Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K01R-01-BAC** **Middle Meherrin River**

Cause Location: Middle Meherrin River from its headwaters to mouth.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Middle Meherrin River from Crupper Run to its mouth was first impaired for the Recreation Use in the 2004 cycle due to a fecal coliform exceedance rate of 2/19 at 5AMMR000.69. It converted to E. coli in the 2010 cycle. The segment was extended upstream during the 2014 cycle due to E. coli exceedance rates of 3/12 at 5AMMR000.69 and 2/12 at 5AMMR008.77.

The impairment was nested in the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 04/12/2010 and by the SWCB on 9/30/2010.

During the 2018 cycle, the exceedance rate at 5AMMR008.77 was 2/12; additional monitoring at 5AMMR015.22 showed an exceedance rate of 4/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K01R_MMR01A98 / Middle Meherrin River / Crupper Run to mouth	4A	Escherichia coli	2010	L	7.15
VAP-K01R_MMR02A08 / Middle Meherrin River / Middle Meherrin River from its headwaters to its confluence with Crupper Run	4A	Escherichia coli	2014	L	11.25

Middle Meherrin River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**18.40**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K01R-01-BEN** **Middle Meherrin River**

Cause Location: Middle Meherrin River from its headwaters to its confluence with Crupper Run.

City / County: Lunenberg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Middle Meherrin River from its headwaters to Crupper Run was initially impaired of the Aquatic Life Use in the 2014 cycle due to an altered benthic community at freshwater probabilistic monitoring station 5AMMR008.77. The BMI community in this reach is dominated by the filterer FFG which indicates nutrient enrichment. Habitat scores for sediment were also low suggesting another probable stressor.

The station is located on private property; therefore, sampling continued at new station 5AMMR014.21 in the 2018 cycle instead; monitoring there was inconclusive.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K01R_MMR02A08 / Middle Meherrin River / Middle Meherrin River from its headwaters to its confluence with Crupper Run	5A	Benthic-Macroinvertebrate Bioassessments	2014	M	11.25

Middle Meherrin River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.25**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K01R-03-BEN** **Finneywood Creek**

Cause Location: Finneywood Creek from its headwaters to its mouth on the South Meherrin River

City / County: Mecklenburg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle, Finneywood Creek was impaired of the Aquatic Life Use due to an altered benthic community at 5AFNY004.78, which was a 2005 Probmon site.

The stream runs through a pasture with active cattle access. Flow was minimal, sedimentation was extensive, and organic solids were abundant in channel. Minimal habitat was present.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K01R_FNY01A08 / Finneywood Creek / Finneywood Creek from its headwaters to its mouth on the South Meherrin River	5A	Benthic-Macroinvertebrate Bioassessments	2008	M	5.11

Finneywood Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.11**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K01R-04-BEN** **Blackstone Creek**

Cause Location: Blackstone Creek from its headwaters to its mouth

City / County: Mecklenburg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Blackstone Creek was impaired of the Aquatic Life Use in the 2018 cycle due to an altered benthic community at 5ABKS001.60.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K01R_BKS01A16 / Blackstone Creek / Blackstone Creek from its headwaters to its mouth	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	4.47

Blackstone Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.47**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-01-BAC** **North Meherrin River**

Cause Location: North Meherrin River from Couches Creek to Reedy Creek.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2006 cycle, the North Meherrin River from Couches Creek to Reedy Creek was impaired of the Recreation Use due to an E.coli exceedance rate of 2/9 at 5ANMR013.95.

The impairment was addressed in the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010.

It was delisted in 2012 and relisted in 2014.

The exceedance rate was 5/35 in the 2018 cycle.

The segment was mistakenly listed as nested in previous assessments. This was corrected in the 2018 cycle. The impairment is Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_NMR01A98 / North Meherrin River / Couches Creek to Reedy Creek.	4A	Escherichia coli	2014	L	7.54

North Meherrin River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.54**

Sources:

- Livestock (Grazing or Feeding Operations)
- Municipal Point Source Discharges
- Unspecified Domestic Waste
- Wastes from Pets
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-01-BEN** **North Meherrin River**

Cause Location: North Meherrin River from Couches Creek to unnamed tributary below unimproved road.

City / County: Lunenberg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

In the 2010 cycle, the North Meherrin River from Couches Creek to Reedy Creek was impaired of the Aquatic Life Use due to an altered benthic community at 5ANMR013.95 during 2008 sampling. This section of the North Meherrin River had incised banks and a high rate of sedimentation. Cobble surfaces in riffles were dominated by periphyton.

The impairment was extended downstream to an unnamed tributary in the 2014 cycle based on additional monitoring at 5ANMR007.90.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_NMR01A98 / North Meherrin River / Couches Creek to Reedy Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	7.54
VAP-K02R_NMR02B04 / North Meherrin River / Confluence with Reedy Creek to unnamed tributary below unimproved road.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	2.63

North Meherrin River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.17**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-02-BAC** **Big Juniper Creek**

Cause Location: Big Juniper Creek from Little Juniper Creek to the mouth.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In the 2006 cycle, Big Juniper Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/9 at 5ABJC001.00.

In the 2014 cycle, the impairment was nested in the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010.

The exceedance rate was 5/12 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_BJC01A98 / Big Juniper Creek / Little Juniper Creek to mouth.	4A	Escherichia coli	2006	L	6.68

Big Juniper Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.68**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-03-BAC** **Kits Creek**

Cause Location: Kits Creek from its headwaters to the mouth

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2018 cycle, Kits Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/3 at 5AKIT002.65. The exceedance rate at 5AKIT000.67 is acceptable (0/12); therefore, continued monitoring is recommended.

The impairment is proposed for nesting in the North Meherrin River Bacterial TMDL, which was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_KIT01A06 / Kits Creek / Kits Creek from its headwaters to the mouth	4A	Escherichia coli	2018	L	4.82

Kits Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.82**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-03-BEN** **Kits Creek**

Cause Location: Kits Creek from its headwaters to the mouth

City / County: Lunenberg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Kits Creek was impaired of the Aquatic Life Use in the 2008 cycle due to an altered benthic community at 5AKIT002.65.

Monitoring at station 5AKIT000.67 is inconclusive.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_KIT01A06 / Kits Creek / Kits Creek from its headwaters to the mouth	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	4.82

Kits Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.82**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-04-BAC** **Reedy Creek**

Cause Location: Reedy Creek from its headwaters to its mouth on the North Meherrin River

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2008 cycle, Reedy Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 3/9 at 5ARYK002.34.

The impairment was subsequently nested in the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010.

The exceedance rate was 2/12 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_RYK01A08 / Reedy Creek / Reedy Creek from its headwaters to its mouth on the North Meherrin River	4A	Escherichia coli	2008	L	10.40

Reedy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.40**

Sources:

- Livestock (Grazing or Feeding Operations)
- Municipal Point Source Discharges
- Unspecified Domestic Waste
- Wastes from Pets
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-04-BEN** **Couches Creek**

Cause Location: Couches Creek from its headwaters to its mouth on the North Meherrin River

City / County: Lunenberg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Couches Creek has been impaired of the Aquatic Life Use since the 2010 cycle due to altered benthic communities at 5ACHS003.42 and 5ACHS006.33.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_CHS01A08 / Couches Creek / Couches Creek from its headwaters to its mouth on the North Meherrin River	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	7.37

Couches Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**7.37**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-05-BAC** **Ledbetter Creek**

Cause Location: Ledbetter Creek from its headwaters to its mouth.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In the 2010 cycle, Ledbetter Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 8/12 at 5ALDB000.03.

The impairment was later nested in the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010.

The exceedance rate was 8/12 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_LDB01A10 / Ledbetter Creek / Ledbetter Creek from its headwaters to its mouth.	4A	Escherichia coli	2010	L	9.08

Ledbetter Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.08**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K02R-06-BAC** **Couches Creek**

Cause Location: Couches Creek from its headwaters to its mouth on the North Meherrin River.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In the 2014 cycle, Couches Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at 5ACHS003.42.

The impairment was nested in the North Meherrin River Bacterial TMDL, which was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010.

The exceedance rate remained 4/12 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_CHS01A08 / Couches Creek / Couches Creek from its headwaters to its mouth on the North Meherrin River	4A	Escherichia coli	2014	L	7.37

Couches Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.37**

Sources:

- Livestock (Grazing or Feeding Operations)
- Municipal Point Source Discharges
- Unspecified Domestic Waste
- Wastes from Pets
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-01-BAC** **Flat Rock Creek**

Cause Location: Flat Rock from the first confluence downstream of the Route 647 bridge downstream to the mouth.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2002 cycle, Flat Rock Creek from the first confluence downstream of the Route 647 bridge downstream to the mouth was impaired of the Recreation Use due to fecal coliform exceedances at 5AFRC002.98. The impairment converted to E. coli in the 2008 cycle. The Flat Rock Creek and Broad Branch Bacterial TMDL was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009.

Station 5AFRC007.54 later had E. coli exceedances as well.

The segment extent was mistakenly altered and the downstream most portion was delisted in previous cycles. As of the 2016 cycle, a merged impairment (VAC-K03R-01 and VAC-K03R-02) extended from the headwaters to Kettlesticks Creek. The segmentation was corrected in the 2018 cycle and the applicable portions were nested.

During the 2018 cycle, the E. coli exceedance rate was 2/12 at 5AFRC002.98.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_FRC01A98 / Flat Rock Creek / First confluence downstream of Route 647 to the mouth.	4A	Escherichia coli	2008	L	9.76

Segment extent corrected and merged in the 2018 cycle.

Flat Rock Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.76**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-01-BEN** **Flat Rock Creek**

Cause Location: Flat Rock Creek from its headwaters to its mouth.

City / County: Lunenberg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Flat Rock Creek from its headwaters to Kettlesticks Creek was impaired of the Aquatic Life Use in the 2014 cycle due to 2012 monitoring at freshwater probabilistic monitoring station 5AFRC011.93.

Additional monitoring at 5AFRC013.25 in 2015 also indicated impairment.

The segment was extended to the mouth in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_FRC01A98 / Flat Rock Creek / First confluence downstream of Route 647 to the mouth.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	9.76
Segment extent corrected and merged in the 2018 cycle.					
VAP-K03R_FRC01B18 / Flat Rock Creek / Kenbridge WTP intake to the first confluence downstream of the Route 647 bridge	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	4.70
AU split off in the 2018 cycle to correct segmentation.					
Segment extent corrected and merged in the 2018 cycle.					
VAP-K03R_FRC02A06 / Flat Rock Creek / Route 652 to Kenbridge PWS intake.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	1.73
Segment split in the 2018 cycle.					
VAP-K03R_FRC02B18 / Flat Rock Creek / Headwaters to Route 652.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	3.89
Segment split in the 2018 cycle.					

Flat Rock Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**20.08**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-02-BAC** **Flat Rock Creek**

Cause Location: Flat Rock Creek from Route 652 downstream to the Kenbridge PWS intake.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2006 cycle, Flat Rock Creek from the Route 652 bridge downstream to the Kenbridge WTP intake was impaired of the Recreation Use due to an E. coli exceedance rate of 2/3 at 5AFRC013.25. The Flat Rock Creek and Broad Branch Bacterial TMDL, which was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009, addressed the original segment.

Note: In the 2008 cycle, the impairment was extended upstream to the headwaters based on an exceedance rate of 4/12 at 5AFRC014.70. In addition, it was mistakenly merged with the bacterial impairment at the mouth of Flat Rock Creek (K03R-01-BAC). In the 2018 cycle, the segmentation was corrected and the upstream extension was split off and nested in the 2018 cycle because the upstream-most impairment was not specifically addressed in the TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_FRC02A06 / Flat Rock Creek / Route 652 to Kenbridge PWS intake.	4A	Escherichia coli	2006	L	1.73

Segment split in the 2018 cycle.

Flat Rock Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.73**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-03-BAC** **Broad Branch**

Cause Location: Broad Branch from its headwaters to the mouth.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Broad Branch was initially impaired of the Recreation Use in the 2006 cycle based on an E. coli exceedance rate of 2/3 at 5ABRD002.09.

Additional monitoring was later conducted.

The Flat Rock Creek and Broad Branch Bacterial TMDL was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_BRD01A06 / Broad Branch / From its headwaters to the mouth	4A	Escherichia coli	2006	L	3.53

Broad Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.53**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-04-BAC** **Meherrin River**

Cause Location: Meherrin River from its confluence with the North Meherrin River to its confluence with Flat Rock Creek.

City / County: Lunenberg Co. Mecklenburg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

NESTED 2014: 38419, 4/12/2010

The Meherrin River from Crooked Creek to Flat Rock Creek was impaired of the Recreation Use in the 2008 cycle due to an E. coli exceedance rate of 3/9 at 5AMHN012.61.

The impairment was extended upstream to the confluence with the North Meherrin River in the 2012 cycle (8/12 at 5AMHN102.61 and 3/14 at 5AMHN108.37).

It was nested in the Meherrin River and Tributaries Bacterial TMDL in the 2014 cycle. The TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010.

In the 2018 cycle, exceedance rates in the segment were:
4/12 at 5AMHN102.61
3/12 at 5AMHN105.36
0/1 at 5AMHN104.32

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_MHN01A00 / Meherrin River / Meherrin River from the South Hill raw water intake to a point 5 miles upstream.	4A	Escherichia coli	2012	L	5.03
VAP-K03R_MHN01B06 / Meherrin River / Meherrin River from the confluence with North Meherrin River to a point 5 miles upstream of the South Hill Intake.	4A	Escherichia coli	2012	L	1.94
VAP-K03R_MHN02A04 / Meherrin River / From South Hill's raw water intake to the confluence with Crooked Creek.	4A	Escherichia coli	2012	L	1.29
VAP-K03R_MHN03A08 / Meherrin River / Meherrin River from its confluence with Crooked Creek to its confluence with Flat Rock Creek.	4A	Escherichia coli	2008	L	3.17

Meherrin River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.43**

Sources:

Livestock (Grazing or Feeding Operations)
Municipal Point Source Discharges
Unspecified Domestic Waste
Wastes from Pets
Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-05-BAC** **XFH - Flat Rock Creek, UT**

Cause Location: An unnamed tributary to Flat Rock Creek from its headwaters to its mouth.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

NESTED 2014: 36046, 12/29/2008

XFH was impaired of the Recreation Use in the 2008 cycle due to E. coli exceedances at 5AXFH0.74.

In the 2014 cycle, the impairment was nested in the Flat Rock Creek and Broad Branch Bacterial TMDL, which was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_XFH01A06 / XFH - Flat Rock Creek, Unnamed Tributary / From its headwaters to the mouth	4A	Escherichia coli	2008	L	3.44

XFH - Flat Rock Creek, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.44**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-06-BEN** **Mason Creek**

Cause Location: Mason Creek from its headwaters to the mouth.

City / County: Lunenberg Co. Mecklenburg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Masons Creek was impaired in the 2014 cycle due to an altered benthic community at 5AMSC002.30.

This reach may be a future delist candidate due to beaver impacts to the 2011 samples. More recent sampling in 2016 indicate betters habitat though slight nutrient and sedimentation stressors are present. Monitoring should continue to accurately characterize the BMI community in this reach.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_MSC01A10 / Mason Creek / Mason Creek from a point 5 miles upstream of PWS intake to its mouth on the Meherrin River.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	2.85
VAP-K03R_MSC01B14 / Mason Creek / Mason Creek from its headwaters to a point 5 miles upstream of the PWS intake	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	5.98

Segment adjusted in the 2018 cycle.

Mason Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**8.83**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-07-BAC** **Flat Rock Creek**

Cause Location: Flat Rock from the Kenbridge WTP intake downstream to the first confluence below the Route 647 bridge.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2002 cycle, Flat Rock Creek from the first confluence downstream of the Route 647 bridge downstream to the mouth was impaired of the Recreation Use due to fecal coliform exceedances at 5AFRC002.98. The impairment converted to E. coli in the 2008 cycle. The Flat Rock Creek and Broad Branch Bacterial TMDL was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009.

It was mistakenly extended upstream in the 2008 cycle due to an E. coli exceedance rate of 3/12 at 5AFRC009.53 and merged with the upstream impairment K03R-02-BAC. As this portion was first listed in 2008 cycle, the due date should be 2020. The segmentation was corrected in the 2018 cycle. Since this portion was not specifically addressed in the TMDL, it will be nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_FRC01B18 / Flat Rock Creek / Kenbridge WTP intake to the first confluence downstream of the Route 647 bridge	4A	Escherichia coli	2008	L	4.70

AU split off in the 2018 cycle to correct segmentation.

Segment extent corrected and merged in the 2018 cycle.

Flat Rock Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.70**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K03R-08-BAC** **Flat Rock Creek**

Cause Location: Flat Rock Creek from its headwaters to the Route 652 bridge.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2006 cycle, Flat Rock Creek from the Route 652 bridge downstream to the Kenbridge WTP intake was impaired of the Recreation Use due to an E. coli exceedance rate of 2/3 at 5AFRC013.25. The Flat Rock Creek and Broad Branch Bacterial TMDL, which was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009, addressed the original segment.

Note: In the 2008 cycle, the impairment was extended upstream to the headwaters based on an exceedance rate of 4/12 at 5AFRC014.70. In addition, it was mistakenly merged with the bacterial impairment at the mouth of Flat Rock Creek (K03R-01-BAC). In the 2018 cycle, the segmentation was corrected and the upstream extension was split off and nested in the 2018 cycle because the upstream-most impairment was not specifically addressed in the TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K03R_FRC02B18 / Flat Rock Creek / Headwaters to Route 652.	4A	Escherichia coli	2008	L	3.89

Segment split in the 2018 cycle.

Flat Rock Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.89**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K04R-01-BAC** **Stony Creek**

Cause Location: Stony Creek from its headwaters to it mouth

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2004 cycle, Stony Creek 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).

Additional monitoring was conducted during the 2010 cycle. Stony Creek remained impaired due to an E. coli violation rate of 3/12 at 5ASNY000.65. The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area and the TMDL states that this segment will be considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K04R_SNY01A96 / Stony Creek / Headwaters to mouth.	4A	Escherichia coli	2010	L	14.24

Stony Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.24**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K04R-02-BAC** **Shining Creek**

Cause Location: Shining Creek from its headwaters to it mouth

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Shining Creek was assessed not supporting of the Recreation Use support goal based on an E. coli violation rate of 8/32 at the Rt. 637 bridge (5ASHN000.77).

The impairment is within the study area for the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 4/12/2010 and 9/30/2010. The TMDL states that this segment will be considered nested (Category 4A).

The violation rate was 12/23 during the 2014 cycle, and no new data was collected during the 2016 cycle.

Additional monitoring was conducted at 5AMHN004.25 in the 2018 cycle (4/12.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K04R_SHN01A06 / Shining Creek / The mainstem of Shining Creek	4A	Escherichia coli	2010	L	7.74

Shining Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.74**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K04R-03-BAC** **Taylors Creek**

Cause Location: Taylors Creek from its headwaters to it mouth

City / County: Brunswick Co. Mecklenburg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Taylors Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/12 at the Route 657 bridge (5ATLR001.85).

The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area and the TMDL states that this segment will be considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K04R_TLR01A10 / Taylors Creek / Headwaters to mouth at the Meherrin River	4A	Escherichia coli	2010	L	10.35

Taylors Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.35**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K04R-04-BAC** **Meherrin River**

Cause Location: The Meherrin River from Stony Creek downstream to Taylors Creek.

City / County: Brunswick Co. Lunenberg Co. Mecklenburg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, the Meherrin River from Stony Creek to Taylors Creek was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 5/12 at 5AMHN093.07, which is located at the Route 1 bridge.

The impairment is within the study area for the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 4/12/2010 and 9/30/2010. The TMDL states that this segment will be considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K04R_MHN01B10 / Meherrin River / Stony Creek to Taylors Creek	4A	Escherichia coli	2010	L	6.95

Meherrin River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.95**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-01-BAC** **Genito Creek**

Cause Location: Mainstem from its headwaters to its mouth

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Genito Creek was originally assessed as impaired of the Recreation Use in 2006 due to E. coli exceedances at the Route 623 bridge (5AGTO001.16). During the 2010 cycle the violation rate was 9/23. The impairment was addressed in the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is considered Category 4A.

During the 2016 cycle the segment remained impaired for E.coli with a violation rate of 2/11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_GTO01A94 / Genito Creek / Headwaters to mouth.	4A	Escherichia coli	2006	L	8.13

Genito Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.13**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-02-BAC** **Meherrin River**

Cause Location: Meherrin River from Taylors Creek downstream to Reedy Creek

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Meherrin River from Taylors Creek to Reedy Creek was originally considered fully supporting but threatened during the year 1998 cycle, but was downgraded during the 2002 cycle. During the 2006 cycle, the segment was assessed as not supporting of the Recreation Use support goal based on fecal coliform exceedances at 5AMHN068.30, 5AMHN073.98, and 5AMHN082.13 and E. coli exceedances at 5AMHN082.13.

During the 2010 cycle, the E. coli exceedance rate was 13/38 at 5AMHN082.13, 4/11 at 5AMHN075.24, 7/18 at 5AMHN073.98, and 4/18 at 5AMHN068.30. In addition, monitoring at 5AMHN060.95 indicated impairment (3/12 for E. coli); therefore, the segment was extended downstream to Douglas Run. In the 2014 cycle, the exceedance rate was 17/41 at 5AMHN082.13; no additional monitoring was conducted at the other stations.

During the 2012 cycle, the Meherrin River and Tributaries bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010.

Although the upper portion was addressed in the TMDL, the expansion downstream to Douglas Run was not. The original portion of the Meherrin River is considered Category 4A. The extension was split into a separate impairment which will be due in 2022 (see K08R-01-BAC).

During the 2016 cycle the segment was still impaired for E.coli with an exceedance rate of 12/35 at station 5AMHN082.13 and 4/12 at 5AMHN068.30.

The exceedance rate was 8/35 at 5AMHN082.13 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_MHN01B98 / Meherrin River / Taylors Creek to Hicks Creek.	4A	Escherichia coli	2006	L	6.95
VAP-K05R_MHN02B98 / Meherrin River / Hicks Creek to Lawrenceville PWS Intake.	4A	Escherichia coli	2006	L	5.03
VAP-K05R_MHN03B98 / Meherrin River / Lawrenceville PWS intake to Reedy Creek.	4A	Escherichia coli	2006	L	14.22

Meherrin River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**26.20**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-03-BAC** **Briery Branch**

Cause Location: The mainstem of Briery Branch.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Briery Branch was assessed in 2004 as not supporting of the Recreation Use support goal based on a fecal coliform exceedance rate of 4/12 at 5A-PL-GR-B, a Confined Animal Feeding Operation special study station.

Additional monitoring was conducted during the 2010 cycle. The segment remained impaired due to an E. coli exceedance rate of 6/12 at 5ABRY001.88, which was renamed from 5A-PL-GR-B. The impairment converted to E. coli, but the original TMDL due date was maintained.

The Briery Branch impairment was addressed in the Meherrin River and Tributaries Bacterial TMDL, which was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is considered Category 4A.

No new data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_BRY01A02 / Briery Branch / Headwaters to mouth	4A	Escherichia coli	2010	L	4.01

Briery Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.01**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-04-BAC** **Hicks Creek**

Cause Location: Headwaters to mouth at the Meherrin River.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Hicks Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/12 at the Route 623 bridge (5AHIC001.35).

The Meherrin River and Tributaries bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area and the TMDL states that this segment will be considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_HIC01A10 / Hicks Creek / Headwaters to mouth at Meherrin River	4A	Escherichia coli	2010	L	7.37

Hicks Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.37**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-05-DO** **Hays Creek**

Cause Location: The mainstem of Hayes Creek.

City / County: Brunswick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, Hays Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 5AHAY000.38, which is located at the Route 686 bridge.

During the 2016 cycle, Hays Creek remained impaired due to a dissolved oxygen exceedance rate of 2/12 at 5AHAY000.38. Dissolved oxygen was acceptable at station 5AHAY003.23 (1/12) and 5AHAY004.92 (0/9.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_HAY01A10 / Hays Creek / Headwaters to mouth at Meherrin River	5C	Oxygen, Dissolved	2010	L	6.39

Hays Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**6.39**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-06-BEN** **Little Genito Creek**

Cause Location: Headwaters to mouth at Genito Creek.

