys Run mouth.

RIVER MILE: 2.76

LATITUDE: 37.11803 **LONGITUDE:** -80.53909

DOWNSTREAM LIMIT:

DESCRIPTION: Connellys Run mouth on the New R.

RIVER MILE: 0.00

LATITUDE: 37.14074 **LONGITUDE:** -80.56809

The segment begins near the headwaters of Connellys Run at an unnamed tributary (37°07'04" / 80°32'16") downstream to its mouth on the New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bacteria at 9-CNL000.01 (Bissett Park Bridge, Radford) exceeds the WQS instantaneous criterion of 400 cfu/100 ml in three of nine observations. The range of exceedances is from 500 to 1900 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
Urban nonpoint sources are believed to be the primary source of the FC impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Montgomery, Radford

STREAM NAME: Plum Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N18R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.5 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Plum Cr. headwaters

RIVER MILE: 4.50

LATITUDE: 37.13390 **LONGITUDE:** -80.47208

DOWNSTREAM LIMIT:

DESCRIPTION: Plum Cr. mouth on New R.

RIVER MILE: 0.00

LATITUDE: 37.13297 **LONGITUDE:** -80.52945

The upstream limit is the headwaters of Plum Creek extending downstream to its mouth on the New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
9-PLM000.60 located on Rt. 11 just above the mouth of Plum Creek reports fecal coliform bacteria exceedances in two of nine observations. Values in excess of the WQS 400 cfu/100 ml instantaneous criterion are 1100 and 1500 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Agriculture / Urban

Recreational Use
Fecal coliform sources of impairment are a mix of agricultural and urban nonpoint source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Floyd

STREAM NAME: Little River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N19R-01

ASSESSMENT CATEGORY: 5A/5C

SEGMENT SIZE: 10.93 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Meadow Cr. mouth on Little R.

RIVER MILE: 63.27

LATITUDE: 36.94694 **LONGITUDE:** -80.21589

DOWNSTREAM LIMIT:

DESCRIPTION: Oldfield Cr. mouth on Little R.

RIVER MILE: 52.34

LATITUDE: 36.95806 **LONGITUDE:** -80.29876

The segment begins at the mouth of Meadow Creek on Little River and extends downstream to the mouth of Oldfield Creek. The segment spans the Endicott and Floyd Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreational Use-Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2004), Temperature (2002)

Recreational Use
Station 9-LRV056.74 finds two fecal coliform observations exceeding the WQS 400 cfu/100 instantaneous criterion from 11 samples (Category 5A). Values that exceed the standard are 500 and 1400 cfu/100 ml. Fecal coliform is a 2004 initial listing for this segment.

Aquatic Life Use
The aquatic life is not supported due to temperature exceedances. Station 9-LRV056.74 located at the Rt. 221 Bridge records two exceedances of the 20°C temperature natural trout criterion from 11 measurements. Exceedances occur in July 1998 (25.7°C) and (21.3 °C) in May 2000 (Category 5C). The temperature impairment was initially listed in 2002.

IMPAIRMENT SOURCE: NPS- Agriculture / Wildlife, Unknown

Recreational Use
Nonpoint sources are the suspected as causing the impairment. These sources could include agriculture and wildlife but are not confirmed.

Aquatic Life Use
The water temperature exceedances are believed to be due to natural conditions. There are no known sources of heat to cause the exceedances other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Floyd

STREAM NAME: Dodd Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N20R-01

ASSESSMENT CATEGORY: 5D

SEGMENT SIZE: 15.41 - Miles

INITIAL LISTING: 1998 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Junction of Routes 710 and 714.

RIVER MILE: 15.41

LATITUDE: 36.87139 **LONGITUDE:** -80.29457

DOWNSTREAM LIMIT:

DESCRIPTION: Dodd Cr. mouth on West Fork Little R.

RIVER MILE: 0.00

LATITUDE: 36.93833 **LONGITUDE:** -80.34064

The upper limit extends from the junction of Routes 710 and 714 downstream to the Dodd Creek mouth on the West Fork Little River. The segment spans the Woolwine and Floyd Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, Temperature (2002) - 1.18 mi.