City / County: Brunswick Co. Mecklenburg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2010 cycle, Little Genito Creek was assessed as not supporting of the Aquatic Life Use due to benthic impairment at 2008 probabilistic monitoring station 5ALTG001.50.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_LTG01A10 / Little Genito Creek / Headwaters to mouth at Genito Creek	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	12.05

Little Genito Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**12.05**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-07-BAC** **Evans Creek**

Cause Location: Headwaters to mouth at the Meherrin River.

City / County: Brunswick Co. Mecklenburg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Evans Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 4/12 at the Route 623 bridge (5AEVN000.96).

The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area and the TMDL states that this segment will be considered nested (Category 4A).

During the 2016 cycle, the segment remained impaired for E.coli with an exceedance rate of 2/11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_EVN01A10 / Evans Creek / Headwaters to mouth at the Meherrin River.	4A	Escherichia coli	2010	L	11.72

Evans Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.72**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-08-BAC** **Totaro Creek**

Cause Location: Headwaters to mouth at the Meherrin River.

City / County: Brunswick Co. Mecklenburg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Totaro Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 10/12 at the Route 58 bridge (5ATRO002.00).

The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area and the TMDL states that this segment will be considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_TRO01A10 / Totaro Creek / Start of PWS 5 miles above the Town of Lawrenceville's intake to its mouth at the Meherrin River.	4A	Escherichia coli	2010	L	4.86
VAP-K05R_TRO01B10 / Totaro Creek / Headwaters to start of PWS segment 5 miles above Town of Lawrenceville's intake	4A	Escherichia coli	2010	L	0.47

Totaro Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.33**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K05R-09-BAC** **Allen Creek**

Cause Location: Headwaters to mouth

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2016 cycle, Allen Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 4/23 at 5AALN001.00.

The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area so is considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K05R_ALN01A08 / Allen Creek / Headwaters to mouth	4A	Escherichia coli	2016	L	6.96

Allen Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.96**

Sources:

Agriculture Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K06R-02-BAC** **Great Creek**

Cause Location: The mainstem of Great Creek from Powell Creek downstream to its mouth, excluding Great Creek Reservoir.

City / County: Brunswick Co. Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Portions of Great Creek have been impaired since the 2002 cycle. During the year 2006 cycle, the previous bacteria impairments (VAP-K06R-01, -02, and -03) in Great Creek were combined based on fecal coliform exceedances at 5AXEA000.04, 5A-PL-GR-A, and 5AGTC005.40, and E. coli exceedances at 5AGTC017.75. 5AXEA000.04 and 5A-PL-GR-A are confined animal feeding operation (CAFO) special study stations that were discontinued in 2002.

During the 2008 cycle, the entire mainstem of Great Creek, excluding Great Creek Reservoir, remained impaired and converted to E. coli based on an E. coli exceedance rate of 2/11 at station 5AGTC017.75.

Monitoring was conducted throughout the segment during the 2010 cycle to characterize the extent of the impairment. The upstream and downstream stations had acceptable exceedance rates; therefore the segment was shortened and parts of the creek were partially delisted.

5AGTC025.70 - Rt. 602 - 0/11
5AGTC023.89 - Rt. 617 - 1/11
5AGTC022.59 - Rt. 620 - 0/12
5AGTC020.71 - Rt. 653 - 7/19
5AGTC017.75 - Rt. 644 - 8/19
5AGTC015.20 - Rt. 1 - 1/12
5AGTC013.62 - Rt. 763 - 3/12
5AGTC006.97 - RR bridge - 5/12
5AGTC005.40 - Rt. 713 - 1/18
5AGTC004.82 - opposite Lawrenceville STP - 1/12
5AGTC000.38 - above Buford Branch - 1/12

In the 2018 cycle, the segment from the Lawrenceville PWS intake to the mouth was relisted based on an E. coli exceedance rate of 3/12 at 5AGTC005.40. The impairment is extended to re-incorporate this portion.

The Meherrin River Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The TMDL addressed the entire riverine portion of Great Creek. The segments are considered Category 2C/3A/4A as appropriate.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K06R_GTC01C10 / Great Creek / Powell Creek to upstream extent of PWS Section 5a-3b.	4A	Escherichia coli	2006	L	6.44
VAP-K06R_GTC02B00 / Great Creek / Upstream extent of PWS Section 5a-3b to extent of backwater at Great Creek Reservoir.	4A	Escherichia coli	2006	L	2.18
VAP-K06R_GTC04B00 / Great Creek / Great Creek Reservoir dam to the Lawrenceville PWS intake (PWS Section 5a-3b).	4A	Escherichia coli	2008	L	2.75
VAP-K06R_GTC05B00 / Great Creek / Lawrenceville PWS intake to its mouth.	4A	Escherichia coli	2018	L	7.57

Great Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**18.94**

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K06R-03-BAC** **Stevens Branch**

Cause Location: The mainstem of Stevens Branch from its headwaters to its mouth at Great Creek.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Stevens Branch was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 5/10 at 5ASTV000.62, which is located at a private road off of Rt. 700.

The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area and the TMDL states that this segment will be considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K06R_STV01A10 / Stevens Branch / Headwaters to mouth at Great Creek	4A	Escherichia coli	2010	L	4.30

Stevens Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.30**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K06R-04-BAC** **Tea Branch**

Cause Location: The mainstem of Tea Branch from its headwaters to its mouth at Great Creek.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Tea Branch was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 9/11 at 5ATEA001.47, which is located at Rt. 652.

The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area and the TMDL states that this segment will be considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K06R_TEA01A10 / Tea Branch / Headwaters to mouth at Great Creek	4A	Escherichia coli	2010	L	3.24

Tea Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.24**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K06R-05-BAC** **XHQ - Great Creek, UT**

Cause Location: Headwaters to its mouth at Great Creek.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Tributary XHQ was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/12 at 5AXHQ000.38, which is located at Rt. 603.

The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area and the TMDL states that this segment will be considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K06R_XHQ01A10 / XHQ - Great Creek, UT / Headwaters to mouth at Great Creek	4A	Escherichia coli	2010	L	2.12

XHQ - Great Creek, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.12**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K07R-02-BAC** **Roses Creek**

Cause Location: From the Alberta Sewage Treatment Plant discharge to the mouth at Great Creek.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Roses Creek from the Alberta STP discharge downstream to its mouth at Great Creek was previously evaluated not supporting of the Recreation Use support goal based on fecal coliform standard exceedances at the Route 678 bridge (5ARSE001.22). The TMDL was completed for E. coli and was approved by the EPA on 7/6/2004 and by the SWCB on 12/2/04.

During the 2010 cycle, the segment remained impaired with an E. coli violation rate of 13/33 at 5ARSE001.22 and 4/12 at 5ARSE000.23. The violation rate at 5ARSE006.68 was acceptable (1/12).

The violation rate at 5ARSE001.22 was 7/24 during the 2014 cycle. No other additional data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K07R_RSE01A96 / Roses Creek / Alberta STP to mouth at Great Creek	4A	Escherichia coli	2006	L	9.85

Roses Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.85**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K07R-03-BAC** **Rocky Run**

Cause Location: Rocky Run and its tributaries, including Sandy Branch.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Rocky Run was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 4/11 at 5ARYR000.62, which is located at Rt. 642.

Rocky Run drains to Roses Creek, which has a completed bacterial TMDL that was adopted by the EPA on 7/6/2004 and by the SWCB on 12/2/2004. The TMDL requires extensive reductions in the watershed; therefore, this segment is considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K07R_RYR01A08 / Rocky Run / Rocky Run and its tributaries downstream to its mouth at Roses Creek.	4A	Escherichia coli	2010	L	21.27

Rocky Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**21.27**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K07R-03-BEN** **Rocky Run**

Cause Location: Rocky Run and its tributaries, including Sandy Branch.

City / County: Brunswick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle, Rocky Run was assessed as impaired of the Aquatic Life Use due to a benthic impairment at freshwater probabilistic monitoring station 5ARYR001.23.

Additional monitoring occurred during the 2014 cycle, both at station 5ARYR001.23 and at station 5ARYR000.62, which is located at Rt. 642. There is severe impairment at both stations.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K07R_RYR01A08 / Rocky Run / Rocky Run and its tributaries downstream to its mouth at Roses Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	21.27

Rocky Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**21.27**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K07R-04-BAC** **Roses Creek**

Cause Location: From its headwaters downstream to the Alberta Sewage Treatment Plant discharge.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, the portion of Roses Creek upstream of the sewage treatment plant outfall was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/9 at 5ARSE009.87.

Although this station is upstream of the original impaired segment, it was included in the Roses Creek Bacterial TMDL, which was adopted by the EPA on 7/6/2004 and by the SWCB on 12/2/2004. The TMDL requires extensive reductions in the watershed; therefore, this segment is considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K07R_RSE01B10 / Roses Creek / Headwaters to Town of Alberta's STP discharge	4A	Escherichia coli	2010	L	1.95

Roses Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.95**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K07R-05-BAC** **Soloman Creek**

Cause Location: Headwaters to mouth at Roses Creek.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2018 cycle, Soloman Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 3/11 at 5ASMN001.97, which is located at Rt. 634.

The creek drains to Roses Creek, which has a completed bacterial TMDL that was adopted by the EPA on 7/6/2004 and by the SWCB on 12/2/2004. The TMDL requires extensive reductions in the watershed; therefore, this segment is considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K07R_SMN01A18 / Soloman Creek / Headwaters to mouth at Roses Creek	4A	Escherichia coli	2018	L	4.98

Soloman Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.98**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K08L-01-HG** **Emporia Lake (Meherrin Reservoir)**

Cause Location: Emporia Lake

City / County: Greensville Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

In 2007 the lake had fish tissue monitoring with Mercury in 3 species (Chain Pickerel, Largemouth Bass and Redear Sunfish.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08L_MHN02C98 / Emporia Lake (Meherrin Reservoir) / On Meherrin River in Emporia	5A	Mercury in Fish Tissue	2014	L	263.68

Emporia Lake (Meherrin Reservoir) **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**263.68**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K08L-02-CHLA** **Brunswick Lake**

Cause Location: Brunswick Lake

City / County: Brunswick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Chlorophyll-a / 5A

During the 2016 cycle the segment became impaired for Chlorophyll a with 2/3 exceedances.

no new data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08L_RDC01A98 / Brunswick Lake (County Pond) / VDGIF lake on Reedy Creek.	5A	Chlorophyll-a	2016	L	160.33

Brunswick Lake **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		**160.33**	

Sources:

Agriculture

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K08L-02-DO** **Brunswick Lake**

Cause Location: Brunswick Lake

City / County: Brunswick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

In 2006 Brunswick Lake was assessed as not supporting the Aquatic Life Use due to low dissolved oxygen in bottom waters. The low DO only occurred during periods of stratification, however the TSIs for the lake were above 60:

TSI(TP) = 64
TSI(CA) = 69
TSI(SD) = 66

Therefore the low dissolved oxygen was considered to be exacerbated by excessive nutrients and a TMDL was required. In addition, both total phosphorus and chlorophyll a were considered observed effects b/c of screening level exceedances. The lake should be reevaluated once nutrient criteria are established.

For the 2008 cycle nutrient criteria was developed for lakes and DO was no longer impaired. Only pH was impaired at 5ARDC007.30 with an exceedance rate of 5/36.

In the 2012 cycle the segment was listed as impaired for aquatic life use with a DO exceedance rate of 7/37 at station 5ARDC007.30.

During the 2014 cycle there was no new data so the impairments remain.

During the 2016 cycle the segment was impaired for DO with an exceedance rate of 7/56 at 5ARDC007.30 and 9/47 at 5ARDC008.50.

no new data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08L_RDC01A98 / Brunswick Lake (County Pond) / VDGIF lake on Reedy Creek.	5A	Oxygen, Dissolved	2006	L	160.33

Brunswick Lake **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:		**160.33**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K08R-02-BAC** **Robinson Creek**

Cause Location: Robinson Creek from its headwaters to its mouth.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Robinson Creek was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 2/11 at 5ARNS000.94, which is located at a private road east of Rt. 670.

The Meherrin River and Tributaries Bacterial TMDL was approved by the EPA on 4/12/2010 and by the SWCB on 9/30/2010. The impairment is within the study area; therefore, this segment is considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08R_RNS01A10 / Robinson Creek / Headwaters to mouth at the Meherrin River	4A	Escherichia coli	2010	L	6.07

Robinson Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.07**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K08R-03-BAC** **Wilson Creek**

Cause Location: Wilson Creek from its beginning at the confluence of Dukes Branch and Huckleberry Branch to its mouth at Brunswick Lake.

City / County: Brunswick Co. Greensville Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2012 cycle, Wilson Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5AWIL002.42, which is located at the Route 712 bridge.

The exceedance rate was 5/12 during the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08R_WIL01A10 / Wilson Creek / Start of Wilson Creek at the confluence of Dukes Branch and Huckleberry Branch to its mouth at Brunswick Lake	5A	Escherichia coli	2012	L	2.74

Wilson Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.74**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K08R-03-BEN** **Wilson Creek**

Cause Location: Wilson Creek from its beginning at the confluence of Dukes Branch and Huckleberry Branch to its mouth at Brunswick Lake.

City / County: Brunswick Co. Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2010 cycle, Wilson Creek was assessed as not supporting of the Aquatic Life Use due to impairment of the benthic community at 5AWIL002.42, which is located at Rt. 712. Additional monitoring during the 2014 cycle showed an acceptable benthic community; therefore, the stream was delisted.

During the 2016 cycle, the segment was relisted and impaired for Benthics.

The station has been discontinued due to safety concerns.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08R_WIL01A10 / Wilson Creek / Start of Wilson Creek at the confluence of Dukes Branch and Huckleberry Branch to its mouth at Brunswick Lake	5A	Benthic-Macroinvertebrate Bioassessments	2016	L	2.74

Wilson Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.74**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K08R-04-BAC** **XII - UT to Dukes Branch**

Cause Location: Headwaters to the mouth at Dukes Branch

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, the segment was impaired of the Recreation use due to an E.coli exceedance rate of 3/10 at 5AXII000.38.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08R_XII01A16 / XII - UT to Dukes Branch / Headwaters to mouth	5A	Escherichia coli	2016	L	1.71

XII - UT to Dukes Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.71**

Sources:

Non-Point Source Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K08R-05-BAC** **Dukes Branch**

Cause Location: Headwaters to the mouth

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, Dukes Branch was impaired of the Recreation use due to an E.coli exceedance rate of 4/12 at 5ADUK001.42.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08R_DUK01A16 / Dukes Branch / Headwaters to the mouth	5A	Escherichia coli	2016	L	2.58

Dukes Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.58**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K09R-01-BAC** **Meherrin River**

Cause Location: The Meherrin River from the Emporia Reservoir Dam to the Route 730 bridge

City / County: Emporia City Greensville Co. Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, the Meherrin River from the Emporia Reservoir dam downstream to Route 730 became impaired for the Recreation Use. Station 5AMHN026.54 had a 2/12 exceedance rate and station 5AMHN052.34 had a 4/36 exceedance rate for E.coli.

The E. coli exceedance rate was 5/36 at 5AMHN052.34 during the 2018 cycle. In addition, the impairment was extended downstream to Fontaine Creek.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K09R_MHN01D98 / Meherrin River / Emporia Reservoir Dam to the Route 730 bridge	5A	Escherichia coli	2016	L	26.75
VAP-K09R_MHN02D00 / Meherrin River / Route 730 bridge to Fontaine Creek (CM21/CM29 watershed boundary).	5A	Escherichia coli	2018	L	2.26

Meherrin River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**29.01**

Sources:

Non-Point Source Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K09R-01-HG** **Meherrin River, Fontaine Creek, Mill Swamp**

Cause Location: Meherrin River below Emporia Reservoir Dam to the state line, including its tributaries Fontaine Creek up to I-95 bridge crossing and Mill Creek up to I-95 bridge crossing

City / County: Emporia City Greensville Co. Southampton Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

On 12/13/2004, the Virginia Department of Health issued a fish consumption advisory due to mercury in gizzard shad. The advisory includes the Meherrin River from below the Emporia dam downstream ~28 miles to the Route 730 bridge. In addition, on 9/16/2008, they issued an advisory for bowfin and largemouth bass from Emporia Reservoir dam to the state line, including the tributaries Fontaine Creek and Mill Swamp up to the I-95 bridge crossings.

The segments will be considered impaired of the Fish Consumption Use. The advisory was based on mercury exceedances at DEQ monitoring stations 5AMHN026.54, 5AMHN051.43, 5AFON006.07, and 5AMLS001.42.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K09R_MHN01D98 / Meherrin River / Emporia Reservoir Dam to the Route 730 bridge	5A	Mercury in Fish Tissue	2010	L	26.75
VAP-K09R_MHN02D00 / Meherrin River / Route 730 bridge to Fontaine Creek (CM21/CM29 watershed boundary).	5A	Mercury in Fish Tissue	2010	L	2.26
VAP-K11R_FON03A98 / Fontaine Creek (aka Fountains Creek) / I-95 bridge to the Route 301 bridge.	5A	Mercury in Fish Tissue	2010	L	7.30
VAP-K11R_FON04A00 / Fontaine Creek (aka Fountains Creek) / Route 301 bridge to the Meherrin River in K12	5A	Mercury in Fish Tissue	2010	L	14.48
VAP-K12R_MLS01A00 / Mill Swamp / I-95 bridge to mouth at Fontaine Creek.	5A	Mercury in Fish Tissue	2010	L	11.53
VAT-K09R_MHN02D08 / Meherrin River / CM21/CM29 watershed boundary at Fountaine Cr to North Carolina border at NC Hwy 186	5A	Mercury in Fish Tissue	2010	L	5.42

Meherrin River, Fontaine Creek, Mill Swamp **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**67.74**

Sources:

Atmospheric Deposition - Toxics Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K09R-01-PCB** **Meherrin River**

Cause Location: The Meherrin River from the Emporia Reservoir Dam to the Route 730 bridge

City / County: Emporia City

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Fish Tissue / 5A

During the 2004 cycle, the Meherrin River from the Emporia Reservoir dam downstream approximately 5 miles was assessed as not supporting the Fish Consumption Use due to PCBs in fish tissue in two samples at station 5AMHN051.43.

During the 2006 cycle, VDH issued a fish consumption advisory for PCBs from the Emporia dam to the Route 730 bridge (12/13/2004). The segment was extended to match the advisory. The TMDL due date for PCBs is 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K09R_MHN01D98 / Meherrin River / Emporia Reservoir Dam to the Route 730 bridge	5A	PCB in Fish Tissue	2004	L	26.75

Meherrin River **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**26.75**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K10R-01-DO** **Rattlesnake Creek**

Cause Location: Rattlesnake Creek mainstem from headwaters to its mouth at Fontaine Creek

City / County: Brunswick Co. Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, Rattlesnake Creek from Edwards Creek to its mouth was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances at several stations in the segment. The impairment was extended upstream in the 2012 cycle. During the 2014 cycle, the exceedance rates were as follows:

1/10 at 5ARSK000.23
4/24 at 5ARSK003.08
6/12 at 5ARSK006.97
4/12 at 5ARSK009.28
2/10 at 5ARSK011.59

During the 2016 cycle the segment remained impaired for Aquatic Life Use due to dissolved oxygen exceedances at stations 5ARSK006.97 and 5ARSK009.28 (3/12 and 4/12, respectively.) Monitoring at station 5ARSK003.08 and 5ARSK011.59 was acceptable.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K10R_RSK01A00 / Rattlesnake Creek / Headwaters to its mouth at Fontaine Creek.	5C	Oxygen, Dissolved	2010	L	17.18

Rattlesnake Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**17.18**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K10R-02-BAC** **Fontaine Creek (Fountains Creek)**

Cause Location: Fontaine Creek mainstem from Quarrel Creek to Rocky Run.

City / County: Greensville Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Fontaine Creek from Quarrel Creek to Rocky Run was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 4/24 at 5AFON037.89, which is located at Rt. 603.

The segment is located with the study area for the Fontaine Creek Bacterial TMDL, which was approved by the EPA on 1/13/2011 and by the SWCB on 8/4/2011. All bacterial impairments within the watershed will be addressed during the implementation phase; therefore, the segment is considered nested (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K10R_FON01B10 / Fontaine Creek / Fontaine Creek from the confluence of Quarrel Creek to the end of the watershed at Rocky Run.	4A	Escherichia coli	2010	L	0.56

Fontaine Creek (Fountains Creek) **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.56**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K10R-02-DO** **Fontaine Creek (Fountains Creek)**

Cause Location: Fontaine Creek mainstem from Rattlesnake Creek Quarrel Creek and from Rocky Run to the confluence with tributary XGV

City / County: Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, Fontaine Creek from Rattlesnake to the confluence with tributary XGV was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances throughout the segment.

3/9 at 5AFON039.47
3/25 at 5AFON037.89
5/12 at 5AFON033.05
3/12 at 5AFON027.33

During the 2016 cycle, the portion from Rattlesnake Run to Quarrel Creek remained impaired for Aquatic life use due to a DO exceedance rate of 2/12 at station 5AFON039.47. The portion from Quarrel Creek to Rocky Run was partially delisted (1/12 at 5AFON037.89). Rocky Run to XGV also remained listed (3/12 at 5AFON033.05, 0/12 at 5AFON027.33)

No additional monitoring was conducted during the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K10R_FON01A04 / Fontaine Creek / Fontaine Creek from the confluence of Rattlesnake Creek to Quarrel Creek.	5C	Oxygen, Dissolved	2010	L	4.60
VAP-K11R_FON01A02 / Fontaine Creek / Rocky Run to tributary XGV	5C	Oxygen, Dissolved	2010	L	12.04

Fontaine Creek (Fountains Creek) **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**16.64**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K10R-03-BAC** **Quarrel Creek**

Cause Location: Quarrel Creek mainstem from White Oak Creek to its mouth.

City / County: Brunswick Co. Greensville Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2016 cycle, Quarrel Creek became impaired for the Recreation Use due to E.coli exceedances with a violation rate of 3/11 and was nested into the Fontaine Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K10R_QRL01A10 / Quarrel Creek / Confluence with White Oak Creek to mouth at Fontaine Creek	4A	Escherichia coli	2016	L	3.34

Quarrel Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.34**

Sources:

Agriculture Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K10R-03-DO** **Quarrel Creek**

Cause Location: Quarrel Creek mainstem from White Oak Creek to its mouth.

City / County: Brunswick Co. Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, Quarrel Creek from White Oak Creek to its mouth was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances at 5AQRL000.54, which is located at Rt. 602. The exceedance rate was 5/12 during the 2012 cycle.

During the 2016 cycle, the segment remained impaired for the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/24 at 5AQRL000.54.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K10R_QRL01A10 / Quarrel Creek / Confluence with White Oak Creek to mouth at Fontaine Creek	5C	Oxygen, Dissolved	2010	L	3.34

Quarrel Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.34**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K10R-03-PH** **Quarrel Creek**

Cause Location: Quarrel Creek mainstem from White Oak Creek to its mouth.

City / County: Brunswick Co. Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2016 cycle, Quarrel Creek from White Oak Creek to its mouth was impaired for the Aquatic Life Use due to a pH exceedance rate of 3/24.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K10R_QRL01A10 / Quarrel Creek / Confluence with White Oak Creek to mouth at Fontaine Creek	5C	pH	2016	L	3.34

Quarrel Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.34**

Sources:

Natural Sources

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K10R-04-DO** **Beddingfield Creek**

Cause Location: Beddingfield Creek from Mason Branch to its mouth at Fontaine Creek.

City / County: Brunswick Co. Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, Beddingfield Creek was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 5ABDD000.69, which is located at Rt. 600. The violation rate was 5/11 during the 2012 cycle.

During the 2016 cycle, the segment was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 5ABDD000.69 with a violation rate of 5/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K10R_BDD01A10 / Beddingfield Creek / Mason Branch to mouth at Fontaine Creek	5C	Oxygen, Dissolved	2010	L	4.18

Beddingfield Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**4.18**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K10R-06-PH** **Rocky Run**

Cause Location: Rocky Run from the Doyle Lake dam to its mouth at Fontaine Creek.

City / County: Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Rocky Run was assessed as not supporting of the Aquatic Life Use in the 2010 cycle due to a pH exceedance rate of 2/12 at 5ARCY000.90, which is located at Route 604.

During the 2016 cycle, the segment remained impaired for the Aquatic Life Use due to a pH exceedance rate of 2/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K10R_RCY01A10 / Rocky Run / Doyle Lake dam to mouth at Fontaine Creek	5C	pH	2010	L	0.86

Rocky Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**0.86**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K11R-03-BAC** **Cattail Creek**

Cause Location: Cattail Creek upstream of Collier Branch.

City / County: Greensville Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Beginning in the 2004 cycle, the segment was assessed as not supporting of the Recreation Use goal based on fecal coliform exceedances at 5ACTT005.89 and 5ACTT002.73. These stations are confined animal feeding operation (CAFO) special study stations and are located at the Route 633 and Route 622 bridges.

Additional monitoring at 5ACTT002.73 was conducted during the 2010 cycle. The bacterial impairment converted to E. coli due to an exceedance rate of 2/12.

The Fontaine Creek Bacterial TMDL was developed during the 2012 cycle. It was approved by the EPA on 1/13/2011 and by the SWCB on 8/4/2011. Cattail Creek is within the study area for the TMDL; therefore, it is considered nested (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K11R_CTT01A02 / Cattail Creek / Headwaters at Smith Pond dam to Collier Branch	4A	Escherichia coli	2010	L	5.33

Cattail Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.33**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K11R-05-DO** **Beaverpond Creek**

Cause Location: The mainstem of Beaverpond Creek within Virginia.

City / County: Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, Beaverpond Creek was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances. The exceedance rates during the 2012 cycle were as follows:

3/12 at 5ABVC000.48
2/12 at 5ABVC002.31

During the 2016 cycle, the segment remained impaired with a DO exceedance rate of 3/12 at 5ABVC002.31. Monitoring at station 5ABVC000.48 was acceptable (1/12).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K11R_BVC01A04 / Beaverpond Creek / VA-NC state line to mouth at Fontaine Creek	5C	Oxygen, Dissolved	2010	L	3.35

Beaverpond Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.35**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K11R-06-PH** **XGV - Fontaine Creek, UT**

Cause Location: Headwaters to mouth

City / County: Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

XGV was assessed as not supporting of the Aquatic Life Use in the 2010 cycle due to a pH exceedance rate of 3/7 at 5AXGV000.92.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K11R_XGV01A10 / XGV - Fontaine Creek, UT / Headwaters to mouth at Fontaine Creek	5C	pH	2010	L	1.95

XGV - Fontaine Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.95**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K11R-08-DO** **XGU - Fontaine Creek, UT**

Cause Location: Headwaters to mouth

City / County: Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

XGU was assessed as not supporting of the Aquatic Life Use in the 2010 cycle due to a dissolved oxygen exceedance rate of 9/12 at 5AXGU000.35, which is located at frontage road F-128.

During the 2016 cycle, the segment remained impaired due to a dissolved oxygen exceedance rate of 4/11 at 5AXGU000.35

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K11R_XGU01A10 / XGU - Fontaine Creek, UT / Headwater to mouth at Fontaine Creek	5C	Oxygen, Dissolved	2010	L	1.82

XGU - Fontaine Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.82**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K11R-08-PH** **XGU - Fontaine Creek, UT**

Cause Location: Headwaters to mouth

City / County: Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

XGU was assessed as not supporting of the Aquatic Life Use in the 2010 cycle due to a pH exceedance rate of 6/12 at 5AXGU000.35, which is located at frontage road F-128.

During the 2016 cycle, the segment remained impaired due to a pH exceedance rate of 9/11 at 5AXGU000.35.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K11R_XGU01A10 / XGU - Fontaine Creek, UT / Headwater to mouth at Fontaine Creek	5C	pH	2010	L	1.82

XGU - Fontaine Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.82**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K12R-01-BAC** **Fontaine Creek**

Cause Location: From the Route 301 bridge to its mouth at the Meherrin River. Nested within segment VAP-K11R-03.

City / County: Greensville Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In 2002 the segment of Fontaine Creek from Mill Creek to the Meherrin River was assessed as not supporting of the Recreation Use based on fecal coliform exceedances at the Route 625 bridge (5AFON006.07). During the year 2006 cycle, the segment was amended from the Route 301 bridge to the Meherrin River and E. coli was added as an impairment.

During the 2008 cycle, the segment remained impaired for bacteria due to E. coli exceedances and the impairment converted to E. coli. The violation rates during the 2010 cycle were 3/8 at 5AFON001.46 and 4/23 at 5AFON006.07.

The Fontaine Creek Bacterial TMDL was developed during the 2012 cycle and was approved by the EPA on 1/13/2011 and by the SWCB on 8/4/2011. The impairment is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K11R_FON04A00 / Fontaine Creek (aka Fountains Creek) / Route 301 bridge to the Meherrin River in K12	4A	Escherichia coli	2006	L	14.48

Fontaine Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.48**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

Cause Group Code: **K13R-01-BAC** **Tarrara Creek**

Cause Location: This cause encompasses the entirety of Tarrara Creek located northeast of Boykins.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Recreation Use is impaired based on the E.coli bacteria data exceeds the swimming criteria indicator with 9 violates/ 34 obs at Station 5ATRR002.50. A TMDL was established for E. Coli on 9/28/2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K13R_TRR01A00 / Tarrara Creek / Located northeast of Boykins. All of Tarrara Creek. Flat, marshy with low flow swamp characteristics.	4A	Escherichia coli	2008	L	14.49

Tarrara Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.49**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K13R-04-BAC** **Flat Swamp**

Cause Location: This cause encompasses the area downstream of the confluence of Bellyache Swamp and Frank's Branch extending downstream to its confluence with Tarrara Creek.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Impairment is retained for Recreational Use based on Fecal Coliform data (3 viol / 11 obs). Recreation Use was first listed as impaired in 2004 for Fecal Coliform. A Bacteria TMDL for Flat Swamp was EPA approved 9/28/2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K13R_FTS01A04 / Flat Swamp / North of White Head Hall. Downstream of the confluence of Bellyache Swamp and Frank's Branch extending downstream to its confluence with Tarrara Creek.	4A	Escherichia coli	2016	L	8.48

Flat Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.48**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K14L-02-BAC** **Nottoway Falls Lake**

Cause Location: Nottoway Falls Lake

City / County: Lunenberg Co. Nottoway Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Station ID: 5ANTW143.06 (2007/2011-2012 Nottoway Falls Lake)

During the 2016 cycle the segment was impaired for E. coli - 2/14 exceedance Rate.

During the 2018 cycle there was no new data.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14L_NTW01L00 / Nottoway Falls Lake / Nottoway River	5A	Escherichia coli	2014	L	32.19

Nottoway Falls Lake **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:		**32.19**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K14L-02-DO** **Nottoway Falls Lake**

Cause Location: Nottoway Falls Lake

City / County: Lunenberg Co. Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

Station ID:
5ANTW143.06 (2007 Nottoway Falls Lake)
During the 2016 cycle the segment was impaired for DO - 7/39 exceedance Rate.
No new data for the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14L_NTW01L00 / Nottoway Falls Lake / Nottoway River	5A	Oxygen, Dissolved	2004	L	32.19

Nottoway Falls Lake **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:		**32.19**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K14L-02-HG** **Nottoway Falls Lake**

Cause Location: Nottoway Falls Lake

City / County: Lunenberg Co. Nottoway Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

Station ID:
5ANTW143.06 (2007 FT Sampling)
During the 2016 Fish tissue monitoring had results of Hg in 2 Species.
During the 2018 cycle it was no new data.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14L_NTW01L00 / Nottoway Falls Lake / Nottoway River	5A	Mercury in Fish Tissue	2010	L	32.19

Nottoway Falls Lake **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**32.19**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K14R-01-BAC** **Nottoway River**

Cause Location: Headwaters to the backwater of Nottoway Falls Lake

City / County: Lunenberg Co. Nottoway Co. Prince Edward Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In 1998, Nottoway River from its headwaters to The Falls was assessed as fully supporting but threatened of the Recreation Use due to fecal coliform exceedances at 5ANTW155.06. It was included on EPA's Attachment B "Waters to be Identified to Virginia for Listing Consideration During Development of Next List." It was downgraded to impaired in the 2002 cycle.

It converted to E. coli in the 2006 cycle due to an exceedance rate of 3/21 at 5ANTW155.06.

The Non-Tidal Chowan River Watershed Bacterial TMDL was approved by the EPA on 10/14/2005 and by the SWCB on 9/27/2006.

In the 2018 cycle, the E. coli exceedance rate is 8/36 at DEQ station 5ANTW155.06.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14R_NTW01A98 / Nottoway River / Headwaters to a point 5 miles upstream of Victoria's PWS intake 200 feet upstream of Route 49.	4A	Escherichia coli	2006	L	13.53
VAP-K14R_NTW02A98 / Nottoway River / From a point 5 miles upstream of Victoria's intake to the backwaters of Nottoway Falls Lake, excluding tributaries.	4A	Escherichia coli	2006	L	4.03

Nottoway River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**17.56**

Sources:

Livestock (Grazing or Feeding Operations)

Unspecified Domestic Waste

Wastes from Pets

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K14R-01-BEN** **Nottoway River**

Cause Location: Nottoway River from its confluence with Big Hounds Creek to its confluence with Little Nottoway River.

City / County: Lunenberg Co. Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2010 cycle, the Nottoway River from Big Hounds Creek to the Little Nottoway River was impaired of the Aquatic Life Use based on 2007 monitoring at freshwater probabilistic monitoring station 5ANTW134.52.

This section of the Nottoway River had very slow-moving water and limited habitat availability, mostly in the form of large woody debris. Sediment deposition in the river was relatively high and banks were marginally stable. The flow was low in the fall due to the drought.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14R_NTW01C98 / Nottoway River / Big Hounds Creek to a point 5 miles upstream of Fort Pickett's raw water intake.	5A	Benthic-Macroinvertebrate Bioassessments	2010	M	6.38
VAP-K14R_NTW01D04 / Nottoway River / Nottoway River from a point five miles upstream of Fort Pickett's raw water intake to the Little Nottoway River.	5A	Benthic-Macroinvertebrate Bioassessments	2010	M	0.89

Nottoway River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**7.27**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K14R-02-BAC** **Big Hounds Creek**

Cause Location: Big Hounds Creek from the Lunenburg Lake dam to its mouth on the Nottoway River.

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In the 1998 cycle, Big Hounds Creek was fully supporting but threatened of the Recreation Use due to a fecal coliform exceedance rate of 4/19 recorded at 5ABHC003.73. It was included on EPA's Attachment B "Waters to be Identified to Virginia for Listing Consideration During Development of Next List." It was downgraded to impaired in the 2002 cycle with a TMDL due date of 2010.

The impairment was addressed in the Non-Tidal Chowan River Bacterial TMDL report, which was approved by the EPA on 10/14/2005 and by the SWCB on 9/27/2006.

It was subsequently shortened to end at the Lunenburg Lake dam.

In the 2014 cycle, the exceedance rate at 5ABHC003.73 was 2/12. Level II citizen monitoring was as follows:
6/34 at 5A-BHC-LUN01-SSWCD
3/36 at 5A-BHC-LUN02-SSWCD
4/36 at 5A-BHC-LUN03-SSWCD

In the 2018 cycle, no additional monitoring has been conducted; therefore, the segment remains impaired (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14R_BHC01B98 / Big Hounds Creek / From Lunenburg Lake dam to the Nottoway River.	4A	Escherichia coli	2006	L	10.34

Big Hounds Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.34**

Sources:

- Livestock (Grazing or Feeding Operations)
- Municipal Point Source Discharges
- Unspecified Domestic Waste
- Wastes from Pets
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K14R-03-BAC** **Modest Creek**

Cause Location: Modest Creek Reservoir to the mouth at the Nottoway River

City / County: Lunenberg Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2018 cycle, Modest Creek below Modest Creek Reservoir was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5AMDT001.20.

The stream is located within the study area for Nottoway River bacterial TMDL, which was part of the Non-Tidal Chowan River Watershed TMDL report. The report was approved by the EPA on 10/14/2005 and by the SWCB on 9/27/2006. The impairment is proposed for nesting (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14R_MDT01C06 / Modest Creek / Modest Creek from Modest Creek Reservoir to its mouth at the Nottoway River.	4A	Escherichia coli	2018	L	4.86

Modest Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.86**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K15L-01-HG** **Nottoway Pond**

Cause Location: Nottoway Pond

City / County: Nottoway Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

Station ID:
5ALZT000.12 (2007 FT Sampling)
Hg 2 Species

No new data during the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K15L_LZT01L00 / Nottoway Pond / Lazaretto Creek	5A	Mercury in Fish Tissue	2010	L	50.70

Nottoway Pond **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**50.70**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K15R-01-BAC** **Little Nottoway River**

Cause Location: Little Nottoway River from its confluence with Lazaretto Creek to its mouth on the Nottoway River.

City / County: Nottoway Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In the 1998 cycle, the Little Nottoway River below Lazaretto Creek was assessed as fully supporting but threatened for the Recreation Use due to a fecal coliform exceedance rate of 4/20 at 5ALNT004.68. It was included on EPA's Attachment B, the "Waters to be Identified to Virginia for Listing Consideration During Development of Next List." It was downgraded to impaired in the 2002 cycle.

The impairment converted to E. coli in the 2006 cycle.

The TMDL was addressed in the Non-Tidal Chowan River Watershed Bacterial TMDL report, which was approved by the EPA on 10/14/2005 and by the SWCB on 9/27/2006.

In the 2016 cycle, the exceedance rate at upstream station 5ALNT009.80 was also impaired (3/12.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K15R_LNT01A00 / Little Nottoway River / From Lazaretto Creek to a point 5 miles upstream of Fort Pickett's raw water intake.	4A	Escherichia coli	2006	L	9.08
VAP-K15R_LNT02A04 / Little Nottoway River / Little Nottoway River from a point 5 miles upstream from Fort Pickett's raw water intake to its confluence with Nottoway River.	4A	Escherichia coli	2006	L	0.83

Little Nottoway River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.91**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K15R-02-BAC** **Carys Creek**

Cause Location: Carys Creek from its headwaters to the mouth

City / County: Nottoway Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

NESTED 2010: 24384, 10/14/2005

During the 2006 cycle, Carys Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5ACRY001.10.

Carys Creek is located within the study area for the Little Nottoway Bacterial TMDL, which was addressed as part of the Non-Tidal Chowan River Watershed Bacterial TMDL report. The TMDL was approved by the EPA on 10/14/2005 and by the SWCB on 9/27/2006. The impairment is considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K15R_CRY01A06 / Carys Creek / Carys Creek from its headwaters to the mouth	4A	Escherichia coli	2006	L	6.34

Carys Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.34**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K15R-03-BAC** **Lazaretto Creek**

Cause Location: Lazaretto Creek from its headwaters to the backwater of Crystal Lake.

City / County: Nottoway Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

NESTED 2010: 24384, 10/14/2005

During the 2010 cycle, Lazaretto Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at station 5ALZT001.39.

The stream is located within the study area for the Little Nottoway Bacterial TMDL, which was addressed as part of the Non-Tidal Chowan River Watershed Bacterial TMDL report. The TMDL was approved by the EPA on 10/14/2005 and by the SWCB on 9/27/2006. The impairment is considered nested (Category 4A.)

The exceedance rate was 2/12 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K15R_LZT01A10 / Lazaretto Creek / Lazaretto Creek from a point five miles upstream of the Crewe WTP intake to the backwater of Crystal Lake.	4A	Escherichia coli	2010	L	3.91
VAP-K15R_LZT01B18 / Lazaretto Creek / Lazaretto Creek from its headwaters to a point five miles upstream of the Crewe WTP intake.	4A	Escherichia coli	2010	L	1.06

Lazaretto Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.97**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K15R-04-BEN** **Mallorys Creek**

Cause Location: Mallorys Creek from its headwaters to the mouth

City / County: Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2014 cycle, Mallorys Creek was impaired of the Aquatic Life Use based on 2012 freshwater probabilistic monitoring at 5AMLL000.03. Sediment metrics scored moderate to low with the presence of beaver activity and filamentous algae.

Additional monitoring occurred in 2014 at station 5AMLL001.27. This also indicated impairment. This is a small stream with eroded clay banks and excessive sedimentation. There is cattle access downstream of the bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K15R_MLL01A06 / Mallorys Creek / Mallorys Creek from its headwaters to the mouth	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	7.11

Mallorys Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**7.11**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K15R-05-BAC** **Whetstone Creek**

Cause Location: Whetstone Creek from its headwaters to its mouth on the Little Nottoway River.

City / County: Nottoway Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

NESTED 2014: 24384, 10/14/2005

During the 2014 cycle, Whetstone Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/11 at station 5AWSN000.48.

The stream is located within the study area for the Little Nottoway Bacterial TMDL, which was addressed as part of the Non-Tidal Chowan River Watershed Bacterial TMDL report. The TMDL was approved by the EPA on 10/14/2005 and by the SWCB on 9/27/2006. The impairment is considered nested (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K15R_WSN01A08 / Whetstone Creek / Whetstone Creek from its headwaters to its mouth on the Little Nottoway River	4A	Escherichia coli	2014	L	8.41

Whetstone Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.41**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K15R-06-BEN** **Little Nottoway River**

Cause Location: Little Nottoway River from its confluence with Lazaretto Creek to 5 miles above the Town of Blackstone's raw water intake.

City / County: Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2018 cycle, this segment of the Little Nottoway River was impaired of the Aquatic Life Use due to a poor benthic community during 2013 monitoring at 5ALNT009.80, which is located at the Route 625 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K15R_LNT01A00 / Little Nottoway River / From Lazaretto Creek to a point 5 miles upstream of Fort Pickett's raw water intake.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	9.08

Little Nottoway River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.08**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K16L-01-DO** **Fort Pickett Reservoir**

Cause Location: Fort Pickett Reservoir

City / County: Brunswick Co. Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

During the 2018 cycle the segment became impaired for DO at station 5ANTW127.14 with an exceedance rate of 5/46.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16L_NTW01L04 / Fort Pickett Reservoir / Fort Pickett Reservoir	5A	Oxygen, Dissolved	2018	L	318.95

Fort Pickett Reservoir **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:		**318.95**	

Sources:

Natural Sources

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K16L-01-TP** **Fort Pickett Reservoir**

Cause Location: Fort Pickett Reservoir

City / County: Brunswick Co. Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Phosphorus (Total) / 5A

Station IDs:
5ANTW127.14 (Lake Station)
During the 2016 cycle the Lake was treated with algaecides and was impaired for Total Phosphorus - 2/3 exceedance Rate (Median calculated from 3 sample years)

During the 2018 cycle the segment remained impaired for TP with 1/2 exceedances.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16L_NTW01L04 / Fort Pickett Reservoir / Fort Pickett Reservoir	5A	Phosphorus (Total)	2012	L	318.95

Fort Pickett Reservoir **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Phosphorus (Total) - Total Impaired Size by Water Type:		**318.95**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K16R-01-BEN** **XBL - Hurricane Branch, UT**

Cause Location: Hurricane Branch, UT from the Town of Blackstone STP to its mouth on Hurricane Branch.

City / County: Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

Hurricane Branch below the Town of Blackstone Municipal STP was initially impaired in the 1994 cycle based on benthic monitoring gat 5AXBL000.80 in comparison to reference station 5AXBL001.18, which is located upstream of the discharge.

The TMDL was approved by the EPA on 9/30/2004 and by the SWCB on 3/15/2005.

Additional monitoring in 2008 and 2010-2012 confirmed the impairment.

Note: The impairment was extended upstream to the headwaters in the 2008 cycle based on an impaired community at 5AXBL000.80. This section was considered nested; however, it was mistakenly included in the same fact sheet. The impairment will remain nested in the 2018 cycle, but the fact sheets will be separated (see K16R-03-BEN).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16R_XBL01A94 / Hurricane Branch, Unnamed Tributary / From Blackstone STP discharge to mouth at Hurricane Branch.	4A	Benthic-Macroinvertebrate Bioassessments	1994	L	1.07

XBL - Hurricane Branch, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.07**

Sources:

Non-Point Source	Unspecified Urban Stormwater

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K16R-02-BAC** **Beaver Pond Creek**

Cause Location: Beaver Pond Creek from its headwaters to its mouth on the Nottoway River

City / County: Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Beaverpond Creek was assessed as fully supporting but threatened for the Recreation Use in the 1998 cycle to a fecal coliform exceedance rate of 6/12 at 5ABPC000.12. It was included on EPA's Attachment B list - "Waters Identified to Virginia for Listing Consideration During Development of Next List." It wad downgraded in the 2002 cycle with a TMDL due date of 2010.

The impairment converted to E. coli in the 2006 cycle due to an exceedance rate of 4/12.

The TMDL for Beaver Pond Creek was included in the Non-Tidal Chowan River Watershed Bacterial TMDL, which was approved by the EPA on 10/15/2005 and by the SWCB on 9/27/2006.

The exceedance rate was 13/24 in the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16R_BPC01A00 / Beaver Pond Creek / Beaver Pond Creek from its headwaters to its mouth on the Nottoway River	4A	Escherichia coli	2004	L	7.43

Beaver Pond Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.43**

Sources:

Livestock (Grazing or Feeding Operations)	Unspecified Domestic Waste	Wastes from Pets	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K16R-03-BEN** **XBL - Hurricane Branch, UT**

Cause Location: Hurricane Branch, UT from its headwaters to the Town of Blackstone outfall

City / County: Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

Hurricane Branch below the Town of Blackstone Municipal STP was initially impaired in the 1994 cycle based on benthic monitoring gat 5AXBL000.80 in comparison to reference station 5AXBL001.18, which is located upstream of the discharge. The TMDL was approved by the EPA on 9/30/2004 and by the SWCB on 3/15/2005.

The impairment was extended upstream to the headwaters in the 2008 cycle based on an impaired community at 5AXBL000.80 during monitoring in 2008 and 2010-2012. This section is considered nested; however, it was mistakenly included in the same fact sheet. The impairment will remain nested in the 2018 cycle, but the fact sheets will be separated.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16R_XBL02A02 / Hurricane Branch, Unnamed Tributary / unnamed tributary of Hurricane Branch from its headwaters to the Town of Blackstone STP outfall.	An 4A	Benthic-Macroinvertebrate Bioassessments	2008	L	2.10

XBL - Hurricane Branch, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.10**

Sources:

Non-Point Source	Unspecified Urban Stormwater

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K16R-06-BAC** **Tommeheton Creek**

Cause Location: Tommeheton Creek from its headwaters to the backwaters of Tommeheton Lake.

City / County: Brunswick Co. Dinwiddie Co. Lunenberg Co. Nottoway Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, upper Tommeheton Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5ATMT006.63.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16R_TMT01A10 / Tommeheton Creek / Tommeheton Creek from its headwaters to the backwaters of Tommeheton Lake.	5A	Escherichia coli	2016	L	7.84

Tommeheton Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.84**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K16R-06-DO** **Tommeheton Creek**

Cause Location: Tommeheton Creek from its headwaters to the backwaters of Tommeheton Lake.

City / County: Brunswick Co. Dinwiddie Co. Lunenberg Co. Nottoway Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, upper Tommeheton Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/12 at 5ATMT006.63.

The exceedance rate was 3/12 in the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16R_TMT01A10 / Tommeheton Creek / Tommeheton Creek from its headwaters to the backwaters of Tommeheton Lake.	5C	Oxygen, Dissolved	2010	M	7.84

Tommeheton Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**7.84**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K16R-07-BEN** **Seay Creek**

Cause Location: Seay Creek from its headwaters to it mouth on Crooked Creek.

City / County: Lunenberg Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2014 cycle, Seay Creek was impaired of the Aquatic Life Use based on benthic monitoring at 5A5ASYC003.90 in 2012. Additional monitoring occurred in 2013.