Recreational Use
The Dodd Creek drainage bacteria Total Maximum Daily Load (TMDL) Study and allocations is complete with US EPA approval on December 11, 2002 (Category 4A). Additional bacteria sampling above and below the 1998 303(d) Dodd Creek Impaired segment has increased the original segment size by 5.98 miles. 2002 tributary additions include the West Fork of Dodd Creek (6.47 miles) and an unnamed tributary to the West Fork (0.49 miles).

Fecal coliform bacteria exceedances of both the 400 cfu/100 ml instantaneous and geometric mean 200 cfu/100 ml criteria cause the segment to not support the receational use. The segment was originally listed based on the former fecal coliform WQS instantaneous criterion of 1000 cfu/100 ml and 200 geometric mean. Listed below are the monitored sites showing fecal coliform instantaneous excursions / with total sample collections (maximum) and geometric mean calculation exceedances / with total calculations where applicable. Instantaneous Escherichia coli (E. coli) single observations are listed next (value). Each exceed the WQS criterion of 235 cfu/100 ml. Data below reflect the 2004 Cycle data window. One ambient fixed site 9-DDD004.64 is included with the non-fixed sites below.

Dodd Creek (Category 4A)
9-DDD000.04 Rt. 698 Bridge - 4/4 instant (3500); 1/1 geomean; E. coli 1/1 (800).
9-DDD002.70 Rt. 696 Bridge - 4/4 instant (3100); 1/1 geomean; E. coli 1/1 instant (800).
9-DDD004.64 Rt. 720 Bridge above Floyd STP - 3/11 instant (1600).
9-DDD004.75 Rt. 720 Bridge - 4/4 instant (4800); 1/1 geomean; E. coli 1/1 instant (800).
9-DDD006.27 Rt. 8 Bridge - 3/4 instant (2600); 1/1 geomean; E. coli 1/1 instant (480).
9-DDD008.20 Rt. 710 Bridge - 3/3 instant (1700); 1/1 geomean.

West Fork Dodd Creek (Category 4A)
9-DDW000.02 Rt. 8 Bridge - 4/4 instant (2500); 1/1 geomean; E. coli 1/1 instant (800).

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9-DDW004.02 Rt. 714 Bridge - 4/4 instant (9200); 1/1 geomean; E. coli 1/1 instant (800).
9-XDC000.48 Rt. 807 Bridge - 4/4 instant (6400); 1/1 geomean; E. coli 1/1 instant (>800).

The West Fork Dodd Creek impairment extends 6.47 miles from its headwaters (36°50'03.10" / 80°20'56.09") near the Blue Ridge Parkway downstream to the West Fork mouth on Dodd Creek (36°53'15.66" / 80°19'21.17"). The unnamed tributary portion extends 0.49 miles from just upstream of the Rt. 8 crossing (36°52'18" / 080°20'03") downstream to its confluence with the West Fork Dodd Creek (36°52'33" / 080°19'43") on the Floyd Quad.

The entirety of the study can be viewed at http://www.deq.state.va.us.

Aquatic Life Use
Station 9-DDW000.02 records two of two temperature exceedances causing the waters to not support the aquatic life use in these natural trout waters. The WQS temperature criterion is 20°C. Exceedances occur on July 28, 1999 (23.3°C) and June 28, 2000 (20.1°C). The believed naturally impaired 1.18 mile segment extends from an unnamed tributary located at 36°52'33" / 80°19'43" downstream to the West Fork Dodd Creek confluence with Dodd Creek (Category 5C). The aquatic life use impaired segment was initially listed in 2002.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife / Domestic Septage, Natural

Recreational Use
The source of the impairment is believed to be a mix of agricultural, wildlife and domestic septage (straight pipes noted) nonpoint source runoff.

Aquatic Life Use
The water temperature exceedances are believed due to natural conditions. There are no known sources of heat to cause exceedance of the temperature criterion other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Montgomery, Pulaski

STREAM NAME: Little River (Riverine Only)

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N21R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 1.78 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Meadow Creek mouth on Little R.