Seay Creek and its benthic community is limited by available habitat. Hardpan clay is dominant and banks show signs of frequent scouring events. Algae and brown floc observed in slower reached of the stream, indicating a potential for nutrient enrichment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16R_SYC01A14 / Seay Creek / From its headwaters to a point 5 miles above Fort Pickett's raw water intake.	5A	Benthic-Macroinvertebrate Bioassessments	2014	M	6.99
VAP-K16R_SYC02B14 / Seay Creek / Seay Creek from a point 5 miles above Fort Pickett's raw water intake to its mouth on Crooked Creek	5A	Benthic-Macroinvertebrate Bioassessments	2014	M	0.51

Seay Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**7.50**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-01-BAC** **Nottoway River**

Cause Location: The Nottoway River from Turkey Egg Creek to Sturgeon Creek.

City / County: Brunswick Co. Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2010 cycle, the Nottoway River from Turkey Egg Creek to Sturgeon Creek was assessed as not supporting of the Recreation Use due to E. coli exceedances at the Route 1 bridge (5ANTW109.02). The exceedance rate was 7/36 during the 2014 cycle.

During the 2016 and 2018 cycles, the segment remained impaired due to exceedance rates of 3/12 at station 5ANTW0113.13 and 9/41 at 5ANTW109.02.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_NTW01A00 / Nottoway River / Turkey Egg Creek to Sturgeon Creek	5A	Escherichia coli	2010	H, 2yr	9.99

Nottoway River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.99**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-02-BAC** **Waqua Creek**

Cause Location: Waqua Creek - headwaters to the Masons Mill Pond dam.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Waqua Creek from its headwaters to the Route 46 bridge was initially assessed as not supporting of the Recreation Use goal during the 2002 cycle. In 2004, the impairment was based on fecal coliform exceedances at 5AWAQ020.52 (Route 617) and at 5AWAQ022.17 (private road). These stations were confined animal feeding operation (CAFO) special study stations.

Additional monitoring was conducted during the 2012 cycle. The impairment was confirmed due to an E. coli violation rate of 3/12 at 5AWAQ020.52 and the impairment was converted to E. coli.

In the 2016 cycle, Waqua Creek from Route 46 to one mile downstream was not supporting for the Recreation use due to an E.coli violation rate of 2/12 (2016 fact sheet K16R-07-BAC). The impairment was merged with the existing upstream impairment during the 2018 cycle and was extended downstream to Masons Mill Pond.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_WAQ01B00 / Waqua Creek / Headwaters to Masons Mill Pond.	5A	Escherichia coli	2012	H, 2yr	9.61

Waqua Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.61**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-03-BAC** **Waqua Creek**

Cause Location: Waqua Creek from the confluence with Great Branch to the mouth

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, Waqua Creek from Great Branch to the mouth was impaired for the Recreation Use due to an E.coli violation rate of 2/12 at 5AWAQ001.40.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_WAQ03A16 / Waqua Creek / Confluence of Great Branch to the mouth at the Nottoway River.	5A	Escherichia coli	2016	L	5.59

Waqua Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.59**

Sources:

Agriculture Non-Point Source Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-04-BAC** **Great Creek**

Cause Location: Great Creek from the headwaters to the mouth

City / County: Brunswick Co. Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, Great Creek was impaired of the Recreation Use due to exceedances of E.coli. The exceedance rate was 7/12 at 5AGRC002.46.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_GRC01A16 / Great Creek / From the headwaters to the mouth at the Nottoway River	5A	Escherichia coli	2016	L	5.45

Great Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.45**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-05-BAC** **Reedy Creek**

Cause Location: Reedy Creek from the headwaters to the mouth

City / County: Brunswick Co. Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, Reedy Creek was assessed as not supporting the Recreation use due to an E.coli exceedance rate of 10/24 at 5ARYC002.31.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_RYC01A16 / Reedy Creek / From its headwaters to the mouth at the Nottoway River	5A	Escherichia coli	2016	L	6.02

Reedy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.02**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-05-DO** **Reedy Creek**

Cause Location: Reedy Creek from the headwaters to the mouth

City / County: Brunswick Co. Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2016 cycle, Reedy Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/25 at 5ARYC002.31.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_RYC01A16 / Reedy Creek / From its headwaters to the mouth at the Nottoway River	5C	Oxygen, Dissolved	2016	L	6.02

Reedy Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**6.02**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-06-BAC** **Turkey Egg Creek**

Cause Location: Turkey Egg Creek from the headwaters to the mouth

City / County: Brunswick Co. Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, Turkey Egg Creek was impaired of the Recreation use due to exceedances of E.coli at 5ATEG001.77. The exceedance rate was 6/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_TEG01A16 / Turkey Egg Creek / From its headwaters to the mouth at the Nottoway River	5A	Escherichia coli	2016	L	5.64

Turkey Egg Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.64**

Sources:

Non-Point Source Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-07-DO** **Hickory Run**

Cause Location: Hickory Run from its headwaters to its mouth.

City / County: Brunswick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2016 cycle, Hickory Run was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/12 at station 5AHCK000.96.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_HCK01A16 / Hickory Run / From its headwaters to its mouth	5C	Oxygen, Dissolved	2016	L	4.94

Hickory Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**4.94**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K17R-07-PH** **Hickory Run**

Cause Location: Hickory Run from its headwaters to its mouth.

City / County: Brunswick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2016 cycle, Hickory Run was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/12 at station 5AHCK000.96.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K17R_HCK01A16 / Hickory Run / From its headwaters to its mouth	5C	pH	2016	L	4.94

Hickory Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.94**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K18R-01-DO** **Sturgeon Creek**

Cause Location: The mainstem of Sturgeon Creek from its headwaters downstream to the confluence with Lloyds Run.

City / County: Brunswick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

The dissolved oxygen violation rate at station 5ASTG013.22, which is located at the Route 1 bridge, was 2/12 during the 2014 cycle. Therefore, the segment is considered impaired of the Aquatic Life Use.

No new data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K18R_STG01B14 / Sturgeon Creek / Headwaters to Lloyds Run.	5C	Oxygen, Dissolved	2014	L	12.96

Sturgeon Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**12.96**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-01-BAC** **Masons Branch**

Cause Location: Masons Branch from its headwaters to its mouth at Indian Creek.

City / County: Brunswick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2012 cycle, Masons Branch was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/17 at 5AMSN001.62, which is located at the Route 633 bridge.

During the 2016 cycle, the segment remained impaired due to an E.coli exceedance rate of 2/11 at station 5AMSN003.24. Monitoring at the original listing station, 5AMSN001.62, was acceptable (0/10.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_MSN01A10 / Masons Branch / Headwaters to mouth at Indian Creek	5A	Escherichia coli	2012	L	4.89

Masons Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.89**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-03-BAC** **Buckskin Creek**

Cause Location: Buckskin Creek from its headwaters to its mouth at the Nottoway River.

City / County: Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Buckskin Creek was previously assessed as not supporting the Recreation Use goal based on a fecal coliform violations at the Route 609 bridge (5ABSK004.32).

Additional monitoring was conducted during the 2010 cycle. The impairment was confirmed and converted to E. coli due to a violation rate of 2/10. During the 2012 cycle, the violation rates were as follows:

2/12 at 5ABSK000.60
5/22 at 5ABSK004.32
3/12 at 5ABSK006.52
4/12 at 5ABSK007.40
2/12 at 5ABSK008.75
4/11 at 5ABSK011.17

Additional sampling occurred in the 2016 cycle. Data indicated impairment at all monitored stations.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_BSK01A00 / Buckskin Creek / Headwaters to mouth, excluding segment downstream of XHW.	5A	Escherichia coli	2010	L	9.94
VAP-K19R_BSK01B12 / Buckskin Creek / Confluence with XHW to a downstream confluence	5A	Escherichia coli	2010	L	1.96

Buckskin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.90**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-03-DO** **Buckskin Creek**

Cause Location: Buckskin Creek from the confluence with XHW to the second downstream tributary.

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, the portion of Buckskin Creek immediately downstream of tributary XHW was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/12 at 5ABSK008.75, which is located at Rt. 692.

During the 2016 cycle, the segment was extended slightly further downstream to include station 5ABSK007.40. Both stations are impaired for the Aquatic Life Use due to DO violations with exceedance rates of 3/24 at station 5ABSK007.40 and 9/24 at station 5ABSK008.75.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_BSK01B12 / Buckskin Creek / Confluence with XHW to a downstream confluence	5C	Oxygen, Dissolved	2012	L	1.96

Buckskin Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.96**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-04-HG** **Nottoway River and Tributaries**

Cause Location: The Nottoway River from the confluence with the Blackwater River at the Virginia-North Carolina state line upstream to State Route 619 near Purdy, including its tributaries Assamoosick Swamp, Three Creek up to I-95, Rowanty Creek and tributaries, Hatcher Run to I-85, and Arthur Swamp to I-85.

City / County: Dinwiddie Co. Emporia City Greensville Co. Prince George Co. Southampton Co. Sussex Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

During the 2008 cycle, the Nottoway River from the confluence with the Blackwater River at the Virginia-North Carolina state line upstream to State Route 619 near Purdy, including its tributary Assamoosick Swamp, was considered impaired of the Fish Consumption Use due to a VDH fish consumption advisory for mercury. Three Creek up to I-95, Rowanty Creek and its tributaries, Hatcher Run up to I-85, and Arthur Swamp up to I-85 were added to the advisory during the 2010 cycle. No more than two meals/mouth of largemouth bass, smallmouth bass, bowfin, redhorse sucker species, longnose gar, channel catfish, chain pickerel, or sunfish species are recommended.

The advisory was based on exceedances of TSVs and TVs at several DEQ fish tissue monitoring stations, including 5ANTW091.70, 5ANTW075.48, 5ANTW077.95, 5ANTW045.45, 5AASM013.36, 5AROW002.41, 5AATH006.56, and 5AHRA004.16.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_NTW01B00 / Nottoway River / Town of Jarrett intake to Stony Creek	5A	Mercury in Fish Tissue	2008	L	13.90
VAP-K19R_NTW01C08 / Nottoway River / Rt. 619 near Purdy to the Town of Jarrett PWS Intake	5A	Mercury in Fish Tissue	2008	L	4.43
VAP-K23R_ATH01A08 / Arthur Swamp / I-85 bridge to mouth	5A	Mercury in Fish Tissue	2010	L	8.38
VAP-K23R_HRA01A04 / Hatcher Run / Hatcher Run from rivermile 19.27 (I-85) to the pond below Rt. 627.	5A	Mercury in Fish Tissue	2010	L	3.89
VAP-K23R_HRA01B10 / Hatcher Run / Pond at Rt. 627 to mouth at Rowanty Creek	5A	Mercury in Fish Tissue	2010	L	16.22
VAP-K23R_NTW02B00 / Nottoway River / Stony Creek to Nebletts Mill Run.	5A	Mercury in Fish Tissue	2008	L	16.66
State Scenic River (9 VAC 25-260-320)					
VAP-K23R_ROW03B10 / Rowanty Creek / Rowanty Creek downstream of Gravelly Run.	5A	Mercury in Fish Tissue	2010	L	14.07
VAP-K24R_NTW04B00 / Nottoway River / Nebletts Mill Run downstream to Three Creek	5A	Mercury in Fish Tissue	2008	L	19.17
State Scenic River					
Merged in the 2018 cycle					
VAP-K26R_TRE01B98 / Three Creek / I-95 to Otterdam Swamp.	5A	Mercury in Fish Tissue	2010	L	5.10
VAP-K26R_TRE02B98 / Three Creek / Otterdam Swamp to Browns Branch.	5A	Mercury in Fish Tissue	2010	L	5.43
VAP-K29R_ASM01A98 / Assamoosick Swamp / Headwaters to Route 607 bridge.	5A	Mercury in Fish Tissue	2008	L	15.41
VAP-K29R_ASM02A02 / Assamoosick Swamp / Start of PWS at	5A	Mercury in Fish Tissue	2008	L	2.46

river mile 2.5 to mouth.					
VAP-K29R_ASM02A98 / Assamoosick Swamp / Route 607 bridge to river mile 2.5.	5A	Mercury in Fish Tissue	2008	L	5.59
VAT-K27R_TRE01A00 / Three Creek - Upper / From confluence of Chatman Branch (RM 19.26) downstream to above Southampton Correctional Farm at Rt 308 crossing (RM 10.4).	5A	Mercury in Fish Tissue	2010	L	9.17
VAT-K27R_TRE02A00 / Three Creek - Lower / Lower portion of Three Creek. From area of Southampton Correctional Center at Rt 308 crossing (RM 10.4) downstream to confluence with Nottoway River (RM 0.00).	5A	Mercury in Fish Tissue	2010	L	10.67
VAT-K28R_NTW01A00 / Nottoway River - Upper / From upstream intersection with watershed boundary (near Three Cr. confluence, RM 36.50) downstream to 5 miles upstream of Courtland (RM 32.00, end of PWS area - downstream of confluence with Buckhorn Swamp at Vicks Isl.).	5A	Mercury in Fish Tissue	2008	L	4.44
VAT-K28R_NTW02A00 / Nottoway River - Middle (PWS area) / Middle portion of Nottoway River, 5 miles above Norfolk's intake @ Courtland (RM 32.0) at Vicks Island downstream to Norfolk and Western RR crossing @ Courtland (RM 27.00). PWS due to Norfolk raw water intake upstream of Courtland.	5A	Mercury in Fish Tissue	2008	L	5.53
VAT-K28R_NTW03A00 / Nottoway River - Lower / Lower portion of Nottoway River, beginning near Courtland (Norfolk and Western RR crossing, above Rt 58) downstream to end of watershed K28 (NW of Delaware).	5A	Mercury in Fish Tissue	2008	L	10.06
VAT-K30R_NTW01A08 / Nottoway River - Upper / Upper portion of Nottoway River in watershed K30. Segment begins at upstream intersection with watershed boundary (NW of Delaware) downstream below Route 671.	5A	Mercury in Fish Tissue	2008	L	0.45
VAT-K30R_NTW02A08 / Nottoway River -Lower Middle / Middle portion of Nottoway River in watershed K30. Segment starts below Route 671 downstream just below Point Beach.	5A	Mercury in Fish Tissue	2008	L	10.96
VAT-K30R_NTW02B14 / Nottoway River - Lower / Lower portion of Nottoway River in watershed K30. Segment starts below Mill Creek near Point Beach to VA/NC state line.	5A	Mercury in Fish Tissue	2008	L	4.54

Nottoway River and Tributaries **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**186.53**

Sources:

Atmospheric Deposition - Toxics	Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-05-BEN** **XEJ - Nottoway River, UT**

Cause Location: An unnamed tributary (XEJ) of the Nottoway River in its entirety.

City / County: Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle, the tributary was assessed as impaired of the Aquatic Life Use due to an impaired benthic community at station 5AXEJ001.73 in 2001.

Additional benthic monitoring occurred in 2013; however, the results were inconclusive (insufficient information to assess).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_XEJ01A04 / XEJ - UT to Nottoway River / Headwaters to mouth at Nottoway River	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	2.88

XEJ - Nottoway River, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.88**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-06-BEN** **Nottoway River**

Cause Location: The Nottoway River from Buckskin Creek downstream to the confluence with an unnamed tributary located near the Dinwiddie/Sussex Co. line

City / County: Brunswick Co. Dinwiddie Co. Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment of the Nottoway River was assessed as impaired of the Aquatic Life Use during the 2008 cycle due to benthic monitoring in fall 2003 at freshwater probabilistic station 5ANTW097.27.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_NTW02B08 / Nottoway River / The Nottoway River from Buckskin Creek to an UT at approx the Dinwiddie/Sussex Co. line	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	1.04

Nottoway River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.04**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-07-DO** **XAD - Buckskin Creek, UT**

Cause Location: Tributary XAD from its headwaters to its mouth at Buckskin Creek.

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, the tributary XAD was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/12 at 5AXAD001.59, which is located at the Rt. 1 bridge.

During the 2016 cycle the segment remained impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 5/24 at 5AXAD001.59.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_XAD01A12 / XAD - Buckskin Creek, UT / Headwaters to mouth at Buckskin Creek.	5C	Oxygen, Dissolved	2012	L	2.90

XAD - Buckskin Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.90**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-08-DO** **XHW - Buckskin Creek, UT**

Cause Location: Tributary XHW from its headwaters to its mouth at Buckskin Creek.

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, the tributary XHW was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 5/11 at 5AXHW000.38, which is located at the Rt. 692 bridge.

During the 2016 cycle, the segment remained impaired due to a dissolved oxygen exceedance rate of 5/19 at 5AXHW000.38.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_XHW01A12 / XHW - Buckskin Creek, UT / Headwaters to mouth	5C	Oxygen, Dissolved	2012	L	1.63

XHW - Buckskin Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.63**

Sources:

Dam or Impoundment	Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-09-BAC** **XHX - Buckskin Creek, UT**

Cause Location: Tributary XHX from its headwaters to its mouth at Buckskin Creek.

City / County: Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2012 cycle, the tributary XHX was impaired of the Recreation Use due to an E. coli exceedance rate of 2/9 at 5AXHX001.19, which is located at the Rt. 709 bridge.

During the 2016 cycle, the segment remained impaired due to an E. coli exceedance rate of 5/21 at 5AXHX001.19.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_XHX01A12 / XHX - Buckskin Creek, UT / Headwaters to mouth at Buckskin Creek	5A	Escherichia coli	2012	L	2.66

XHX - Buckskin Creek, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.66**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-10-BAC** **XHY - Buckskin Creek, UT**

Cause Location: Tributary XHY from its headwaters to its mouth at Buckskin Creek.

City / County: Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2012 cycle, the tributary XHY was impaired of the Recreation Use due to an E. coli exceedance rate of 3/11 at 5AXHY001.08, which is located south of Route 40.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_XHY01A12 / XHY - Buckskin Creek, UT / Headwaters to mouth at Buckskin Creek	5A	Escherichia coli	2012	L	1.61

XHY - Buckskin Creek, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.61**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K19R-11-BAC** **Moores Swamp**

Cause Location: Headwaters to mouth

City / County: Greensville Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, the segment of Moores Swamp from its headwaters to the start of PWS was impaired for the Recreation Use due to an E.coli impairment at station 5AMRS002.31 with an exceedance rate of 6/12.

The impairment was extended to the mouth in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_MRS01A08 / Moores Swamp / Headwaters to start of PWS	5A	Escherichia coli	2016	L	4.98
VAP-K19R_MRS01B10 / Moores Swamp / Start of PWS to mouth at Nottoway River	5A	Escherichia coli	2018	L	0.73

Moores Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.71**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K20R-01-DO** **White Oak Swamp**

Cause Location: The headwaters of White Oak Swamp downstream to its uppermost tributary

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4C

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 2002 cycle, the segment was assessed as partially supporting of the Aquatic Use because of pH exceedances (5ABTR002.80). The DO exceedance rate at this station was acceptable (3/38), but due to DO exceedances 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 impairment was continued in the 2004 cycle.

During the 2006 cycle, two Natural Conditions Assessment studies were performed. The results of the monitoring and study indicated that all creeks should be delisted except for:

Butterwood Creek (DO) from rivermile 14.59 to 4.65; recommended for Class VII
Cooks Branch (pH) from rivermile 1.08 to 0.00; recommended for Class VII
White Oak Swamp (DO/pH) at the headwaters; recommended for cat 4C

Butterwood Creek from river mile 4.65 (near Route 622) upstream to river mile 14.59 (near Route 643) was reclassified as Class VII swampwaters during the 2010 cycle. The segments remained Category 4C for dissolved oxygen until the swampwater WQS could be developed.

DO violations were documented in this water in 2002. It has since been formally re-classified as a swamp water (Class VII). Per Virginia's Water Quality Standards (9VAC25-260-50), numeric dissolved oxygen standards only apply to Class VII waters when there is sufficient evidence the narrative criterion is not protective of aquatic life uses. To date, this Class VII water has not exhibited a need for a site-specific DO criterion, so the DO impairments for Butterwood Creek and Cooks Branch have been removed.

The headwaters of White Oak Swamp will remain Category 4C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K20R_WOK02A06 / White Oak Swamp / The headwaters of White Oak Swamp downstream to its uppermost tributary	4C	Oxygen, Dissolved			2.20

White Oak Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.20**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K20R-01-PH** **White Oak Swamp**

Cause Location: Headwaters of White Oak Swamp

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 4C

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 2002 cycle, the segment was assessed as partially supporting of the Aquatic Use because of pH exceedances (5ABTR002.80). The DO exceedance rate at this station was acceptable (3/38), but due to DO exceedances 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.

During the 2006 cycle, two Natural Conditions Assessment studies were performed. The results of the monitoring and study indicated that all creeks should be delisted for pH except for Cooks Branch (pH) from rivermile 1.08 to 0.00 which was recommended for reclassification as a Class VII swampwater. and the headwaters of White Oak Swamp which was considered Category 4C.

During the 2010 cycle, Cooks Branch from river mile 1.08 to its mouth was reclassified as Class VII swampwater. The pH values at 5ACKS000.58 now met the Class VII WQS (0/22) and the segment was delisted. The White Oak Swamp segment remains Category 4C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K20R_WOK02A06 / White Oak Swamp / The headwaters of White Oak Swamp downstream to its uppermost tributary	4C	pH			2.20

White Oak Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.20**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K20R-02-BAC** **White Oak Swamp**

Cause Location: The lower portion of White Oak Swamp

City / County: Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2018 cycle, the segment of White Oak Swamp was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 5AWOK012.08.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K20R_WOK01A00 / White Oak Swamp / Uppermost tributary to mouth	5A	Escherichia coli	2018	L	14.83

White Oak Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.83**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K20R-02-DO** **White Oak Swamp**

Cause Location: The lower portion of White Oak Swamp

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

The segment of White Oak Swamp was impaired of the Aquatic Life Use in the 2018 cycle due to a dissolved oxygen exceedance rate of 3/24 at 5AWOK000.54.

Monitoring at 5AWOK006.54 and 5AWOK012.08 was acceptable with exceedance rates of 1/12 and 0/14, respectively.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K20R_WOK01A00 / White Oak Swamp / Uppermost tributary to mouth	5C	Oxygen, Dissolved	2018	L	14.83

White Oak Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**14.83**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K20R-02-PH** **White Oak Swamp**

Cause Location: The lower portion of White Oak Swamp

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

The segment of White Oak Swamp was impaired of the Aquatic Life Use in the 2018 cycle due to a pH exceedance rate of 2/14 at 5AWOK012.08.

Monitoring at 5AWOK000.54 and 5AWOK006.54 was acceptable with exceedance rates of 0/24 and 0/12, respectively.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K20R_WOK01A00 / White Oak Swamp / Uppermost tributary to mouth	5C	pH	2018	L	14.83

White Oak Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**14.83**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K21R-03-HG** **Stony Creek**

Cause Location: Stony Creek from Mortar Branch downstream to its mouth.

City / County: Dinwiddie Co. Sussex Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

During the 2010 cycle, Stony Creek from Mortar Branch to its mouth was assessed as not supporting of the Fish Consumption Use due to mercury exceedances in flier sunfish and spotted bass during DEQ's 2007 fish tissue sampling.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K21R_STO01B00 / Stony Creek / Mortar Branch to mouth	5A	Mercury in Fish Tissue	2010	L	2.60

Merged in the 2018 cycle.

Stony Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**2.60**

Sources:

Atmospheric Deposition - Toxics — Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K21R-05-BAC** **Mortar Branch**

Cause Location: Headwaters to mouth at Stony Creek

City / County: Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2014 cycle, Mortar Branch was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 4/11 at station 5AMTR001.65, which is located at the Route 626 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K21R_MTR01A14 / Mortar Branch / Headwaters to mouth at Stony Creek	5A	Escherichia coli	2014	H, 2yr	6.12

Mortar Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.12**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K21R-05-DO** **Mortar Branch**

Cause Location: Headwaters to mouth at Stony Creek

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle, Mortar Branch was assessed as impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/11 at station 5AMTR001.65, which is located at the Route 626 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K21R_MTR01A14 / Mortar Branch / Headwaters to mouth at Stony Creek	5C	Oxygen, Dissolved	2014	L	6.12

Mortar Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**6.12**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K21R-05-PH** **Mortar Branch**

Cause Location: Headwaters to mouth at Stony Creek

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2014 cycle, Mortar Branch was assessed as impaired of the Aquatic Life Use due to a pH exceedance rate of 5/11 at station 5AMTR001.65, which is located at the Route 626 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K21R_MTR01A14 / Mortar Branch / Headwaters to mouth at Stony Creek	5C	pH	2014	L	6.12

Mortar Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**6.12**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K21R-06-BAC** **Stony Creek**

Cause Location: Stony Creek from Mortar Branch downstream to its mouth.