RIVER MILE: 3.51

LATITUDE: 37.06028 **LONGITUDE:** -80.54721

DOWNSTREAM LIMIT:

DESCRIPTION: Little River confluence on the New River (0.49 miles) riverine below the Little River Reservoir.

RIVER MILE: 0.00

LATITUDE: 37.08191 **LONGITUDE:** -80.57770

This segment begins at the mouth of Meadow Creek and extends downstream to the confluence of Little River with the New River (riverine only). The segment has been expanded by 0.49 miles,eg. downstream of Little River Reservoir. The entire segment is on the Radford South Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Exceedances of the former WQS fecal coliform bacteria instantaneous criterion are recorded in the 2002 Assessment at the United States Geological Survey (USGS) station 03170000. Two of 14 observations exceeded the former instantaneous criterion of 1000 cfu/100 ml at that time. Application of the existing 400 cfu/100 ml instantaneous criterion would have resulted in four of 14 exceedances. Values above the 400 criterion range from 420 to 14,900 cfu/100 ml. Due to the previous 2002 Cycle impaired listing the segment remains impaired and has been expanded with the 2004 Assessment to include an additional 0.49 miles from data at station 9-LRV000.34. This Fact Sheet addresses only riverine impairments.

Station 9-LRV000.34 (Route 605 Bridge) finds four of 26 fecal coliform bacteria observations exceeding the WQS 400 cfu/100 ml instantaneous criterion. Values in excess of the WQS range from 500 cfu/100 ml to 7300. The recreational use is not supported.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The believed source is a mixture of nonpoint source runoff from agricultural activity and wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Montgomery

STREAM NAME: Meadow Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N21R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 4.48 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Mill Cr. on Meadow Cr.

RIVER MILE: 4.48

LATITUDE: 37.07083 **LONGITUDE:** -80.50862

DOWNSTREAM LIMIT:

DESCRIPTION: Meadow Cr. mouth on Little R.

RIVER MILE: 0.00

LATITUDE: 37.06028 **LONGITUDE:** -80.54721

The Meadow Creek mainstem from the Mill Creek confluence downstream to the Meadow Creek mouth on Little River. The entire segment is on the Radford South Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Seven of 12 fecal coliform bacteria observations exceed the instantaneous criterion of 400 cfu/100 ml at 9-MDW004.62 (Rt. 600 Bridge). The geometric mean of 200 cfu/100 ml exceeds in one calculation. The waters do not support the recreational use.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife / Domestic Septage

Recreational Use
The source of the impairment is believed to be a mix of agricultural, wildlife and domestic septage nonpoint source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Floyd, Montgomery

STREAM NAME: Little River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N21R-04

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 13.35 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Little R. at the end of Rt. 706.

RIVER MILE: 37.75

LATITUDE: 36.98669 **LONGITUDE:** -80.39244

DOWNSTREAM LIMIT:

DESCRIPTION: Confluence of Sidney Cr. on Little R.

RIVER MILE: 24.40

LATITUDE: 36.99966 **LONGITUDE:** -80.46770

The segment begins at the end of Rt. 706 downstream to the confluence of Sidney Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 9-LRV032.72 (Rt. 617 Bridge near Brush Creek) finds three of eight fecal coliform bacteria observations exceed the WQS 400 cfu/100 ml instantaneous criterion. Exceedances range from 600 to 1100 cfu/100 ml. The recreational use is not supported.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife / Residential

Recreational Use
Agriculture, wildlife and residential nonpoint source runoff are believed to be contributing sources to the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Floyd, Montgomery

STREAM NAME: Brush Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N21R-05

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.76 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Brush Cr. at first bridge on Route 617 south of the junction of Routes 617 and 601.

RIVER MILE: 5.76

LATITUDE: 37.03899 **LONGITUDE:** -80.36817

DOWNSTREAM LIMIT:

DESCRIPTION: Brush Cr. mouth on Little R.