City / County: Dinwiddie Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, the segment from Mortar Branch to Snake became impaired for the Recreation Use due to E.coli exceedances of 3/12 at 5ASTO06.99.

The impairment was expanded to the mouth in the 2018 cycle based on an E. coli exceedance rate of 4/36 at 5ASTO001.20.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K21R_STO01B00 / Stony Creek / Mortar Branch to mouth	5A	Escherichia coli	2016	L	2.60

Merged in the 2018 cycle.

Stony Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.60**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K21R-07-PH** **Chamberlains Bed**

Cause Location: Start of unnamed pond to the mouth at Stony Creek

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2016 cycle, the segment was impaired for the Aquatic Life Use due to a pH exceedance rate of 2/12 at 5ACBC000.58.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K21R_CBC01A16 / Chamberlains Bed / start of the pond to mouth at Stony Creek	5C	pH	2016	L	1.32

Chamberlains Bed **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.32**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K21R-08-DO** **Chamberlains Bed**

Cause Location: Headwaters to Wheelers Pond

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2016 cycle, the segment was impaired for the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/11 at 5ACBC005.79.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K21R_CBC03A16 / Chamberlains Bed / From the headwaters to Wheelers Pond	5C	Oxygen, Dissolved	2016	L	2.82

Chamberlains Bed **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.82**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K21R-08-PH** **Chamberlains Bed**

Cause Location: Headwaters to Wheelers Pond

City / County: Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2016 cycle, the segment was impaired for the Aquatic Life Use due to a pH exceedance rate of 3/11 at 5ACBC005.79.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K21R_CBC03A16 / Chamberlains Bed / From the headwaters to Wheelers Pond	5C	pH	2016	L	2.82

Chamberlains Bed **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.82**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K22R-03-BAC** **Sappony Creek**

Cause Location: Sappony Creek from UT at powerline downstream to Spiers Pond.

City / County: Dinwiddie Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Sappony Creek from the headwaters to Spiers Pond was assessed as impaired of the Recreation Use during the 2006 due to an E. coli violation rate of 3/12 at 5ASAP005.54. In the 2010 cycle, the impairment was shortened to begin at Mill Run Branch because the E. coli rate at 5ASAP013.69 was acceptable (1/20). The violation rate was 3/13 during the 2012 cycle; therefore, the segment was returned to its original length.

During the 2016 cycle, the segment was shortened and split to exclude the headwaters portion which was no longer impaired for E.coli (VAP-K22R-SAP01C16); the upper portion of Sappony Creek was partially delisted. The portion from the UT at the power line downstream to Spiers Pond remained impaired for Recreation Use due to an E.coli violation of 5/23 at station 5ASAP013.69. 5ASAP005.54 was fully supporting for all that it was monitored for.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K22R_SAP01A00 / Sappony Creek / UT at powerline to Spiers Pond.	5A	Escherichia coli	2006	L	11.86

Sappony Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.86**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K22R-04-BAC** **Sappony Creek**

Cause Location: Spiers Pond Dam to mouth at Stony Creek

City / County: Dinwiddie Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, the segment became impaired for the Recreation Use due to an E.coli exceedance rate of 4/23 at 5ASAP001.46.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K22R_SAP01B00 / Sappony Creek / Spiers Pond dam to mouth at Stony Creek	5A	Escherichia coli	2016	L	4.35

Sappony Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.35**

Sources:

Agriculture Non-Point Source Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K23R-01-BAC** **Arthur Swamp**

Cause Location: Arthur Swamp from its headwaters to its mouth

City / County: Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, Arthur Swamp from the I-85 bridge to its mouth was listed for Recreation Use due to E.coli exceedances (2/12).

The impairment was extended to its mouth in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_ATH01A08 / Arthur Swamp / I-85 bridge to mouth	5A	Escherichia coli	2016	L	8.38
VAP-K23R_ATH01B10 / Arthur Swamp / Headwaters to I-85 bridge	5A	Escherichia coli	2018	L	0.24

Arthur Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.62**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K23R-02-BAC** **Joseph Swamp**

Cause Location: The mainstem of Joseph Swamp.

City / County: Prince George Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2010 cycle, Joseph Swamp was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/9 at 5AJOE003.92, which is located at Rt. 602.

In the 2016 cycle, the exceedance rate at 5AJOE003.92 was 4/11. Monitoring at station 5AJOE007.38 was acceptable (1/12).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_JOE01A10 / Joseph Swamp / Headwaters to mouth	5A	Escherichia coli	2010	L	11.22

Joseph Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.22**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K23R-03-BAC** **XDV - Nebletts Mill Run, UT**

Cause Location: An unnamed tributary (XDV) of Nebletts Mill Run.

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Nebletts Run from the Millpond downstream to the mouth and Tributary XDV had been considered not supporting of the Recreation Use. During the 2006 cycle, the fecal coliform exceedance rate at 5ANBT001.26 was acceptable (2/19); therefore, Nebletts Mill Run was delisted. Tributary XDV continued to be impaired with a fecal coliform instantaneous exceedance rate of 10/17 and an E. coli exceedance rate of 2/2 at station 5AXDV000.46. The bacteria TMDL was due in 2016.

The impairment converted to E. coli during the 2008 cycle. The exceedance rate was 7/13 during the 2010 cycle. The TMDL was developed during the 2012 cycle and was approved by the EPA on 9/20/2010; therefore, the stream is Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_XDV01A02 / XDV - UT to Nebletts Mill Run / An unnamed tributary (XDV) of Nebletts Mill Run from its headwaters to its mouth.	4A	Escherichia coli	2006	L	1.78

XDV - Nebletts Mill Run, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.78**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K23R-04-BAC** **Jones Hole Swamp/Moores Swamp and all tributaries**

Cause Location: Lower Jones Hole Swamp/Moores Swamp and tributaries

City / County: Dinwiddie Co. Prince George Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2010 cycle, the Jones Hole Swamp watershed was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 5/22 at 5AJNH001.73, which is located at the Route 637 bridge.

The violation rate was 6/24 during the 2014 cycle.

During the 2016 cycle, the segment was split to partially delist the headwaters portion of Jones Hole Swamp (VAP-K23R_JNH01B16 and VAP-K23R_JNH01C16.) The lower portion remains impaired for the Recreation use due to E.coli exceedances:
5ACOB000.92 - 2/12
5AJNH001.73 - 11/24
5AJNH004.42 - 2/12

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_JNH01A98 / Jones Hole Swamp/Moores Swamp watershed / Lower Jones Hole Swamp / Moores Swamp and tributaries.	5A	Escherichia coli	2010	L	70.67

Jones Hole Swamp/Moores Swamp and all tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**70.67**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K23R-05-BAC** **Gosee Swamp and Tributaries**

Cause Location: Gosee Swamp/Indian Creek and all of its tributaries below rivermile 6.88

City / County: Prince George Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2014 cycle, lower Gosee Swamp was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5AGSE001.35, which is located at the Rt. 602 bridge.

No new data since 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_GSE01A98 / Gosee Swamp and tributaries / Gosee Swamp/Indian Swamp and all its tributaries below rivermile 6.88.	5A	Escherichia coli	2014	L	27.71

Gosee Swamp and Tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**27.71**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K23R-09-BAC** **Fox Branch**

Cause Location: Fox Branch mainstem

City / County: Dinwiddie Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2018 cycle, Fox Branch was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5AFXB001.27, which is located at the Route 667 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_FXB01A18 / Fox Branch / Headwaters to mouth at Rowanty Creek	5A	Escherichia coli	2018	L	3.48

Fox Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.48**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K23R-10-BAC** **Rowanty Creek**

Cause Location: Rowanty Creek mainstem downstream of Gravelly Run.

City / County: Dinwiddie Co. Prince George Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2012 cycle, Rowanty Creek from Little Cattail Creek to the mouth was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5AROW004.72, which is located at the Route 618 bridge. Continued monitoring was recommended to confirm the impairment because all other stations in the segment were acceptable.

Additional monitoring was conducted in the 2014 cycle at station 5AROW013.14, which is located at the Route 605 bridge. The exceedance rate was unacceptable (3/24); therefore, the segment was extended upstream to Gravelly Run.

During the 2016 cycle E.coli monitoring continued to be impaired:
5AROW002.41 - 4/12
5AROW004.72 - 8/24
5AROW008.64 - 0/12 (S)
5AROW013.14 - 2/12

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_ROW03B10 / Rowanty Creek / Rowanty Creek downstream of Gravelly Run.	5A	Escherichia coli	2012	L	14.07

Rowanty Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.07**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K24R-03-BAC** **Hunting Quarter Swamp**

Cause Location: The mainstem of Hunting Quarter Swamp.

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2018 cycle, Hunting Quarter Swamp was assessed as impaired of the Recreation Use due to an E. coli exceedance rates of 4/24 at station 5AHQS006.22 and 5/12 at station 5AHQS009.57.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K24R_HQS01A98 / Hunting Quarter Swamp / Headwaters to mouth	5A	Escherichia coli	2008	L	16.67

Hunting Quarter Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**16.67**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K24R-04-BAC** **Nottoway River**

Cause Location: Nottoway River from Nebletts Mill Run downstream to Three Creek

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, the Nottoway River from Nebletts Mill Run to Three Creek was impaired of the Recreation Use due to an E.coli exceedance rate of 3/12 at station 5ANTW052.83.

The impairment was extended upstream to Nebletts Mill Run in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K24R_NTW04B00 / Nottoway River / Nebletts Mill Run downstream to Three Creek	5A	Escherichia coli	2016	L	19.17

State Scenic River

Merged in the 2018 cycle

Nottoway River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**19.17**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K24R-05-BAC** **Thweatt Branch and Tributaries**

Cause Location: Thweatt Branch watershed

City / County: Southampton Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2016 cycle, Thweatt Branch and its tributaries was impaired for the Recreation Use due to an E.coli exceedance rate of 4/11 at station 5ATWT001.19.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K24R_TWT01A16 / Thweatt Branch Tributaries / Headwaters to the mouth	5A	Escherichia coli	2016	L	7.26

Thweatt Branch and Tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.26**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K25R-02-BAC** **Raccoon Creek**

Cause Location: The entire mainstem of Raccoon Creek.

City / County: Southampton Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Raccoon Creek 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 was due in 2010.

The TMDL was completed as part of the Chowan River Bacteria TMDL. The TMDL was approved by the EPA on 10/14/2005 and the segment is considered Category 4A.

During the 2008 cycle, the impairment converted to E. coli. However, an upstream station at 5ARCN012.80 had an acceptable exceedance rate (1/12.)

The exceedance rate at 5ARCN003.36 was 7/32 in the 2010 cycle.

During the 2016 cycle, the segment remained impaired for E.coli exceedances at station 5ARCN014.72 (2/12).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K25R_RCN01A02 / Raccoon Creek / The entire mainstem of Raccoon Creek.	4A	Escherichia coli	2008	L	19.90

Raccoon Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**19.90**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K26R-01-BAC** **Three Creek**

Cause Location: Three Creek from its start at the confluence of Cooks Branch and Tryall Creek downstream to Cattail Creek.

City / County: Greensville Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2018 cycle, upper Three Creek was impaired of the Recreation Use due to an E.coli exceedance rate of 2/12 at 5ATRE044.66, which is located at the Route 605 bridge.

The stream is located within the study area for the downstream Three Creek Bacterial TMDL (K26R-03-BAC), which was approved by the EPA on 9/28/2012 and by the SWCB on 3/25/2013. The impairment is proposed for nesting.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K26R_TRE01C18 / Three Creek / Start of Three Creek downstream to Cattail Creek	4A	Escherichia coli	2018	L	6.55

Three Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.55**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K26R-01-DO** **Three Creek**

Cause Location: Three Creek from its start at the confluence of Cooks Branch and Tryall Creek downstream to Cattail Creek.

City / County: Greensville Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

During the 2018 cycle, upper Three Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/12 at 5ATRE044.66, which is located at the Route 605 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K26R_TRE01C18 / Three Creek / Start of Three Creek downstream to Cattail Creek	5C	Oxygen, Dissolved	2018	L	6.55

Three Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**6.55**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K26R-02-BAC** **Three Creek**

Cause Location: From Otterdam Swamp downstream to Browns Branch.

City / County: Greensville Co. Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2006 cycle, Three Creek from Otterdam Swamp to Browns Branch was assessed as not supporting of the Recreation Use support goal based on E. coli exceedances at the Route 615 bridge (5ATRE022.05). The exceedance rate was 3/23 during the 2010 cycle.

The Three Creek TMDL was completed and was approved by the EPA on 9/28/2012 and by the SWCB on 3/25/2013. The AU is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K26R_TRE02B98 / Three Creek / Otterdam Swamp to Browns Branch.	4A	Escherichia coli	2006	L	5.43

Three Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.43**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K26R-04-BAC** **Maclins Creek**

Cause Location: Maclins Creek in its entirety.

City / County: Greensville Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2012 cycle, Maclins Creek was impaired of the Recreation Use due to an E.coli exceedance rate of 2/15 at 5AMCC000.08, which is located at the Route 610 bridge.

The stream is located within the study area for the Three Creek Bacterial TMDL, which was approved by the EPA on 9/28/2012 and by the SWCB on 3/25/2013. Maclins Creek is within the study watershed for K26R-02-BAC and the impairment is considered nested.

The E. coli exceedance rate was 6/12 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K26R_MCC01A00 / Maclins Creek / Headwaters to mouth at Three Creek	4A	Escherichia coli	2012	L	8.80

Maclins Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.80**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K27R-02-BAC** **Three Creek - Lower & Upper & UT to Angelico Cr**

Cause Location: This cause encompasses the area from the confluence of Chatman Branch (RM 20.95) downstream to the confluence with Nottoway River (RM 0.00), to include UT to Angelico Creek.

City / County: Southampton Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Recreational Use is impaired based on the E Coli data exceedance of the swimming criteria indicator at Stations 5ATRE008.48(11 violations / 35 observations) and 5ATRE016.02 (11 violations / 34 observations). 2018 nested new impairment at station 5AXEE001.44 with 3 viol / 11 obs. A Bacteria Total Maximum Daily Load was developed for Three Creek, Flat Swamp, Tarrara Creek, Mill Swamp, and Darden Mill Run in Southampton, Sussex, Greensville, Brunswick Counties and the City of Emporia, Virginia for E. Coli on 9/28/2012

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K27R_TRE01A00 / Three Creek - Upper / From confluence of Chatman Branch (RM 19.26) downstream to above Southampton Correctional Farm at Rt 308 crossing (RM 10.4).	4A	Escherichia coli	2006	L	9.17
VAT-K27R_TRE02A00 / Three Creek - Lower / Lower portion of Three Creek. From area of Southampton Correctional Center at Rt 308 crossing (RM 10.4) downstream to confluence with Nottoway River (RM 0.00).	4A	Escherichia coli	2002	L	10.67
VAT-K27R_XEE01A18 / Unnamed Tributary to Angelico Creek / Evaluated UT along Angelico Cr south of Route 658 crosses Pinopolis Rd (Rt 653).	4A	Escherichia coli	2018	L	4.06

Three Creek - Lower & Upper & UT to Angelico Cr **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**23.90**

Sources:

Non-Point Source | Source Unknown | Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K27R-03-BEN** **Applewhite Swamp**

Cause Location: This cause encompasses the area from the start of swamp (near Harrells Mill) downstream to confluence with Three Creek. Located south of Mason & northeast of Arringdale.

City / County: Southampton Co. Sussex Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use impairment is retained based on the Benthic population rating from the Benthic ProbMon-Benthic IM [MI:S&F-'01, S&F-'02]. No data within Assessment window. Impairment retained until new data collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K27R_APW01A04 / Applewhite Swamp / Located south of Mason & northeast of Arringdale. Segment extends from start of swamp (near Harrells Mill) downstream to confluence with Three Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	8.16

Applewhite Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**8.16**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K27R-05-BEN** **Three Creek - Upper**

Cause Location: This cause encompasses the area from the confluence of Chatman Branch (RM 19.26) downstream to above Southampton Correctional Farm at Rt. 308 crossing (RM 10.4).

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use impairment is retained from the 2004 Assessment based on benthic monitoring assessment which indicates impairment (MI in Fall-'04] based on data at DEQ (AQM & Bio) station @ 5ATRE016.02.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K27R_TRE01A00 / Three Creek - Upper / From confluence of Chatman Branch (RM 19.26) downstream to above Southampton Correctional Farm at Rt 308 crossing (RM 10.4).	5A	Benthic-Macroinvertebrate Bioassessments	2006	L	9.17

Three Creek - Upper **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.17**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-01-BAC** **Mill Swamp**

Cause Location: This cause encompasses the Main stem of Mill Swamp only, from headwaters downstream to the confluence with the Nottoway River. Tributary to Nottoway R, downstream of PWS. W of Delaware.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Recreation Use is impaired based on the E.coli data at Station 5AMSP000.16 with 3 viol / 11 obs. A TMDL was established for E. Coli for Three Creek, Flat Swamp, Tarrara Creek, Mill Swamp, and Darden Mill Run in Southampton, Sussex, Greensville, Brunswick Counties and the City of Emporia, Virginia on 9/28/2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_MSP01A06 / Mill Swamp / Tributary to Nottoway R, downstream of PWS. W of Delaware. Main stem Mill Swamp only, from headwaters downstream to the confluence with the Nottoway River.	4A	Escherichia coli	2006	L	10.49

Mill Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.49**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-01-DO** **Mill Swamp**

Cause Location: This cause encompasses the Main stem of Mill Swamp only, from headwaters downstream to the confluence with the Nottoway River. Tributary to Nottoway R, downstream of PWS. W of Delaware.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

Aquatic Life Use impairment is retained for DO from the 2016 IR with 4 viol/ 24 obs at Station 5AMSP000.16. 2018 IR data for DO is 1 viol / 12 obs. Violations for DO dropped outside of assessment window and no additional data was collected. Therefore additional data is needed to delist.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_MSP01A06 / Mill Swamp / Tributary to Nottoway R, downstream of PWS. W of Delaware. Main stem Mill Swamp only, from headwaters downstream to the confluence with the Nottoway River.	5C	Oxygen, Dissolved	2006	L	10.49

Mill Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**10.49**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-02-BEN** **Buckhorn Swamp**

Cause Location: This cause encompasses the segment of Buckhorn Swamp that is near Pope Count, segment is located between State Hwy 652 and US Hwy 58. Segment ends below State Hwy 657.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use is impaired based on the Benthic population rating from the Benthic ProbMon-sample events [MI:F-'06, VI:S-'06] at Station 5ABKH005.16.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_BKH01A08 / Buckhorn Swamp / Segment of Buckhorn Swamp that is near Pope Count, segment is located between State Hwy 652 and US Hwy 58. Segment ends below State Hwy 657.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	5.68

Buckhorn Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.68**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-04-BEN** **Unnamed Tributary to Mill Swamp**

Cause Location: This cause encompasses the tributary running S / SE from Mill Swamp. To the east of Darden Pond and crosses RT 749 perpendicular.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Benthic data is impaired at station 5AXEC000.76 (X-Trib to Mill Swamp). Spring Score 2012 = 17.1, Fall Score 2012 = 37.5. This was a 2012 probabilistic monitoring site. This stream has very steep banks but is very shallow with loosely packed sediment and little habitat available for benthic organisms to colonize. Assessed with VCPMI score.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_XEC01A14 / Unnamed Tributary To Mill Swamp / Tributary running S / SE from Mill Swamp. To the east of Darden Pond and crosses RT 749 perpendicular.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	1.85

Unnamed Tributary to Mill Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.85**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-05-BAC** **Buckhorn Swamp**

Cause Location: This cause encompasses the segment of Buckhorn Swamp near Pope that crosses over Route 652.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on E.coli data collected at Station 5BKH003.89 with 4 viol / 11 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_BKH01B12 / Buckhorn Swamp / Segment of Buckhorn Swamp near Pope that crosses over Route 652.	5A	Escherichia coli	2012	H	4.22

Buckhorn Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.22**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-05-DO** **Buckhorn Swamp**

Cause Location: This cause encompasses the segment of Buckhorn Swamp near Pope that crosses over Route 652.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

Aquatic Life Use is impaired based on DO at Station 5BKH003.89 with 4 viol / 12 obs. The DO impairment is thought to be from natural conditions. There is currently no natural conditions report.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_BKH01B12 / Buckhorn Swamp / Segment of Buckhorn Swamp near Pope that crosses over Route 652.	5C	Oxygen, Dissolved	2014	M	4.22

Buckhorn Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**4.22**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-05-PH** **Buckhorn Swamp**

Cause Location: This cause encompasses the segment of Buckhorn Swamp near Pope that crosses over Route 652.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

The pH impairment is retained from 2016 IR with 3 viol/ 24 obs at station 5ABKH003.89. 2018 IR has 1 viol / 12 obs. Data that fell outside of the 2018 IR window is why violation rate is below 10%. Need additional data to delist. Impairment thought to be from natural causes.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_BKH01B12 / Buckhorn Swamp / Segment of Buckhorn Swamp near Pope that crosses over Route 652.	5C	pH	2016	L	4.22

Buckhorn Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.22**

Sources:

Naturally Occurring Organic Acids

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-06-BAC** **Nottoway Swamp**

Cause Location: This cause encompasses the segment of Nottoway Swamp near Route 611.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use is impaired in the 2018 IR. In 2016 IR recreation use was supporting with E.coli data from Station 5ANTT002.96 with 2 viol / 23 obs and now in the 2018 IR data dropped off from 2009 and 2010. Data collected in 2014 now violates with 2 viol / 12 obs. Data outside of assessment after 2014 also violate. Therefore in the 2018 IR this segment will be listed for E.coli.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_NTT01A12 / Nottoway Swamp / Segment of Nottoway Swamp near Route 611	5A	Escherichia coli	2018	L	8.12

Nottoway Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.12**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-06-DO** **Nottoway Swamp**

Cause Location: This cause encompasses the segment of Nottoway Swamp near Route 611.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

Aquatic Life Use is impaired based on DO and pH exceedances at Station 5ANT002.96. DO - 5 viol / 12 obs .

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_NTT01A12 / Nottoway Swamp / Segment of Nottoway Swamp near Route 611	5C	Oxygen, Dissolved	2012	L	8.12

Nottoway Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**8.12**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K28R-06-PH** **Nottoway Swamp**

Cause Location: This cause encompasses the segment of Nottoway Swamp near Route 611.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Aquatic Life Use is impaired based on pH exceedances at Station 5ANT002.96 with 2 viol / 12 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K28R_NTT01A12 / Nottoway Swamp / Segment of Nottoway Swamp near Route 611	5C	pH	2012	L	8.12

Nottoway Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**8.12**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K29R-01-BAC** **Seacorrie Swamp, German Swamp, XDW and XDX**

Cause Location: Seacorrie Swamp, portion of German Swamp, UT to Assamoosick Swamp XDW, and UT to Seacorrie Swamp XDX.

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In 1998, the entire mainstem of Assamoosick Swamp (23.8 miles) was assessed as fully supporting but threatened of the Recreation Use. The segment was later identified to Virginia for listing consideration (station 5AASM013.36).

Assamoosick Swamp from the headwaters to Rt. 607 was downgraded in 2002, however the impairment was shortened in the year to end at the Route 607 bridge due to acceptable fecal coliform levels in this downstream portion (0/3 at 5AASM003.00, 0/13 at 5AASM000.89). The TMDL was due in 2010. In 2002, Black Swamp, Seacorrie Swamp, XDW, and XDX were also considered impaired of the Recreation Use. These TMDLs were due in 2014.

In 2004, German Swamp was added to the impairment. This was due in 2016.