RIVER MILE: 0.00

LATITUDE: 37.01430 **LONGITUDE:** -80.40478

Brush Creek from the first bridge on Route 617 south of the junction of Routes 617 and 601 downstream to the Brush Creek mouth on Little River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 9-BSH000.05 (Rt. 617 Bridge) finds the WQS instantaneous criterion for fecal coliform bacteria, 400 cfu/100 ml, exceeded in three of eight observations. The maximum exceedance found is 1300 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
The believed source is a mixture of nonpoint source runoff from agricultural activity and wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Floyd

STREAM NAME: Laurel Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N21R-06

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 3.25 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Laurel Cr. headwaters

RIVER MILE: 3.25

LATITUDE: 37.03295 **LONGITUDE:** -80.28871

DOWNSTREAM LIMIT:

DESCRIPTION: Laurel Cr. mouth on Little R.

RIVER MILE: 0.00

LATITUDE: 37.00431 **LONGITUDE:** -80.37942

Laurel Creek mainstem from its headwaters NW of the Routes 608 and 673 intersection downstream to its confluence with Little River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 9-LLL000.05 finds fecal coliform bacteria exceeds the WQS 400 cfu/100 ml instantaneous criterion in four of eight observations. The exceedances range from 600 to 2800 cfu/100 ml. The recreational use is not supported.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife / Residential

Recreational Use
Agriculture, wildlife and residential nonpoint source runoff are believed to be contributing sources to the impairment.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Floyd, Montgomery

STREAM NAME: Big Indian Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N21R-07

ASSESSMENT CATEGORY: 5C

SEGMENT SIZE: 7.58 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: 0.5 miles upstream of the West Fork Big Indian Cr.

RIVER MILE: 7.58

LATITUDE: 36.94021 **LONGITUDE:** -80.51338

DOWNSTREAM LIMIT:

DESCRIPTION: Big Indian Cr. confluence with Little R.

RIVER MILE: 0.00

LATITUDE: 36.99579 **LONGITUDE:** -80.52298

Big Indian Creek mainstem from approximately 0.5 miles upstream of the West Fork Big Indian Creek mouth downstream to the Big Indian Creek confluence with Little River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Temperature

Aquatic Life Use
Temperature excursions of the WQS stockable trout water criterion, 21°C, occur in two of eight measurements at station 9-BIC000.14. The station is located on the Rt. 787 Bridge. Temperature excursions are 24°C on 7/11/01 and 23°C on 7/10/02.

IMPAIRMENT SOURCE: Unknown

Aquatic Life Use
The exact source is unknown. Water temperature exceedances are believed to be due to natural conditions. There are no known sources of heat to cause exceedance of the temperature criterion other than natural solar radiation.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Giles, Montgomery, Pulaski

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N22R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 52.08 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Rt. 114 Bridge downstream of Crab Cr. mouth on the New R.

RIVER MILE: 75.67

LATITUDE: 37.16139 **LONGITUDE:** -80.55244

DOWNSTREAM LIMIT:

DESCRIPTION: VA / WVA State Line.

RIVER MILE: 23.59

LATITUDE: 37.42861 **LONGITUDE:** -80.85901

The segment begins at the Rt. 114 Bridge just downstream of the Crab Creek mouth (Watershed Boundary) on the New River and extends downstream to the VA / WVA State Line. The segment spans the Radford North, Eggleston, Pearisburg, Narrows and Peterstown, WVA Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting, Fish Consumption Use - Not Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs VDH Fish Consumption Advisory (2001), Fish Tissue - DDE / DDT (2004) - 9.62 mi.

Fish Consumption Use
The Virginia Department of Health (VDH) issued a fish consumption advisory on August 6, 2001 for polychlorinated biphenyls (PCBs) for this portion of the New River (Rt. 114 Bridge downstream to the VA / WVA State Line) based on fish tissue collections from Carp. The VDH advisory recommends no consumption of carp in this segment. The VDH level of concern is 600 parts per billion (ppb) in fish tissue. Analysis of sediment collections for PCBs from numerous sites within the VDH Advisory area find no exceedances of the Consenus Based Probable Effect Concentrations (PEC) screening value (SV) of 676 ppb [MacDonald et al. 2000]. Please visit http://www.vdh.state.va.us for more informaion on the advisory and http://www.deq.state.va.us for more information regarding fish tissue collections and data.

The fish consumption use is not supported due to exceedance of the WQS tissue values for PCBs [Table 6(a), 2004 Assessment Guidance] at the following stations. Routine 2000 fish collections in watershed VAW-N22R at 9-NEW066.90 (New River at Whitethorne) reveal PCBs in excess of the DEQ human health-risk carcinogenic screening value WQS tissue value (TV) of 54 ppb from Carp at 686 ppb. Other species at this site record the following values: Rock Bass 14.9; Northern Hogsucker 6.56; Smallmouth Bass 7.8 ppb from a total of 17 fish. 2001 tissue collections found no exceedancess from 38 total fish comprised of Smallmouth Bass, White Sucker, Northern Hogsucker, Redbreast Sunfish or Rock Bass. 2002 tissue collections however do find exceedances from a total of 27 fish in five Carp at 444, 451, 461, 637 and 1056 ppb, a Channel Catfish at 355 and a Flathead Catfish at 255 ppb. Seven species were analyzed in all.

Station 9-NEW050.70 (Near Pembroke) 2001 and 2002 fish tissue collections exceed the WQS PCB TVs. 2001 collections find two Carp at 2394 and 2310 ppb and one Flathead Catfish at 89 ppb. The 2001 collection consists of 38 total fish representing six species. 2002 reports three Carp at 398, 411 and 532 ppb and one Flathead Catfish at 54 ppb exceeding and/or meeting the WQS TV for PCBs from a total of 41 fish representing seven species.

Station 9-NEW030.15 (Route 460 Bridge at Glen Lyn) reports exceedances of WQS PCB TVs in 2000, 2001 and 2002. Routine 2000 fish

tissue collections in watershed VAW-N29R reveal PCBs in excess of the WQS TV of 54 ppb in tissue from Carp at 3259 ppb. Other species at this site from 24 total fish record the following values: Rock Bass 11.7; Smallmouth Bass 7.8; Northern Hog sucker 8.45 ppb. 2001 fish tissue exceeds for PCB in Carp at 1275, 1425, 3003 and 3121 ppb from a total of 48 fish representing six species. 2002 tissue results find PCB exceedances in Carp at 115, 1313, 2916, 4750, 6385 and 6939 ppb. Five species are analyzed from a total of 34 fish.

The fish consumption use is also impaired for the following contaminants for 9.62 miles on the New River from the mouth of Sinking Creek (RM 54.57) 37°18'18.24" / 80°37'18.32" downstream to the confluence of Stoney Creek on the New River (RM 44.95) 37°21'04.73" / 80°42'03.36". 2001 fish tissue collections find DEQ WQS TV exceedances for 2001 - two Carp for DDE (TV 320 ppb) at 355 / 326 ppb and two Carp for DDT (SV 320 ppb) at 359 / 373 ppb at 9-NEW050.70.

'Observed Effects' are also noted for the same area described above where exceedance of fish tissue screening values (TSVs) [Table 6(b), 2004 Assessment Guidance] from 2001 collections are found. Two Carp exceed the Heptachlor epoxide (TSV 10 ppb) at 54 ppb each. Thus these waters are also a Water of Concern for Heptachlor epoxide.

IMPAIRMENT SOURCE: Unknown, Unknown

Fish Consumption Use
The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB level of concern is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

The exact source(s) of DDE and DDT contamination is unknown.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Montgomery

STREAM NAME: Stroubles Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N22R-02

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 7.08 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: Duck Pond dam on the VPI & SU Campus

RIVER MILE: 9.59

LATITUDE: 37.22444 **LONGITUDE:** -80.42995

DOWNSTREAM LIMIT:

DESCRIPTION: Slate Branch mouth on Stroubles Cr.