During the 2010 cycle, E. coli monitoring was conducted throughout the watershed. The exceedance rates were acceptable at all stations on Black Swamp and Assamoosick Swamp above the Route 607 bridge; therefore, Black Swamp and the portion of Assamoosick Swamp which had been impaired were delisted. The lower portion of German Swamp remained impaired with an E. coli exceedance rate of 2/11 at 5AGMN000.54, however station 5AGMN003.19 was fully supporting (1/12); therefore, the portion above the upstream-most tributary was delisted. Seacorrie Swamp, XDW and XDX remained listed (5/14 at 5ASRE005.89, 4/21 at 5ASRE002.12, 3/8 at 5AXDW001.85, and 5/8 at 5AXDX001.35).

The Assamoosick Swamp and Tributaries Bacterial TMDL was developed during the 2012 cycle; it was approved by the EPA on 6/3/2010 and by the SWCB on 9/30/2010. The previously delisted segments are considered Category 2C; the impaired segments are Category 4A.

No new data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K29R_GMN01A02 / German Swamp / The mainstem of German Swamp from the upstream-most tributary to its mouth.	4A	Escherichia coli	2010	L	2.62
VAP-K29R_SRE01A02 / Seacorrie Swamp / Seacorrie Swamp from its headwaters to its mouth	4A	Escherichia coli	2006	L	7.03
VAP-K29R_XDW01A02 / XDW - Assamoosick Swamp, UT / UT to Assamoosick Swamp	4A	Escherichia coli	2006	L	2.05
VAP-K29R_XDX01A02 / XDX - Seacorrie Swamp, UT / Unnamed tributary to Seacorrie Swamp	4A	Escherichia coli	2006	L	1.46

Seacorrie Swamp, German Swamp, XDW and XDX **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**13.16**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K29R-02-BAC** **Assamoosick Swamp**

Cause Location: Assamoosick Swamp from rivermile 2.5 near Mill Run downstream to its mouth

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2010 cycle, Assamoosick Swamp from rivermile 2.5 near Mill Run downstream to its mouth was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/11 at 5AASM000.89, which is located at the Route 647 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K29R_ASM02A02 / Assamoosick Swamp / Start of PWS at river mile 2.5 to mouth.	5A	Escherichia coli	2010	L	2.46

Assamoosick Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.46**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K29R-03-BAC** **XGT - Assamoosick Swamp, UT**

Cause Location: The UT XGT from its headwaters to its mouth at Assamoosick Swamp.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

During the 2010 cycle, the segment was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/6 at 5AXGT000.50, which is located at the Route 607 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K29R_XGT01A10 / XGT - Assamoosick Swamp, UT / Headwaters to mouth at Assamoosick Swamp	5A	Escherichia coli	2010	L	1.93

XGT - Assamoosick Swamp, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.93**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K29R-04-BAC** **XGS - Assamoosick Swamp, UT**

Cause Location: The UT XGS from its headwaters to its mouth at Assamoosick Swamp.

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, the segment was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 2/9 at 5AXGS000.96, which is located at the Route 634 bridge.

The stream is within the study area for the Assamoosick Swamp and Tributaries Bacterial TMDL, which was developed during the 2012 cycle. The TMDL was approved by the EPA on 6/3/2010 and by the SWCB on 9/30/2010. The stream is considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K29R_XGS01A10 / XGS - Assamoosick Swamp, UT / Headwaters to mouth at Assamoosick Swamp	4A	Escherichia coli	2010	L	2.36

XGS - Assamoosick Swamp, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.36**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K30R-01-BAC** **Darden Mill Run**

Cause Location: This cause encompasses the area from headwaters near Newsoms downstream to Windbourne Millpond, near VA/NC state line.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Recreation Use is impaired based on E.coli exceedance of the swimming criteria indicator with 9 violates/33 obs for station 5ADMR008.42. A Bacteria Total Maximum Daily Load was developed for Three Creek, Flat Swamp, Tarrara Creek, Mill Swamp, and Darden Mill Run in Southampton, Sussex, Greensville, Brunswick Counties and the City of Emporia, Virginia. EPA approved 09/28/2012 (PN 10623).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K30R_DMR01A02 / Darden Mill Run / From headwaters near Newsoms downstream to Windbourne Millpond, near VA/NC state line.	4A	Escherichia coli	2006	L	10.72

Darden Mill Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.72**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K30R-01-DO** **Darden Mill Run**

Cause Location: This cause encompasses the area from headwaters near Newsoms downstream to Windbourne Millpond, near VA/NC state line.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

Aquatic Life Use is impaired due to depressed DO & pH concentrations below the criteria minimum. Impairment is suspected due to natural swamp conditions present in these waters, low flow and high organic content. Below criteria minimum = 4.0 mg/l. DO = 19 viol / 35 obs and pH 22 viol / 35 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K30R_DMR01A02 / Darden Mill Run / From headwaters near Newsoms downstream to Windbourne Millpond, near VA/NC state line.	5C	Oxygen, Dissolved	2002	L	10.72

Darden Mill Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**10.72**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K30R-01-PH** **Darden Mill Run**

Cause Location: This cause encompasses the area from headwaters near Newsoms downstream to Windbourne Millpond, near VA/NC state line.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Aquatic Life Use is impaired due to depressed DO & pH concentrations below the criteria minimum. Impairment is suspected due to natural swamp conditions present in these waters, low flow and high organic content. Below criteria minimum = 4.0 mg/l. DO = 19 viol / 35 obs and pH 22 viol / 35 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K30R_DMR01A02 / Darden Mill Run / From headwaters near Newsoms downstream to Windbourne Millpond, near VA/NC state line.	5C	pH	2004	L	10.72

Darden Mill Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**10.72**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K30R-02-DO** **Nottoway River - Lower**

Cause Location: This cause encompasses the lower portion of the Nottoway River in watershed K30. Segment starts below Mill Creek near Point Beach to VA/NC state line.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

DO is not supporting (4 viol / 36 obs) @ 5ANTW003.30 / Special Study and Trend Station and NCDNR station 5NTW-D0000050-NCDENR (21 viol/ 97 obs).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K30R_NTW02B14 / Nottoway River - Lower / Lower portion of Nottoway River in watershed K30. Segment starts below Mill Creek near Point Beach to VA/NC state line.	5A	Oxygen, Dissolved	2014	L	4.54

Nottoway River - Lower **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**4.54**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K31R-01-BAC** **Blackwater Swamp, Warwick Swamp**

Cause Location: Blackwater Swamp from its headwaters to the Blackwater River and Warwick Swamp from its headwaters to Route 627.

City / County: Dinwiddie Co. Petersburg City Prince George Co. Surry Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

In the 1998 cycle, Warwick Swamp from its headwaters to the Route 627 bridge was assessed as 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 exceedance rate at 5AWKS001.00, the Warwick Swamp segment was shortened to its original length in 2004. During the 2008 cycle, the impairment converted to E. coli.

The exceedance rates during the 2010 cycle were as follows:

5ABKR001.92 - 1/12
5ABKR003.68 - 4/21
5ABKR004.83 - 0/1
5ABKR005.48 - 3/10
5ABKR007.28 - 0/10
5ABKR010.39 - 2/11
5ABKR014.01 - 1/12
5ABKR016.95 - 4/12
5AWKS009.11 - 6/21 (2014 cycle)
5AWKS013.53 - 0/12
5AWKS016.48 - 2/12
5AWKS018.67 - 5/10
5AWKS019.17 - 1/10

The Blackwater River Bacterial TMDL was developed during the 2012 cycle. The report was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. Blackwater Swamp and Warwick Swamp will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K31R_BKR01A98 / Blackwater Swamp / Headwaters to mouth.	4A	Escherichia coli	2006	L	22.90
VAP-K31R_WKS01A00 / Warwick Swamp / Warwick Swamp from its headwaters to the Route 627 bridge.	4A	Escherichia coli	2008	L	13.21

Blackwater Swamp, Warwick Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**36.11**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K31R-02-BAC** **Second Swamp**

Cause Location: Second Swamp from its headwaters to the first tributary upstream of Rt. 630

City / County: Petersburg City Prince George Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Second Swamp from its headwaters to its mouth was initially assessed as not supporting the Recreation Use support goal in 2004 based on a fecal coliform violation rate of 2/9 at the Route 618 bridge (5ASEC001.11).

Additional monitoring was conducted during the 2010 cycle. Data showed that the lower portion of Second Swamp has acceptable E. coli violation rates (1/11 at 5ASEC001.11, 1/12 at 5ASEC005.39, and 1/11 at 5ASEC006.88); therefore, the portion from the first tributary upstream of Route 630 (5ASEC006.88) downstream to its mouth was delisted (6.91 miles).

The upstream portion of Second Swamp remains listed, although only marginal violation rates were noted:

2/12 at 5ASEC014.08
0/12 at 5ASEC012.54
0/12 at 5ASEC010.97
2/12 at 5ASEC008.74

The Blackwater River and Tributaries Bacterial TMDL was developed during the 2012 cycle. The report was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The TMDL addressed all of Second Swamp; therefore, the impaired portion is considered Category 4A and the previously-delisted portion is considered Category 2C.
During the 2016 cycle the segment had an E.coli exceedance rate of 3/12 at station 5ASEC012.54 and remained impaired for the recreation use.

no new data for the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K31R_SEC01A04 / Second Swamp / Second Swamp from its headwater to the first tributary upstream of Rt. 630	4A	Escherichia coli	2010	L	9.52

Second Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.52**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K31R-04-BAC** **Warwick Swamp**

Cause Location: Warwick Swamp from the tributary at approximately rivermile 2.9 to its mouth at Blackwater Swamp.

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, Warwick Swamp from the tributary at approximately rivermile 2.9 to its mouth was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/18 at 5AWKS001.00 and 4/12 at 5AWKS002.12.

The Blackwater River and Tributaries Bacterial TMDL was developed during the 2012 cycle. The report was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The TMDL only addressed the upstream impairment on Warwick Swamp, however the entire stream is located within the study area; therefore, the impaired portion will be considered nested in the Blackwater River impairment (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K31R_WKS03A10 / Warwick Swamp / Warwick Swamp from the tributary at approximately rivermile 2.9 to its mouth	4A	Escherichia coli	2010	L	3.02

Warwick Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.02**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K31R-05-BAC** **North Fork Blackwater Swamp**

Cause Location: North Fork Blackwater Swamp from its headwater to its mouth.

City / County: Prince George Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, North Fork Blackwater Swamp was assessed as not supporting of the Recreation Use due to E. coli violation rates of 2/12 at 5ABNF000.65, 4/11 at 5ABNF003.73, and 2/9 at 5ABNF005.25.

The Blackwater River Bacterial TMDL was developed during the 2012 cycle. The report was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. North Fork Blackwater Swamp is within the study area for the TMDL and will be considered nested (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K31R_BNF01A10 / North Fork Blackwater Swamp / Headwaters to mouth at Blackwater Swamp	4A	Escherichia coli	2010	L	6.11

North Fork Blackwater Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.11**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K31R-08-BAC** **XHO - Warwick Swamp, UT**

Cause Location: Tributary from its headwater to its mouth at XES

City / County: Prince George Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2012 cycle, the tributary was impaired of the Recreation Use due to an E. coli violation rate of 3/9 at 5AXGX000.46, which is located at the Route 626 bridge. The stream drains to Warwick Swamp which was addressed in the Blackwater River and Tributaries Bacterial TMDL, approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The tributary will be considered nested (Category 4A) and will be addressed during implementation of the TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K31R_XHO01A12 / XHO - Warwick Swamp, UT / Headwaters to mouth at XES	4A	Escherichia coli	2012	L	2.42

XHO - Warwick Swamp, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.42**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K31R-09-BAC** **XGX - Warwick Swamp, UT**

Cause Location: Tributary from its headwater to its mouth at Warwick Swamp

City / County: Prince George Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2012 cycle, the tributary was impaired of the Recreation Use due to an E. coli violation rate of 3/9 at 5AXGX000.46, which is located at the Route 626 bridge. The stream drains to Warwick Swamp which was addressed in the Blackwater River and Tributaries Bacterial TMDL, approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The tributary will be considered nested (Category 4A) and will be addressed during implementation of the TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K31R_XGX01A12 / XGX - Warwick Swamp, UT / Headwaters to mouth at Warwick Swamp	4A	Escherichia coli	2012	L	2.22

XGX - Warwick Swamp, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.22**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-01-BAC** **Blackwater River**

Cause Location: Blackwater River from Warwick Swamp to the Route 617 bridge

City / County: Isle Of Wight Co. Southampton Co. Surry Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Blackwater River was identified for listing consideration by the EPA in 1998. The segment from Warwick Swamp to Cypress Swamp was initially assessed as not supporting of the Recreation Use during the 2002 cycle based on fecal coliform exceedances at 5ABLW074.66; the bacteria TMDL was due in 2010. During the 2006 cycle, the fecal coliform exceedance rate was acceptable, however the segment was considered impaired for E. coli based on exceedances at 5ABLW074.66 and downstream station 5ABLW058.22. The FC impairment was changed to E. coli, and the original TMDL due date was maintained.

During the 2010 cycle, it was determined that the 1998 segmentation actually extended downstream to the Route 617 bridge, which is also the location of 5ABLW058.22. The error was corrected and the impairment was extended. See VAT-K32R_BLW01A08.

During the 2012 cycle, the Blackwater River Bacterial TMDL was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The impairment is considered Category 4A.

The following are the 2014 exceedance rates:

5/42 at 5ABLW058.22
1/11 at 5ABLW064.46
3/11 at 5ABLW069.30
3/40 at 5ABLW074.66
2/12 at 5ABLW087.70

During the 2016 cycle the segment remained impaired for Recreation use due to an E.coli exceedance rate of 6/40 at 5ABLW074.66.
During the 2018 cycle the segment remained impaired for Recreation use due to an E.coli exceedance rate of 7/42 at 5ABLW074.66.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_BLW01B98 / Blackwater River / Start of Blackwater River at confluence of Warwick Swamp and Blackwater Swamp to Route 31	4A	Escherichia coli	2006	L	18.55
VAP-K32R_BLW02B98 / Blackwater River / Route 31 to Cypress Swamp	4A	Escherichia coli	2006	L	5.39
VAT-K32R_BLW01A08 / Blackwater River - Lower K32 / Lower portion of Blackwater R. in K32. Starts at the confluence with Cypress Swamp (upstream of Walls Bridge) downstream to above Rt 617 crossing @ Walls Bridge (RM 58.22).	4A	Escherichia coli	2008	L	2.32

Blackwater River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**26.26**

Sources:

Municipal Point Source Discharges Non-Point Source Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-01-BEN** **Blackwater River - Lower**

Cause Location: This cause encompasses the lower portion of Blackwater River in K32. Starts at the confluence with Cypress Swamp (upstream of Walls Bridge) downstream to above Rt. 617 crossing @ Walls Bridge (RM 58.22).

City / County: Isle Of Wight Co. Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use is impaired based on benthic data collected at stations 5ABLW052.91 and 5ABLW055.26.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K32R_BLW01A08 / Blackwater River - Lower K32 / Lower portion of Blackwater R. in K32. Starts at the confluence with Cypress Swamp (upstream of Walls Bridge) downstream to above Rt 617 crossing @ Walls Bridge (RM 58.22).	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	2.32

Blackwater River - Lower **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.32**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-02-BAC** **Spring Branch**

Cause Location: From the old Borden Chemical/Spurlock Adhesives discharge to the confluence with the Blackwater River

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2012 cycle, the segment was impaired of the Recreation Use due to E. coli violations at 5ASRN000.65, which is located below Bryant Pond. The stream is within the study area for the Blackwater River Bacterial TMDL, which was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. Spring Branch will be addressed during implementation and is considered nested (Category 4A). The exceedance rate was 6/48 during the 2014 cycle.

During the 2018 cycle the segment remained impaired for E.coli with exceedances at all stations.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_SRN01A94 / Spring Branch / Spurlock Adhesives discharge to Blackwater River.	4A	Escherichia coli	2012	L	4.15
VAP-K32R_SRN02A06 / Spring Branch / Headwaters to Spurlock Adhesives	4A	Escherichia coli	2018	L	0.11

Spring Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.26**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-02-BEN** **Spring Branch**

Cause Location: From the old Borden Chemical/Spurlock Adhesives discharge to the confluence with the Blackwater River

City / County: Sussex Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

Spring Branch was initially assessed as impaired of the Aquatic Life Use in the 1994 cycle due to a severely impaired benthic community.

There are six past and current biological monitoring stations on Spring Branch. 5ASRN003.82 is located upstream of all the discharges; 5ASRN003.69 is located 50 yards below the Route 460 bridge; 5ASRN001.99 and 5ASRN001.90 are located upstream and downstream of Rt. 653; 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. The three downstream stations were rated impaired during the 2012 cycle.

The benthic TMDL received approval by the EPA on 5/10/2006 and from the SWCB on 9/7/2006. The results indicated that total phosphorus is the Most Probable Stressor for Spring Branch because of its relationship to low dissolved oxygen and high pH. Total phosphorus was therefore used to develop the benthic TMDL.

During the 2018 cycle the segment remained impaired for benthics.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_SRN01A94 / Spring Branch / Spurlock Adhesives discharge to Blackwater River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.15

Spring Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.15**

Sources:

Industrial Point Source Discharge

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-02-PH** **Spring Branch**

Cause Location: From the old Borden Chemical/Spurlock Adhesives discharge to the confluence with the Blackwater River

City / County: Sussex Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 4A

The segment was considered impaired of the Aquatic Life Use in the 2008 cycle due to high pH at station 5ASRN000.66. The benthic TMDL was completed during the 2008 cycle; it received approval by the EPA on 5/10/2006 and from the SWCB on 9/7/2006. The results indicated that total phosphorus is the Most Probable Stressor for Spring Branch because of its relationship to low dissolved oxygen and high pH. The benthic TMDL limits phosphorus input, which should reduce algal growth and lower the pH. Therefore, the segment will be considered a Category 4A water for pH.

The exceedance rates were as follows during the 2014 cycle:

12/63 at 5ASRN000.65
11/60 at 5ASRN000.66
0/64 at 5ASRN001.24
0/63 at 5ASRN001.90
0/59 at 5ASRN001.99
0/40 at 5ASRN003.69

During the 2018 cycle there was no new pH data.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_SRN01A94 / Spring Branch / Spurlock Adhesives discharge to Blackwater River.	4A	pH	2008	L	4.15

Spring Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.15**

Sources:

Industrial Point Source Discharge

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-04-BAC** **Otterdam Swamp**

Cause Location: Otterdam Swamp Headwaters to mouth. Nested within segment K32R-03-DO.

City / County: Prince George Co. Surry Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The segment was initially assessed as not supporting of the Recreation Use goal during the 2002 cycle based on fecal coliform exceedances at 5AOTR001.26, 5AOTR004.31 (Rt. 607), and 5AOTR005.69 (Rt. 606). These are confined animal feeding operation (CAFO) special study stations.

E.coli was added as an impairing cause of the Recreation Use in 2006, however the original bacteria TMDL due date of 2014 was maintained. The bacteria impairment converted solely to E. coli during the 2008 cycle.

Otterdam Swamp was included in the Blackwater River Bacterial TMDL which was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The impairment is considered Category 4A.

The following are the exceedance rates during the 2014 cycle:
4/21 at 5AOTR001.26
3/14 at 5AOTR004.31 (2010 cycle)
0/12 at 5AOTR005.69 (2010 cycle)
During the 2018 cycle the segment remained impaired for E.coli at station 5AOTR008.07 with an exceedance rate of 3/12. Also with 2/12 exceedance rate at station 5AOTR001.26 and 5/12 at station 5AOTR004.31.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_OTR01A98 / Otterdam Swamp / Headwaters to Averys Pond dam	4A	Escherichia coli	2016	L	7.44
VAP-K32R_OTR02A00 / Otterdam Swamp / Below Averys Pond to Blackwater River	4A	Escherichia coli	2006	L	5.86

Otterdam Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**13.30**

Sources:

Agriculture Non-Point Source Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-05-BAC** **Coppahaunk Swamp, UT - XDT**

Cause Location: Mainstem from its headwaters to mouth

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Coppahaunk Swamp mainstem was initially assessed in 2002 as not supporting of the Recreation Use based on numerous fecal coliform exceedances. During the 2006 cycle, station 5AXDT000.50 had an E. coli exceedance rate of 2/2 and the UT was added into the mainstem impairment. The initial bacteria TMDL due date of 2014 was maintained.

During the 2008 cycle, additional E. coli monitoring at station 5ACPH006.00 showed an acceptable exceedance rate (1/11); therefore, the mainstem Coppahaunk Swamp was delisted for bacteria. This was a partial delist because the unnamed tributary to Coppahaunk Swamp, XDT, remains impaired.

XDT was addressed in the Blackwater River Bacterial TMDL which was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. Therefore, it will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_XDT01A08 / Coppahaunk Swamp, UT / Headwaters to mouth at Coppahaunk Swamp	4A	Escherichia coli	2006	L	0.91

Coppahaunk Swamp, UT - XDT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.91**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-07-BAC** **Cypress Swamp Tributaries**

Cause Location: All tributaries to Cypress Swamp, including Johnchecohunk Swamp and Spring Grove Swamp

City / County: Surry Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During 2006, station 5AJCH002.27 on Johnchecohunk Swamp had an E. coli exceedance rate of 2/12. In addition, the Cypress Swamp mainstem (VAP-K32R_CPP01A98) showed exceedances for bacteria. Therefore, the segment was assessed as not supporting the Recreation Use for E. coli.

The Cypress Swamp TMDL was completed and approved by the EPA on 10/14/2005. Due to the high reductions required to meet the Cypress Swamp mainstem TMDL, this segment is considered nested.

The segment remains impaired in the 2014 cycle with an exceedance rate of 2/11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_CPP01B06 / Cypress Swamp Tributaries / All tributaries draining to Cypress Swamp.	4A	Escherichia coli	2006	L	143.62

Cypress Swamp Tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**143.62**

Sources:

Agriculture	Non-Point Source	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-08-BAC** **Cypress Swamp**

Cause Location: Mainstem from its headwaters to its mouth.

City / County: Surry Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

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 exceedances at the Rt. 31 bridge (5ACPP003.20). During the 2004 cycle, the impairment was extended upstream due to fecal coliform exceedances at 5A-PL-SCP1B and 5ACPP006.04 (Rt. 616).

In the 2006 cycle, E. coli was added as an impairing cause based on exceedances at 5ACPP003.20 and 5ACPP007.84 (Rt. 630). The TMDL was completed and approved by the EPA on 10/14/2005.

The impairment was converted to E. coil in the 2008 cycle based on E. coli exceedances at station 5ACPH003.20 and 5ACPH006.04.

The following were the exceedance rates during the 2010 cycle:
8/34 at 5ACPP003.20
2/12 at 5ACPP007.86

During the 2018 cycle there was no new data.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_CPP01A98 / Cypress Swamp / Headwaters to mouth at Blackwater River.	4A	Escherichia coli	2006	L	17.06

Cypress Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**17.06**

Sources:

Agriculture	Non-Point Source	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-11-BAC** **XDR - UT to Otterdam Swamp**

Cause Location: Headwaters to mouth

City / County: Surry Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2006 cycle, XDR (UT to Otterdam Swamp) was considered impaired of the Recreation Use due to a fecal coliform violation rate of 9/16 at 5AXDR00.38. Additional monitoring during the 2010 cycle confirmed an E. coli impairment with a violation rate of 5/14.

The tributary is within the study area for the Otterdam Swamp bacterial impairment, which was addressed in the Blackwater River Bacterial TMDL. The TMDL was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The impairment will be addressed during implementation and is therefore considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_XDR01A06 / UT to Otterdam Swamp / Headwaters to mouth at Otterdam Swamp	4A	Escherichia coli	2010	L	2.61

XDR - UT to Otterdam Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.61**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-13-HG** **Blackwater River Basin**

Cause Location: Blackwater River and tributaries from its headwaters to the VA-State Line

City / County: Dinwiddie Co. Isle Of Wight Co. Petersburg City Prince George Co. South Boston City
Southampton Co. Suffolk City Surry Co. Sussex Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

During the 2006 cycle, the Blackwater River from Route 31 near Dendron downstream to the Virginia-North Carolina state line was assessed as impaired of the Fish Consumption Use due to a VDH fish consumption advisory for mercury.