RIVER MILE: 2.51

LATITUDE: 37.18028 **LONGITUDE:** -80.50450

The upstream end is at the Duck Pond dam on the southwest end of the VPI&SU campus on the Blacksburg Quad. The downstream end is at the Slate Branch mouth on Stroubles Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria (2002), General Standard (Benthic) - 4.98 mi.

Recreational Use
Fecal coliform bacteria exceedances of the 400 cfu/100 ml instantaneous criterion cause impairment of the recreational use. Station 9-STE002.41 (Rt. 659 Bridge) records four exceedances from 35 samples. Five observations of Escherichia coli (E. coli) find no excursions of the 235 cfu/100 ml instantaneous criterion. The 7.08 mile 2002 bacteria impairment extends from the Duck Pond on the VPI & SU Campus downstream to the confluence of Slate Branch.

Aquatic Life Use
The General Standard (Benthic) TMDL Study is complete. The U.S. Environmental Proctection Agency approval is anticipated in January 2004. The original 1998 Listed segment continues for contravention of the General Standard (Benthic) impairment. The General Standard (Benthic) impairment extends from the Duck pond outlet downstream to the mouth of Walls Branch (37°11'45.12" / 80°28'59.64") a total of 4.98 miles.

Station 9-STE007.29 (Rt. 657 Bridge) finds moderate impairment to the biota from a total of nine Rapid Biological Protocol II (RBP II) surveys. The RPB II 5 year Spring score is 34.97; 2 year Spring score is 34.78. The RBP II 5 year Fall score is 41.32; 2 year Fall score is 63.64). The pollution tolerant caddisfly family, Hydropsychidae, is dominant in all fall surveys (average > 50% of total organisms), showing dominance by organisms that feed on suspended organic matter in the fall. Thus, this stream reach shows evidence of organic enrichment in the fall. The midge family, Chironomidae were dominant in the spring of 1999, 2000 and 2002. These organisms are tolerant of organic enrichment and low dissolved oxygen environments.

Citizen stations 9STE-3-SOS (Just before intersection of Plantation and Smithfield and 9STE-4-SOS (Downstream of 9-STE-3-SOS) both find a moderate probability of impairment at these sites. Citizen station 9-STE-5-SOS (AFS Restoration area) reports a low probability of adverse conditions. Citizen stations 9STE-6-SOS (Off Coal Hollow Rd) and 9STE-7-SOS (Off Stoubles Creek Rd) note a low probability for adverse conditions. However, the waters do not support the aquatic life use.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: NPS - Agriculture / Urban, NPS - Agriculture / Urban

Recreational Use
The believed source is nonpoint source pollution from agricultural activity and increased urbanization of the upper portion of the watershed.

Aquatic Life Use
The General Standard (Benthic) impairment source is believed to be a mixture of agricultural and urban nonpoint source runoff.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Pulaski

STREAM NAME: Back Creek

HYDROLOGIC UNIT: 05050001

TMDL ID: VAW-N22R-03

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 16.37 - Miles

INITIAL LISTING: 1996 **TMDL SCHEDULE:** 2004

UPSTREAM LIMIT:

DESCRIPTION: 0.70 miles below Rt. 636 crossing

RIVER MILE: 16.37

LATITUDE: 37.12583 **LONGITUDE:** -80.77583

DOWNSTREAM LIMIT:

DESCRIPTION: Back Cr. mouth on the New R.

RIVER MILE: 0.00

LATITUDE: 37.20139 **LONGITUDE:** -80.60289

The upstream limit is on the south edge of the White Gate Quad about 0.70 miles below the Rt. 636 crossing. The downstream end is the mouth of Back Creek on the New River just east of Parrott, Virginia. The segment spans the White Gate, Staffordsville and Radford North Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting, Aquatic Life Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria, General Standard (Benthic 2002)

The Bacteria and General Standard (Benthic) TMDL Study is underway with an ancitpated completion in the spring of 2004.

Recreational Use
A TMDL Study site, station 9-BCK015.98 on Rt. 636, Black Hollow Road, finds two of three fecal coliform bacteria observations exceed the WQS instantaneous criterion of 400 cfu/100 ml. The exceedances are 3500 and 5400 cfu/100 ml. Each of three Escherichia coli (E. coli) samples exceed the WQS instantaneous criterion of 235 cfu/100 ml at >800.

The segment brackets AQ station 9-BCK009.47 (Rt. 100 Bridge) on the Staffordsville Quad. 9-BCK009.47, the original listing station, records 19 of 21 samples exceeding the fecal coliform bacteria instantaneous criterion of 400 cfu/100 ml. The excursions range from 900 to >8000 cfu/100 ml. Each of three E. coli samples exceed the WQS instantaneous criterion of 235 cfu/100 ml at >800.

A second TMDL Study site, station 9-BCK000.74, at the Rt. 600 Bridge near Back Creek's mouth, finds two of three fecal coliform bacteria observations in excess of the instantaneous criterion each at 490 cfu/100 ml. One E. coli sample exceeds the instantaneous criterion at 290 cfu/100 ml.

Aquatic Life Use
Biological monitoring at 9-BCK009.47 finds severe impairment 'VI'. The benthic impairment is a 2002 addition to the segment. A 1999 RBP II survey score is 37.50. The benthic community at this site is dominated by taxa that are tolerant of nutrient/organic enrichment as evidenced by sedimentation and excessive algal growth on the substrate. Bank erosion and impacts to the riparian zone appear to be the result of land use impacting the riparian zone widths. Informational note: A 2003 RBP II survey, outside the 2004 Assessment data window found 'MI' or moderate impairment (RBP II score 47.83) at this site.

Fact Sheets for Category 5 Waters

IMPAIRMENT SOURCE: NPS - Agriculture / Urban, NPS - Agriculture / Urban

Recreational Use
The source is believed to be a mix of agricultural and urban nonpoint source pollution.

Aquatic Life Use
The source of the General Standard (Benthic) impairment is believed to be a mix of agricultural and urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Giles

STREAM NAME: Little Stony Creek

HYDROLOGIC UNIT: 05050002

TMDL ID: VAW-N24R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.06 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: First upstream unnamed tributary to Little Stony Cr.

RIVER MILE: 2.06

LATITUDE: 37.33833 **LONGITUDE:** -80.62913

DOWNSTREAM LIMIT:

DESCRIPTION: Little Stony Cr. mouth on the New River

RIVER MILE: 0.00

LATITUDE: 37.31500 **LONGITUDE:** -80.64419

The segment begins at the first upstream unnamed tributary (at Pembroke) and extends to the Little Stony Creek mouth on the New River. The entire segment is on the Pearisburg Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bacteria cause the segment to not support the recreational use. The segment brackets station 9-LRY000.28 (Rt. T1404 Snidow St. in Pembroke). This station reports two of 14 samples exceeding the fecal coliform bacteria instantaneous criterion of 400 n/100 ml. Exceedances are 500 and 1800 cfu/100 ml.

Aquatic Life Use
Observed Effects - A 1998 sediment collection finds lead (Pb) exceeding the Consenus Based Probable Effects Concentrations (PEC) [MacDonald et al. 2000] screening value (SV) of 128 parts per million (ppm) at 190. This causes these waters to be a 'Water of Concern'. The exact source of Pb is unknown. No excursions of the PEC SVs are found in ambient sediment data from 1999 or 2000 collections.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The fecal coliform bacteria source is believed to be mainly from urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Bland, Giles, Pulaski

STREAM NAME: Little Walker Creek

HYDROLOGIC UNIT: 05050002

TMDL ID: VAW-N27R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 17.15 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Confluence of Spur Br.

RIVER MILE: 17.15

LATITUDE: 37.09047 **LONGITUDE:** -80.92204

DOWNSTREAM LIMIT:

DESCRIPTION: Little Walker Cr. mouth on Walker Cr.