During the 2008 cycle, the advisory was expanded on 8/31/2007 to include the Blackwater River to its headwaters, including all of its tributaries. The advisory currently recommends consuming no more than two meals/month of largemouth bass, sunfish species, bowfin, chain pickerel, white catfish, redhorse sucker and longnose gar.

The advisory is based on the results of DEQ's fish tissue monitoring program, which show mercury exceedances at multiple stations throughout the watershed, including 5ABKR003.68, 5ABKR002.33, 5AWKS013.53, 5ASEC005.39, 5ABLW074.66, 5ACPP004.04, 5ACPP007.86, 5AJCH000.73.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K31R_BKR01A98 / Blackwater Swamp / Headwaters to mouth.	5A	Mercury in Fish Tissue	2008	L	22.90
VAP-K31R_BNF01A10 / North Fork Blackwater Swamp / Headwaters to mouth at Blackwater Swamp	5A	Mercury in Fish Tissue	2008	L	6.11
VAP-K31R_CAT01A10 / Cattail Creek / Headwaters to mouth at Blackwater Swamp	5A	Mercury in Fish Tissue	2008	L	3.43
VAP-K31R_SEC01A04 / Second Swamp / Second Swamp from its headwater to the first tributary upstream of Rt. 630	5A	Mercury in Fish Tissue	2008	L	9.52
VAP-K31R_SEC01B10 / Second Swamp / First tributary upstream of Rt. 630 to mouth	5A	Mercury in Fish Tissue	2008	L	6.91
VAP-K31R_WKS01A00 / Warwick Swamp / Warwick Swamp from its headwaters to the Route 627 bridge.	5A	Mercury in Fish Tissue	2008	L	13.21
VAP-K31R_WKS02A04 / Warwick Swamp / Warwick Swamp from the Route 627 bridge to the tributary at approximately rivermile 2.9	5A	Mercury in Fish Tissue	2008	L	6.23
VAP-K31R_WKS03A10 / Warwick Swamp / Warwick Swamp from the tributary at approximately rivermile 2.9 to its mouth	5A	Mercury in Fish Tissue	2008	L	3.02
VAP-K31R_XAT01A10 / Blackwater Swamp, UT / Headwaters to mouth at Blackwater Swamp	5A	Mercury in Fish Tissue	2008	L	1.46
VAP-K31R_XES01A08 / Warwick Swamp, UT / Headwater to mouth at Warwick Swamp	5A	Mercury in Fish Tissue	2008	L	3.43
VAP-K31R_XFN01A08 / North Fork Blackwater Swamp, UT / Headwaters to mouth at North Fork Blackwater Swamp	5A	Mercury in Fish Tissue	2008	L	2.82
VAP-K31R_XFX01A10 / Warwick Swamp, UT / Headwaters to mouth at Warwick Swamp	5A	Mercury in Fish Tissue	2008	L	2.95
VAP-K31R_XGE01A10 / Blackwater Swamp, UT / Headwaters to mouth at Blackwater Swamp	5A	Mercury in Fish Tissue	2008	L	1.46
VAP-K31R_XGX01A12 / XGX - Warwick Swamp, UT / Headwaters to mouth at Warwick Swamp	5A	Mercury in Fish Tissue	2008	L	2.22
VAP-K31R_XHO01A12 / XHO - Warwick Swamp, UT / Headwaters	5A	Mercury in Fish Tissue	2008	L	2.42

to mouth at XES					
VAP-K31R_XHP01A10 / Blackwater Swamp, UT / Headwaters to mouth at Blackwater Swamp	5A	Mercury in Fish Tissue	2008	L	2.50
VAP-K31R_XHS01A12 / XHS - Second Swamp, UT / Headwaters to mouth at Second Swamp	5A	Mercury in Fish Tissue	2008	L	4.39
VAP-K31R_ZZZ01A14 / Unsegmented Rivers in K31 / Unsegmented portion of watershed CU52.	5A	Mercury in Fish Tissue	2008	L	40.84
VAP-K31R_ZZZ01B14 / Unsegmented Rivers in K31 / Unsegmented portion of watershed CU53.	5A	Mercury in Fish Tissue	2008	L	94.09
VAP-K31R_ZZZ01C14 / Unsegmented Rivers in K31 / Unsegmented portion of watershed CU54.	5A	Mercury in Fish Tissue	2008	L	59.14
VAP-K32R_BLW01B98 / Blackwater River / Start of Blackwater River at confluence of Warwick Swamp and Blackwater Swamp to Route 31	5A	Mercury in Fish Tissue	2008	L	18.55
VAP-K32R_BLW02B98 / Blackwater River / Route 31 to Cypress Swamp	5A	Mercury in Fish Tissue	2006	L	5.39
VAP-K32R_CPH01A98 / Coppahaunk Swamp / Headwaters to mouth at Blackwater River.	5A	Mercury in Fish Tissue	2008	L	11.98
VAP-K32R_CPP01A98 / Cypress Swamp / Headwaters to mouth at Blackwater River.	5A	Mercury in Fish Tissue	2008	L	17.06
VAP-K32R_CPP01B06 / Cypress Swamp Tributaries / All tributaries draining to Cypress Swamp.	5A	Mercury in Fish Tissue	2008	L	143.62
VAP-K32R_OTR01A98 / Otterdam Swamp / Headwaters to Averys Pond dam	5A	Mercury in Fish Tissue	2008	L	7.44
VAP-K32R_OTR02A00 / Otterdam Swamp / Below Averys Pond to Blackwater River	5A	Mercury in Fish Tissue	2008	L	5.86
VAP-K32R_RED01A08 / Reedy Branch Watershed / Headwaters to mouth at Otterdam Swamp	5A	Mercury in Fish Tissue	2008	L	7.31
VAP-K32R_SRN01A94 / Spring Branch / Spurlock Adhesives discharge to Blackwater River.	5A	Mercury in Fish Tissue	2008	L	4.15
VAP-K32R_SRN02A06 / Spring Branch / Headwaters to Spurlock Adhesives	5A	Mercury in Fish Tissue	2008	L	0.11
VAP-K32R_XAL01A08 / Spring Branch, UT / Headwaters to mouth at Spring Branch.	5A	Mercury in Fish Tissue	2008	L	0.72
VAP-K32R_XAW01A08 / Spring Branch, UT / Headwaters to mouth at Spring Branch.	5A	Mercury in Fish Tissue	2008	L	1.07
VAP-K32R_XDR01A06 / UT to Otterdam Swamp / Headwaters to mouth at Otterdam Swamp	5A	Mercury in Fish Tissue	2008	L	2.61
VAP-K32R_XDS01A06 / UT to Otterdam Swamp / Headwaters to mouth at Otterdam Swamp	5A	Mercury in Fish Tissue	2008	L	1.12
VAP-K32R_XDT01A08 / Coppahaunk Swamp, UT / Headwaters to mouth at Coppahaunk Swamp	5A	Mercury in Fish Tissue	2008	L	0.91
VAP-K32R_XFM01A08 / Blackwater River, UT / Headwaters to mouth at Blackwater River	5A	Mercury in Fish Tissue	2008	L	3.13
VAP-K32R_XFV01A10 / XFV - Otterdam Swamp, UT / Headwaters to mouth	5A	Mercury in Fish Tissue	2008	L	1.20
VAP-K32R_XGC01A10 / XGC - Coppahaunk Swamp, UT / Headwaters to mouth at Coppahaunk Swamp	5A	Mercury in Fish Tissue	2008	L	2.97

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

VAP-K32R_ZZZ01A14 / Unsegmented Rivers in K32R / Unsegmented portion of watershed CU55.	5A	Mercury in Fish Tissue	2008	L	30.88
VAP-K32R_ZZZ01B14 / Unsegmented Rivers in K32R / Unsegmented portion of watershed CU56.	5A	Mercury in Fish Tissue	2008	L	40.81
VAP-K32R_ZZZ01C14 / Unsegmented Rivers in K32R / Unsegmented portion of watershed CU57	5A	Mercury in Fish Tissue	2008	L	111.12
VAT-K32R_BLW01A08 / Blackwater River - Lower K32 / Lower portion of Blackwater R. in K32. Starts at the confluence with Cypress Swamp (upstream of Walls Bridge) downstream to above Rt 617 crossing @ Walls Bridge (RM 58.22).	5A	Mercury in Fish Tissue	2006	L	2.32
VAT-K33R_ANT01A06 / Antioch Swamp - Middle / From confluence with Burnt Mills Swamp downstream to confluence with northern UT (RM 1.30).	5A	Mercury in Fish Tissue	2010	L	1.45
VAT-K33R_BLW01A00 / Blackwater River - Upper / Upper portion of Blackwater R. in K33. Starts at the Rt 617 crossing (Walls Bridge, RM 58.22) downstream to above Rt 460 crossing @ Zuni (RM 40.23).	5A	Mercury in Fish Tissue	2006	L	19.10
VAT-K33R_BLW02A04 / Blackwater River - Middle / Middle portion of Blackwater River within watershed, from Rt 460 bridge crossing, RM 40.22 to downstream approx. halfway between Station 5ABLW040.22 and Station 5ABLW038.69.	5A	Mercury in Fish Tissue	2004	L	1.04
VAT-K33R_BLW03A08 / Blackwater River - Lower / Lower portion of Blackwater River within watershed, from RM 39.34 downstream of confluence with Antioch Swamp (RM 35.22)].	5A	Mercury in Fish Tissue	2004	L	4.18
VAT-K33R_BLW04A08 / Blackwater River / From connection of Antioch Swamp to the Watershed line of K33.	5A	Mercury in Fish Tissue	2008	L	1.81
VAT-K33R_BMS01A12 / Burnt Mills Swamp / At confluence of Antioch Swamp to Route 258.	5A	Mercury in Fish Tissue	2008	L	5.16
VAT-K33R_ZZZ01A00 / Unsegmented rivers in K33R, Villines Swamp / Evaluated non-segmented rivers/swamps in K33.	5A	Mercury in Fish Tissue	2008	L	199.37
VAT-K34R_GHB01A18 / Golden Hill Branch / Tributary to Mill Swamp; North of Elberon	5A	Mercury in Fish Tissue	2010	L	3.47
VAT-K34R_MSW01A00 / Mill Swamp / Located northwest of Raynor, upstream tributary to Rattlesnake Swamp. Segment begins at confluence of Moores Swamp with Mill Swamp (mile 16.78) downstream to confluence with Rattlesnake Swamp (mile 0.0).	5A	Mercury in Fish Tissue	2010	L	8.44
VAT-K34R_MSW02A18 / Mill Swamp- Upper / Upstream portion of Swamp, Located North of Route 617 and South of Colonial Trail	5A	Mercury in Fish Tissue	2010	L	5.14
VAT-K34R_RKN01A02 / Rattlesnake Swamp K34 / Located northwest of Raynor. Rattlesnake Swamp Segment from confluence of Pouches Swamp downstream to watershed boundary K33/K34.	5A	Mercury in Fish Tissue	2010	L	6.42
VAT-K34R_ZZZ01A00 / Unsegmented rivers in K34R, Rattlesnake Swamp / Evaluated non-segmented rivers in K34.	5A	Mercury in Fish Tissue	2010	L	153.32
VAT-K35R_BNT01A04 / Brantley Swamp - Lower / Located northeast of Pulleys Crossroads. Segment from confluence with Lightwood Swamp downstream to confluence with Seacock Swamp.	5A	Mercury in Fish Tissue	2010	L	3.65
VAT-K35R_RHS01A08 / Round Hill Swamp / Confluence of Seacock Swamp between State Route 614 and State Route 623	5A	Mercury in Fish Tissue	2010	L	0.64
VAT-K35R_SCK01A00 / Seacock Swamp - Upper / Located west of Rt 460, south of Sussex - Southampton Co. line. Upper portion of Seacock Swamp, from Drumwright Pond downstream to confluence with unnamed tributary, approx. 0.1 mi downstream of Rt 628 crossing.	5A	Mercury in Fish Tissue	2010	L	0.84

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

VAT-K35R_SCK02A08 / Seacock Swamp - Lower / Located west of Rt 460 south of Ivor. Lower portion of Seacock Swamp, from confluence with Brantley Swamp (RM 8.73) downstream below State Hwy 614.	5A	Mercury in Fish Tissue	2010	L	2.50
VAT-K35R_SCK03A08 / Seacock Swamp - Lower / Lower portion of Seacock Swamp south of Doles Crossroads, west of State Hwy 600.	5A	Mercury in Fish Tissue	2010	L	2.59
VAT-K35R_SCK03B18 / Seacock Swamp / Approx. 1 mi north of Seacock Swamp where it crosses Route 635 to confluences with the Blackwater River	5A	Mercury in Fish Tissue	2010	L	3.23
VAT-K35R_SCK04A10 / Seacock Swamp / From State Route 618 south to confluence with Reddy Hole Branch	5A	Mercury in Fish Tissue	2010	L	0.81
VAT-K35R_XDY01A04 / UT Seacock Swamp- Upper / UT to Seacock Swamp, PRO CAFO special study. Headwaters to confluence with Seacock Swamp mainstem.	5A	Mercury in Fish Tissue	2010	L	1.02
VAT-K35R_XDZ01A04 / UT Airfield Pond - Upper / UT to Airfield Pond, PRO CAFO special study. Headwaters to confluence with UT VAT-K35R_XDZ02A04.	5A	Mercury in Fish Tissue	2010	L	0.68
VAT-K35R_XDZ02A04 / UT Airfield Pond - Lower / UT start at confluence with segment VAT-K35R_XDZ01A04 halfway between State Hwy 622 and 729 downstream to Airfield Pond.	5A	Mercury in Fish Tissue	2010	L	0.71
VAT-K35R_XED01A18 / UT to Seacock Swamp- Lower / Tributary of Seacock Swamp that runs East / West from South of Corinth at Rt. 626 to Rt 635 north of Unity in Southampton County where it merges with the mainstem of Seacock Swamp.	5A	Mercury in Fish Tissue	2010	L	3.75
VAT-K35R_ZZZ01A00 / Unsegmented rivers in Seacock Swamp. / Area of unsegmented rivers that extend west from Airfield Pond, North to Rt. 460 in Wakefield, East to Guildfield Corner and South to Corinth.	5A	Mercury in Fish Tissue	2010	L	206.98
VAT-K35R_ZZZ02A18 / Unsegmented Seacock Swamp - No Station / Unsegmented portions K35R Seacock Swamp	5A	Mercury in Fish Tissue	2010	L	13.29
VAT-K36R_BLC01A06 / Black Creek / Located NW of Burdette. From Wades Pond downstream to mouth. Tributary to Blackwater R. with confluence at RM 22.0.	5A	Mercury in Fish Tissue	2008	L	4.95
VAT-K36R_BLC02A10 / Black Creek - Upper / Segment parallel with State Route 503. Southeast of Whitefields Millpond and Johnson Millpond.	5A	Mercury in Fish Tissue	2008	L	3.29
VAT-K36R_BLW01A00 / Blackwater River - Uppermost (PWS) / From start of watershed at RM 35.21 (at the confluence with Seacock Swamp) downstream to approximately 0.1 mi south of Rt. 603.	5A	Mercury in Fish Tissue	2004	L	4.28
VAT-K36R_BLW01B08 / Blackwater River - Upper / Between State Hwy 603 at the confluence with Horse Swamp to approximately 0.5 mi north of State Hwy 630.	5A	Mercury in Fish Tissue	2004	L	6.47
VAT-K36R_BLW02A08 / Blackwater River - Middle / Segment includes water from east of Edgehill to west of the Franklin Municipal John Beverly Rose Airport.	5A	Mercury in Fish Tissue	2004	L	3.85
VAT-K36R_BLW02B08 / Blackwater River - Upper / Segment begins north of Maynards Crossroads and State Hwy 630 and ends at Joyners Bridge.	5A	Mercury in Fish Tissue	2004	L	2.47
VAT-K36R_BLW02C10 / Blackwater River - Upper / Segment begins at State Route 611 and ends near Edgehill.	5A	Mercury in Fish Tissue	2004	L	3.00
VAT-K36R_BLW03A08 / Blackwater River - Middle / Segment begins west of the Franklin Municipal John Beverly Rose Airport and	5A	Mercury in Fish Tissue	2004	L	2.23

ends at the Blackwater Landing in Franklin.

VAT-K36R_BLW04A08 / Blackwater River - Lower Middle / From Blackwater Landing in Franklin the southern end of the industrial waste ponds in Isle of Wight.	5A	Mercury in Fish Tissue	2004	L	2.83
VAT-K36R_BLW04B12 / Blackwater River - Lower Middle / From Industrial Waste Ponds near Isle of Wight and Suffolk line to US-58.	5A	Mercury in Fish Tissue	2004	L	0.69
VAT-K36R_BLW04C12 / Blackwater River - Lower Middle / South of the Isle of Wight / Suffolk line beginning at Rt 58 downstream to Cox Landing	5A	Mercury in Fish Tissue	2012	L	4.75
VAT-K36R_BLW05A08 / Blackwater River - Lower / From Cox Landing downstream to downstream to VA/NC state line	5A	Mercury in Fish Tissue	2004	L	5.10
VAT-K36R_CRW01A18 / Corrowaugh Swamp / Trib to Blackwater North of Route 619 upstream near Dardens Pond and Route 611	5A	Mercury in Fish Tissue	2008	L	5.87
VAT-K36R_CYS01A12 / Cypress Swamp / Swamp off of Blackwater River. From Town of Sedley downstream to Route 611.	5A	Mercury in Fish Tissue	2008	L	5.16
VAT-K36R_DKS01A10 / Ducks Swamp / From confluence with Jenkins Swamp upstream to confluence with Corrowaugh Swamp - north of Walters and Aqueduct.	5A	Mercury in Fish Tissue	2008	L	2.61
VAT-K36R_WAC01A08 / Washole Creek / Segment at the confluence of Blackwater. East of Franklin Sewage Disposal. South of US Hwy 58.	5A	Mercury in Fish Tissue	2008	L	0.55
VAT-K36R_XGI01A08 / Unsegmented Tributary to Blackwater / Unsegmented river from Blackwater south of Franklin and north of State Hwy 58	5A	Mercury in Fish Tissue	2008	L	2.75
VAT-K36R_ZZZ01A00 / Unsegmented rivers in K36R (not PWS area) / Evaluated non-segmented rivers in K36 (excluding Corrowaugh Swamp), located downstream of Norfolk raw water intake located southeast of Burdette (on Blackwater R).	5A	Mercury in Fish Tissue	2008	L	308.86
VAT-K36R_ZZZ01B00 / Unsegmented rivers in K36R (PWS area) / The evaluated tributaries to Blackwater River (including Corrowaugh Swamp), located within 5 mi upstream from Norfolk raw water intake located southeast of Burdette (on Blackwater R). From end of K36 (RM 35.0) downstream to RM 27.0.	5A	Mercury in Fish Tissue	2008	L	68.05
VAT-K36R_ZZZ01C18 / UT to Blackwater / Trib to Blackwater River in Franklin South of 258 to headwaters near Clay St	5A	Mercury in Fish Tissue	2008	L	3.20

Blackwater River Basin **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			######

Sources:

Atmospheric Deposition - Toxics	Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-15-BAC** **Spring Branch, UT (XAW)**

Cause Location: The unnamed tributary from its headwaters to its mouth at Spring Branch.

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2010 cycle, the UT was assessed as not supporting of the Recreation Use due to E. coli exceedances at the Route 460 bridge (5AXAW000.19). The stream is located within the study area for the Blackwater River Bacterial TMDL, which was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The impairment will be addressed during implementation; therefore, it is considered nested (Category 4A.)

The exceedance rate was 20/53 during the 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_XAW01A08 / Spring Branch, UT / Headwaters to mouth at Spring Branch.	4A	Escherichia coli	2010	L	1.07

Spring Branch, UT (XAW) **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.07**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-16-BAC** **Spring Branch, UT (XAL)**

Cause Location: The unnamed tributary from its headwaters to its mouth at Spring Branch.

City / County: Prince George Co. Surry Co. Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

During the 2012 cycle, the tributary was impaired of the Recreation Use due to E. coli exceedances at 5AXAL000.02. The stream is located within the study area for the Blackwater River Bacterial TMDL, which was approved by the EPA on 7/9/2010 and by the SWCB on 9/30/2010. The impairment will be addressed during implementation; therefore, it is considered nested (Category 4A.) The exceedance rate was 7/24 during the 2014 cycle.

During the 2018 cycle the segment remained impaired with exceedance rates of 16/22 at 5AXAW000.19.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_XAL01A08 / Spring Branch, UT / Headwaters to mouth at Spring Branch.	4A	Escherichia coli	2012	L	0.72

Spring Branch, UT (XAL) **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.72**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K32R-18-BEN** **Blackwater River, UT**

Cause Location: Unnamed tributary XFM from its headwaters to its mouth at Blackwater River

City / County: Sussex Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle, the tributary was assessed as not supporting the Aquatic Life Use due to impairment of the benthic community at station 5AXFM000.88, which is located at the Route 613 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K32R_XFM01A08 / Blackwater River, UT / Headwaters to mouth at Blackwater River	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	3.13

Blackwater River, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.13**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K33R-02-BAC** **Blackwater River - Middle**

Cause Location: This cause encompasses the middle portion of Blackwater River from Rt. 460 bridge crossing, RM 40.22 to downstream approx. halfway between Station 5ABLW040.22 and Station 5ABLW038.69.

City / County: Isle Of Wight Co. Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreational Use is not supported with 5 viol / 34 obs at station 5ABLW040.22 (K33R-02-BAC)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K33R_BLW02A04 / Blackwater River - Middle / Middle portion of Blackwater River within watershed, from Rt 460 bridge crossing, RM 40.22 to downstream approx. halfway between Station 5ABLW040.22 and Station 5ABLW038.69.	5A	Escherichia coli	2012	H	1.04

Blackwater River - Middle **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.04**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

Cause Group Code: **K33R-02-BEN** **Blackwater River - Upper**

Cause Location: This cause encompasses the upper portion of Blackwater R. in K33. Starts at the Rt. 617 crossing (Walls Bridge, RM 58.22) downstream to above Rt. 460 crossing @ Zuni (RM 40.23).

City / County: Isle Of Wight Co. Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Benthic impairment is retained from 2008 Assessment. No new benthic data within the assessment window. Previous impairment is from benthic data collected at stations 5ABLW052.91 and 5ABLW055.26. Station Metrics in 2002 for station 52.91 and 2001 for 55.26 in the Spring and Fall were classified as moderately impaired with low DO and swamp conditions.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K33R_BLW01A00 / Blackwater River - Upper / Upper portion of Blackwater R. in K33. Starts at the Rt 617 crossing (Walls Bridge, RM 58.22) downstream to above Rt 460 crossing @ Zuni (RM 40.23).	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	19.10

Blackwater River - Upper **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**19.10**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K33R-03-BEN** **Blackwater River - Lower and Burnt Mills Swamp**

Cause Location: This cause encompasses the lower portion of the Blackwater River from RM 39.34 to the confluence with Antioch Swamp as well as the entirety of Burnt Mills Swamp

City / County: Isle Of Wight Co. South Boston City Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Benthic impairment identified at DEQ (ProbMon) station 5ABLW038.69. Station 5ABLW038.69 Benthic IM [MI: S&F '05] and 5ABMS000.80 [VI: S&F 10].

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K33R_BLW03A08 / Blackwater River - Lower / Lower portion of Blackwater River within watershed, from RM 39.34 downstream of confluence with Antioch Swamp (RM 35.22)].	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	4.18
VAT-K33R_BMS01A12 / Burnt Mills Swamp / At confluence of Antioch Swamp to Route 258.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	5.16

Blackwater River - Lower and Burnt Mills Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.34**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K34R-01-BAC** **Mill Swamp**

Cause Location: Located northwest of Raynor, upstream tributary to Rattlesnake Swamp. Segment begins at confluence of Moores Swamp with Mill Swamp (mile 16.78) downstream to confluence with Rattlesnake Swamp (mile 0.0).