RIVER MILE: 0.00

LATITUDE: 37.20698 **LONGITUDE:** -80.73810

The segment begins at the confluence of Spur Branch on Little Walker Creek extending downstream to the mouth of Little Walker on Walker Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 9-LWK000.77 located on the Rt. 100 Bridge finds two of 18 fecal coliform bacteria exceedances of the WQS 400 cfu/100 ml instantaneous criterion. The exceeding values are 500 and 1000 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Agriculture / Wildlife

Recreational Use
Possible sources of fecal coliform bacteria are believed to be from agricultural activity and wildlife.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Giles

STREAM NAME: Wolf Creek

HYDROLOGIC UNIT: 05050002

TMDL ID: VAW-N32R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 5.51 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: Unnamed Trib at Intersection of Rts. 61 and 724.

RIVER MILE: 5.51

LATITUDE: 37.29731 **LONGITUDE:** -80.87699

DOWNSTREAM LIMIT:

DESCRIPTION: Wolf Cr. mouth on New R.

RIVER MILE: 0.00

LATITUDE: 37.33479 **LONGITUDE:** -80.80979

The upstream limit of the segment is near the intersection of Routes 61 and 724 at the confluence of an unnamed tribuarty extending downstream to the mouth of Wolf Creek on the New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 9-WFC000.20 (Rt. 61 Bridge) finds fecal coliform bacteria exceeds the 400 cfu/100 ml instantaneous criterion in two of 18 samples. Exceeding values are 700 and 1500 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use

The exact source(s) is not known but is believed to be nonpint source contributions from residential areas.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Giles

STREAM NAME: Rich Creek

HYDROLOGIC UNIT: 05050002

TMDL ID: VAW-N34R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 2.77 - Miles

INITIAL LISTING: 2002 **TMDL SCHEDULE:** 2014

UPSTREAM LIMIT:

DESCRIPTION: Brush Cr. mouth on Rich Cr.

RIVER MILE: 2.77

LATITUDE: 37.39889 **LONGITUDE:** -80.80642

DOWNSTREAM LIMIT:

DESCRIPTION: Rich Cr. mouth on the New R.

RIVER MILE: 0.00

LATITUDE: 37.38139 **LONGITUDE:** -80.82761

The segment begins just downstream of Peterstown, West Virginia at the mouth of Brush Creek on Rich Creek and extends to the Rich Creek confluence on the New River. The entire segment is on the Peterstown, WVA Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Fecal coliform bacteria cause the segment to not support the recreational use. The segment brackets station 9-RHC000.08 (Rt. 806 Bridge). This station finds 10 of 18 samples exceeding the fecal coliform bacteria instantaneous criterion of 400 cfu/100 ml. Exceeding values range from 500 to 2800 cfu/100 ml.

IMPAIRMENT SOURCE: NPS - Urban

Recreational Use
The believed source is urban nonpoint source pollution.

Fact Sheets for Category 5 Waters

RIVER BASIN: New River Basin

CITY/COUNTY: Giles

STREAM NAME: Adair Run

HYDROLOGIC UNIT: 05050002

TMDL ID: VAW-N35R-01

ASSESSMENT CATEGORY: 5A

SEGMENT SIZE: 0.38 - Miles

INITIAL LISTING: 2004 **TMDL SCHEDULE:** 2016

UPSTREAM LIMIT:

DESCRIPTION: VA / WVA State Line.

RIVER MILE: 0.38

LATITUDE: 37.37194 **LONGITUDE:** -80.87255

DOWNSTREAM LIMIT:

DESCRIPTION: Adair Run mouth on the New R.

RIVER MILE: 0.00

LATITUDE: 37.37498 **LONGITUDE:** -80.86752

The Adair Run segment begins at the Virginia / West Virginia State Line and extends downstream to the Adair Run confluence with the New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Recreation Use - Not Supporting

IMPAIRMENT CAUSE: Bacteria

Recreational Use
Station 9-ADR000.13 located on the Rt. 648 Bridge finds the recreational use is not supported. Fecal coliform exceeds the 400 cfu/100 ml instantaneous criterion in six of 26 observations. Exceeding values range from 500 to 4200 cfu/100 ml.

IMPAIRMENT SOURCE: NPS

Recreational Use
The exact source of the fecal coliform bacteria contamination is not known but is believed to be nonpoint source related.