City / County: Isle Of Wight Co. Surry Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Recreational Use is impaired based on the E.coli data with 8 viol / 24 obs at DEQ (AQM) station @ 5AMSW006.77.

A Bacterial TMDL for the Chowan Study Area was developed and EPA approved on 10/14/2005 (VAT-K34R-01).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K34R_MSW01A00 / Mill Swamp / Located northwest of Raynor, upstream tributary to Rattlesnake Swamp. Segment begins at confluence of Moores Swamp with Mill Swamp (mile 16.78) downstream to confluence with Rattlesnake Swamp (mile 0.0).	4A	Escherichia coli	2010	L	8.44

Mill Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.44**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K34R-02-BAC** **Rattlesnake Swamp**

Cause Location: This cause encompasses Rattlesnake Swamp Segment from confluence of Pouches Swamp downstream to watershed boundary K33/K34.

City / County: Isle Of Wight Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Recreational Use is impaired based on E.coli data 11 viol / 35 obs.

A Bacterial TMDL for the Chowan Study Area was developed and EPA approved on 10/14/2005 (VAT-K34R-01). This TMDL includes Rattlesnake (Creek) Swamp, Mill Swamp, Cypress Swamp, Nottoway River, Little Nottoway River, Big Hounds Creek, Beaverpond Creek, Sappony Creek, and Raccoon Creek.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K34R_RKN01A02 / Rattlesnake Swamp K34 / Located northwest of Raynor. Rattlesnake Swamp Segment from confluence of Pouches Swamp downstream to watershed boundary K33/K34.	4A	Escherichia coli	2010	L	6.42

Rattlesnake Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.42**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35L-01-DO** **Airfield Pond**

Cause Location: This cause encompasses the Pond north of Lightwood Swamp, off of State Route 628.

City / County: Sussex Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

Aquatic Life Use is impaired for dissolved oxygen based on the Class III DO water quality criteria. Data from station 5ALTD005.10 has 15 viol / 42 obs for Dissolved Oxygen.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35L_LTD01A02 / Airfield Pond / Pond north of Lightwood Swamp; off of State Route 628	5C	Oxygen, Dissolved	2008	L	120.07

Airfield Pond **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:		**120.07**	

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed	Natural Sources

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35L-01-HG** **Airfield Pond**

Cause Location: This cause encompasses all of Airfield Pond north of Lightwood Swamp; Off of State Route 628.

City / County: Sussex Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

The Fish Consumption Use is impaired based on Fish Tissue data from 2006 at Station 5ALTD005.10. Fish Tissue data Impaired for Hg for fish species Brown Bullhead Catfish, Largemouth Bass, Chain Pickerel, Bowfin & Bluegill Sunfish. The VDH Fish Advisory is for all of Blackwater and its tributaries as stated on 10/29/03, modified 7/27/05 and again on 8/31/07.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35L_LTD01A02 / Airfield Pond / Pond north of Lightwood Swamp; off of State Route 628	5A	Mercury in Fish Tissue	2010	L	120.07

Airfield Pond **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**120.07**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35L-01-PH** **Airfield Pond**

Cause Location: This cause encompasses the Pond north of Lightwood Swamp, off of State Route 628.

City / County: Sussex Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Aquatic Life Use is impaired for pH based on data from station 5ALTD005.10 with 5 viol/ 42 obs for pH based on Class III water quality criteria.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35L_LTD01A02 / Airfield Pond / Pond north of Lightwood Swamp; off of State Route 628	5C	pH	2008	L	120.07

Airfield Pond **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		**120.07**	

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed	Natural Sources

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35R-02-BAC** **Seacock Swamp - Lower**

Cause Location: This cause encompasses the lower portion of Seacock swamp south of Doles Crossroads, west of State Hwy 600.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Fecal Coliform / 5A

Recreational Use impairment is retained. Need new E.coli data.
2006 01557 / 2008 K35R-02-BAC

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35R_SCK03A08 / Seacock Swamp - Lower / Lower portion of Seacock Swamp south of Doles Crossroads, west of State Hwy 600.	5A	Fecal Coliform	2004	L	2.59

Seacock Swamp - Lower **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**2.59**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35R-02-BEN** **Seacock Swamp - Lower**

Cause Location: This cause encompasses the lower portion of Seacock swamp

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use is impaired based on benthic assessment at station 5ASCK003.84 Benthic IM [MI:S-'04]. There is insufficient data to assess DO or pH.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35R_SCK03A08 / Seacock Swamp - Lower / Lower portion of Seacock Swamp south of Doles Crossroads, west of State Hwy 600.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	2.59

Seacock Swamp - Lower **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.59**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35R-03-BAC** **UT Seacock Swamp**

Cause Location: This cause encompasses the UT to Seacock Swamp, PRO CAFO special study. Headwaters to confluence with Seacock Swamp mainstem.

City / County: Surry Co.

Use(s): Recreation

Cause(s) / VA Category: Fecal Coliform / 5A

Recreational Use is not supported based on data over 5 years old (2004 IR FC data: 6 viol / 7 obs.) at 5AXDY000.96. The impaired status was retained from previous Fecal Coliform data.
Confined animal operations are present in the watershed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35R_XDY01A04 / UT Seacock Swamp- Upper / UT to Seacock Swamp, PRO CAFO special study. Headwaters to confluence with Seacock Swamp mainstem.	5A	Fecal Coliform	2004	L	1.02

UT Seacock Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**1.02**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35R-05-BAC** **UT Airfield Pond - Upper**

Cause Location: This cause encompasses UT to Airfield Pond, PRO CAFO special study. Headwaters to confluence with UT VAT-K35R_XDZ02A04.

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use impairment is based on 2015 data from Station 5AXDZ001.73 with 2 viol / 6 obs for E.coli. Previously for E.coli in 2007 was 4 viol/ 6 obs. Listing based on Fecal Coliform data impairment (TMDL ID: VAT-K41R-05) based with 13 violates / 16 observations.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35R_XDZ01A04 / UT Airfield Pond - Upper / UT to Airfield Pond, PRO CAFO special study. Headwaters to confluence with UT VAT-K35R_XDZ02A04.	5A	Escherichia coli	2004	L	0.68

UT Airfield Pond - Upper **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.68**

Sources:

Animal Feeding Operations (NPS) Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35R-06-BAC** **Seacock Swamp - Upper and Lower**

Cause Location: This cause encompasses the upper portion of Seacock Swamp between Drumwright Pond and approximately 0.2 mi east of Rt. 628 and lower Seacock Swamp between the confluence of Brantley Swamp and the confluence with Round Hill Swamp.

City / County: Southampton Co. Surry Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

The Recreation Use is impaired based on E.coli data at Station 5ASCK006.96 with 10 viol / 30 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35R_SCK02A08 / Seacock Swamp - Lower / Located west of Rt 460 south of Ivor. Lower portion of Seacock Swamp, from confluence with Brantley Swamp (RM 8.73) downstream below State Hwy 614.	5A	Escherichia coli	2012	L	2.50

Seacock Swamp - Upper and Lower **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.50**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35R_SCK01A00 / Seacock Swamp - Upper / Located west of Rt 460, south of Sussex - Southampton Co. line. Upper portion of Seacock Swamp, from Drumwright Pond downstream to confluence with unnamed tributary, approx. 0.1 mi downstream of Rt 628 crossing.	5A	Fecal Coliform	2006	L	0.84

Seacock Swamp - Upper and Lower **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**0.84**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K35R-08-BEN** **Round Hill Swamp**

Cause Location: The cause encompasses Round Hill Swamp between the confluence with Seacock Swamp and Rt. 623

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Aquatic Life Use is impaired based on benthic impairments (Benthic ProbMon-Benthic IM [MI:S-'05] at station 5ARHS000.39.

2008 K35R-08-BEN

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35R_RHS01A08 / Round Hill Swamp / Confluence of Seacock Swamp between State Route 614 and State Route 623	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	0.64

Round Hill Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.64**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-01-DO** **Blackwater - Lower Middle**

Cause Location: Segment includes water from west of Franklin Municipal Airport downstream to Cox Landing downstream to RM 0.65 (at Suffolk City & Gates County line).

City / County: Isle Of Wight Co. Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4C

The Aquatic Life Use impairment is retained. The DO impairment is Cat 4C based on EPA approval letter dated April 8, 2010 to confirm all six Blackwater segments are impaired due to natural conditions and therefore move to Category 4C. In the EPA approval letter, "it is EPAs understanding that VADEQ will request that Blackwater River (Middle, Lower-Middle, Lower. Mouth) be formally reclassified as a Class VII Swamp Water during the next triennial review of the Virginia's Water Quality Standards". Water remain in Class II with a Cat 4C until Triennial Review.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_BLW02A08 / Blackwater River - Middle / Segment includes water from east of Edgehill to west of the Franklin Municipal John Beverly Rose Airport.	4C	Oxygen, Dissolved			3.85
VAT-K36R_BLW03A08 / Blackwater River - Middle / Segment begins west of the Franklin Municipal John Beverly Rose Airport and ends at the Blackwater Landing in Franklin.	4C	Oxygen, Dissolved			2.23
VAT-K36R_BLW05A08 / Blackwater River - Lower / From Cox Landing downstream to downstream to VA/NC state line	4C	Oxygen, Dissolved			5.10

Blackwater - Lower Middle **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**11.18**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-02-BAC** **Blackwater River - Lower Middle**

Cause Location: This cause encompasses the lower Blackwater River from RM 13.76 (downstream of Franklin, confluence of UT, parallel to Hayden High School) downstream west of Union Camp Holding Pond. And from South of the Isle of Wight / Suffolk line beginning at Rt. 58 downstream to Cox Landing.

City / County: Isle Of Wight Co. Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on E.coli data from DEQ (AQM) stations:
5ABLW012.28 (6 viol / 32 obs); 5ABLW009.14 (4 viol / 34 obs); 5ABLW009.80(4 viol / 33 obs).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_BLW04A08 / Blackwater River - Lower Middle / From Blackwater Landing in Franklin the southern end of the industrial waste ponds in Isle of Wight.	5A	Escherichia coli	2006	L	2.83
VAT-K36R_BLW04C12 / Blackwater River - Lower Middle / South of the Isle of Wight / Suffolk line beginning at Rt 58 downstream to Cox Landing	5A	Escherichia coli	2012	L	4.75

Blackwater River - Lower Middle **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.58**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-02-BEN** **Black Creek**

Cause Location: This cause encompasses the Black Creek Located NW of Burdette. From Wades Pond downstream to mouth. Tributary to Blackwater R. with confluence at RM 22.0.

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use impairment is retained based on the Benthic data collected at Station 5ABLC000.88 (Benthic ProbMon-Benthic IM [MI:F-'03, VI:S-'03]).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_BLC01A06 / Black Creek / Located NW of Burdette. From Wades Pond downstream to mouth. Tributary to Blackwater R. with confluence at RM 22.0.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	4.95

Black Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.95**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-02-DO** **Blackwater River - Lower Middle**

Cause Location: This cause encompasses the area from RM 13.76 (downstream of Franklin, confluence of UT, parallel to Hayden High School) downstream west of Union Camp Holding Pond.

City / County: Isle Of Wight Co. Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4C

The Aquatic Life Use is impaired based on DO data at DEQ (AQM) stations @ 5ABLW013.16 (12 violations / 35 observations), 5ABLW012.96 (7 violations / 18 observations), 5ABLW012.28 (15 violations / 35 observations), 5ABLW011.48 (8 violations / 18 observations), 5ABLW010.60 (7 violations / 18 observations), 5ABLW009.80 (15 violations / 35 observations), 5ABLW009.14 (11 violations / 36 observations). DO impairment is Cat 4C based on EPA approval letter dated April 15, 2010 to confirm all six Blackwater segments are impaired due to natural conditions and therefore move to Category 4C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_BLW04A08 / Blackwater River - Lower Middle / From Blackwater Landing in Franklin the southern end of the industrial waste ponds in Isle of Wight.	4C	Oxygen, Dissolved			2.83
VAT-K36R_BLW04B12 / Blackwater River - Lower Middle / From Industrial Waste Ponds near Isle of Wight and Suffolk line to US-58.	4C	Oxygen, Dissolved			0.69
VAT-K36R_BLW04C12 / Blackwater River - Lower Middle / South of the Isle of Wight / Suffolk line beginning at Rt 58 downstream to Cox Landing	4C	Oxygen, Dissolved			4.75

Blackwater River - Lower Middle **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**8.27**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-03-BAC** **Black Creek- Upper**

Cause Location: This cause encompasses the upper portion of Black Creek parallel with State Route 503. Southeast of Whitefields Millpond and Johnson Millpond.

City / County: Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use is impaired based on E.coli data collected at station 5ABLC006.97 with 4 viol / 24 obs with a 16.6 % violation rate.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_BLC02A10 / Black Creek - Upper / Segment parallel with State Route 503. Southeast of Whitefields Millpond and Johnson Millpond.	5A	Escherichia coli	2010	L	3.29

Black Creek- Upper **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.29**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-03-DO** **Washole Creek**

Cause Location: This cause encompasses the area at the confluence of Blackwater. East of Franklin Sewage Disposal. South of US Hwy 58.

City / County: Isle Of Wight Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4C

The Aquatic Life Use is impaired based on DO data (10 violations / 33 observations) at station 5AWAC000.03. The DO impairment is Cat 4C based on EPA approval letter dated April 15, 2010 to confirm all six Blackwater segments are impaired due to natural conditions and therefore move to Category 4C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_WAC01A08 / Washole Creek / Segment at the confluence of Blackwater. East of Franklin Sewage Disposal. South of US Hwy 58.	4C	Oxygen, Dissolved			0.55

Washole Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**0.55**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-04-BAC** **Cypress Swamp**

Cause Location: This cause encompasses Cypress Swamp from town of Sedley downstream to Route 611.

City / County: Isle Of Wight Co. Southampton Co. Suffolk City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation Use is impaired (3 violations / 12 observations) at Station 5ACYS001.92.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_CYS01A12 / Cypress Swamp / Swamp off of Blackwater River. From Town of Sedley downstream to Route 611.	5A	Escherichia coli	2012	L	5.16

Cypress Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.16**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-04-BEN** **Unsegmented Tributary to Blackwater**

Cause Location: This cause encompasses the Unsegmented River from Blackwater South of Franklin to North of State Hwy 58.

City / County: Southampton Co. Suffolk City

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use is impaired based on Benthic Impairments. The Benthic ProbMon is impaired [VI:S&F-'06, 07] AT DEQ (ProbMon) Station @ 5AXGI001.79.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_XGI01A08 / Unsegmented Tributary to Blackwater / Unsegmented river from Blackwater south of Franklin and north of State Hwy 58	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	2.75

Unsegmented Tributary to Blackwater **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.75**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-05-BAC** **Washole Creek**

Cause Location: This cause encompasses the area at the confluence of Blackwater. East of Franklin Sewage Disposal. South of US Hwy 58.

City / County: Isle Of Wight Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation Use ins not supporting based on E.coli data (4 violations / 33 observations) at station 5AWAC000.30.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_WAC01A08 / Washole Creek / Segment at the confluence of Blackwater. East of Franklin Sewage Disposal. South of US Hwy 58.	5A	Escherichia coli	2014	L	0.55

Washole Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.55**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-07-BAC** **Blackwater River - Upper**

Cause Location: This cause encompasses the Blackwater River segment north of Maynards Crossroads and State Hwy 630 and ends at Joyners Bridge

City / County: Isle Of Wight Co. Southampton Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use impairment is retained with 3 viol / 30 observation. Additional samples needed for delist. Recreation Use was impaired based on data at station 5ABLW022.84 with 4 viol / 32 obs in 2016 IR.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_BLW02B08 / Blackwater River - Upper / Segment begins north of Maynards Crossroads and State Hwy 630 and ends at Joyners Bridge.	5A	Escherichia coli	2016	L	2.47

Blackwater River - Upper **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.47**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K36R-08-BAC** **Ducks Swamp**

Cause Location: This cause encompasses the area from the confluence with Jenkins Swamp upstream to confluence with Corrowaugh Swamp -north of Walters and Aqueduct.

City / County: Isle Of Wight Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use is not supported based on E.coli data collected at station 5ADKS000.09 with 3 viol / 24 obs. Station was supporting based on E.coli in the 2016 IR.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K36R_DKS01A10 / Ducks Swamp / From confluence with Jenkins Swamp upstream to confluence with Corrowaugh Swamp - north of Walters and Aqueduct.	5A	Escherichia coli	2018	L	2.61

Ducks Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.61**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K37R-01-PH** **Buckhorn Creek**

Cause Location: This cause encompasses all of Northern Branch of Buckhorn Creek (within Virginia).

City / County: Southampton Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 4C

The Aquatic Life Use is impaired due to depressed pH concentrations, impairment continued from 2004 IR at DEQ (AQM) station @ 5AXDN000.48 (segment Class change from III to VII, can not delist previous impairments since no current data). A natural conditions report is complete that determined the pH impairment was not influenced by anthropogenic sources.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K37R_XDN01A00 / Buckhorn Creek / All of Northern Branch of Buckhorn Creek (within Virginia).	4C	pH			1.52

Buckhorn Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.52**

Sources:

Naturally Occurring Organic Acids

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K38R-01-BEN** **Somerton Creek**

Cause Location: This cause encompasses the area of Somerton Creek from 5 miles upstream from monitoring station (RM 10.36) downstream to VA/NC state line.

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use is impaired based on the Benthic Impairments at Station 5ASTN008.78. Station 5ASTN008.78 Benthic IM [MI:F-'04].

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K38R_STN01A00 / Somerton Creek / Somerton Creek from 5 miles upstream from monitoring station (RM 10.36) downstream to VA/NC state line.	5A	Benthic-Macroinvertebrate Bioassessments	2006	L	9.38

Somerton Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.38**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K38R-02-BAC** **March Swamp**

Cause Location: This cause encompasses entirety of March Swamp. Northeast of Factory Hill. Northern tributary to Somerton Creek.

City / County: Suffolk City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on E.coli data at DEQ (AQM) station @ 5AMAR001.65 with 2 viol / 15 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K38R_MAR01A06 / March Swamp / Northeast of Factory Hill. Northern tributary to Somerton Creek. Entirety of swamp.	5A	Escherichia coli	2008	L	7.71

March Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.71**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K38R-04-BAC** **Jones Swamp**

Cause Location: This cause encompasses from Spivey Swamp near Rt. 643 (Arthur Dr) upstream to confluence with Quaker Swamp near Route 664.

City / County: Suffolk City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation is impaired with 4 viol / 17 obs for E. Coli @ DEQ Station 5AJNS001.89.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K38R_JNS01A14 / Jones Swamp / Trib to Spivey Swamp near Rt. 643 (Arthur Dr) upstream to confluence with Quaker Swamp near Route 664.	5A	Escherichia coli	2014	L	3.80

Jones Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.80**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K38R-05-BAC** **Chapel Swamp**

Cause Location: This cause encompasses the Northern tributary of Somerton Creek. Located east of Cleopus. Entirety of swamp.

City / County: Suffolk City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use is impaired with 2 viol / 16 obs at station 5ACHP002.03.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K38R_CHP01A04 / Chapel Swamp / Northern tributary of Somerton Creek. Located east of Cleopus. Entirety of swamp.	5A	Escherichia coli	2014	L	8.28

Chapel Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.28**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K38R-06-BAC** **Somerton Creek**

Cause Location: This cause encompasses Somerton Creek from 5 miles upstream from monitoring station (RM 10.36) downstream to VA/NC state line.

City / County: Suffolk City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use impaired based on E. coli data from station 5ASTN008.78 with 7 viol/ 34 viol.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K38R_STN01A00 / Somerton Creek / Somerton Creek from 5 miles upstream from monitoring station (RM 10.36) downstream to VA/NC state line.	5A	Escherichia coli	2016	L	9.38

Somerton Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.38**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K38R-07-DO** **Jones Swamp**

Cause Location: This cause encompasses the Trib to Spivey Swamp from Rt. 643 (Arthur Dr) upstream to confluence with Quaker Swamp near Route 664.

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

The Aquatic Life Use is not supported based on DO data collected at station 5AJNS001.89 with 12 viol/ 17 obs. Impairment is suspected to be natural conditions.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K38R_JNS01A14 / Jones Swamp / Trib to Spivey Swamp near Rt. 643 (Arthur Dr) upstream to confluence with Quaker Swamp near Route 664.	5C	Oxygen, Dissolved	2018	L	3.80

Jones Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.80**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K38R-07-PH** **Jones Swamp**

Cause Location: This cause encompasses the Trib to Spivey Swamp from Rt. 643 (Arthur Dr) upstream to confluence with Quaker Swamp near Route 664.

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

The Aquatic Life Use is not supported based on pH data collected at station 5AJNS001.89 with 6 viol/ 17 obs. Impairment is suspected to be natural conditions.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K38R_JNS01A14 / Jones Swamp / Trib to Spivey Swamp near Rt. 643 (Arthur Dr) upstream to confluence with Quaker Swamp near Route 664.	5C	pH	2018	L	3.80

Jones Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.80**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K39L-01-HG** **Lake Drummond**

Cause Location: This cause encompasses the entirety of lake Drummond within the Great Dismal Swamp National Wildlife Refuge. Located on City of Suffolk/City of Chesapeake boundary near NC state line.

City / County: Chesapeake City Suffolk City

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

The Fish Consumption Use is impaired based on the VDH fish consumption advisory for Bowfin and Chain Pickerel (issued 10/2003 & modified 7/27/05, 8/31/2007 recommending no more than two meals/month due to Hg reported in fish tissue).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K39L_LKD01A06 / Lake Drummond / Within the Great Dismal Swamp National Wildlife Refuge. Located on City of Suffolk/City of Chesapeake boundary near NC state line. Entirety of lake.	5A	Mercury in Fish Tissue	2006	L	######

Lake Drummond **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**3,241.96**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

Cause Group Code: **K39L-01-PH** **Lake Drummond**

Cause Location: This cause encompasses the entirety of lake Drummond within the Great Dismal Swamp National Wildlife Refuge. Located on City of Suffolk/City of Chesapeake boundary near NC state line.

City / County: Chesapeake City Suffolk City

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

The Aquatic Life Use is impaired based on the pooled pH exceedance of the criteria for this parameter with a violation rate of 100% (113 violates/113 obs.).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K39L_LKD01A06 / Lake Drummond / Within the Great Dismal Swamp National Wildlife Refuge. Located on City of Suffolk/City of Chesapeake boundary near NC state line. Entirety of lake.	5C	pH	2008	L	######

Lake Drummond **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		**3,241.96**	

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed — Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K39R-01-HG** **Dismal Swamp Canal & Feeder Ditch to Lake Drummond**

Cause Location: This cause encompasses the Dismal Swamp Canal from Deep Creek Locks to VA/NC state line and including Feeder Ditch to Lake Drummond and unsegmented rivers in K39R.

City / County: Chesapeake City

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

The Fish Consumption Use is impaired based on the VDH fish consumption advisory for Bowfin and Chain Pickerel (issued 10/2003 & modified 7/27/05, recommending no more than two meals/month due to Hg reported in fish tissue).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K39R_XCK01A00 / Dismal Swamp Canal & Feeder Ditch to Lake Drummond / Dismal Swamp Canal from Deep Creek Locks to VA/NC state line and including Feeder Ditch to Lake Drummond.	5A	Mercury in Fish Tissue	2004	L	13.21

Dismal Swamp Canal & Feeder Ditch to Lake Drummond **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**13.21**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

Cause Group Code: **K39R-02-HG** **Unsegmented rivers in K39R**

Cause Location: This cause encompasses the non-segmented rivers-feeder ditches within K39.

City / County: Chesapeake City Suffolk City

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

Fish Consumption Use impairment for Mercury is retained for 2018 IR. Monitoring data at Station 5B-GDS-ED is from 2005. The feeder ditches flow to Lake Drummond which is impaired for Fish Consumption based on a VDH Fish Consumption Advisory.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K39R_ZZZ01B08 / Unsegmented rivers in K39R / Evaluated non-segmented areas of K39. majority of waters are feeder ditches to Lake Drummond.	5A	Mercury in Fish Tissue	2010	L	15.28

Unsegmented rivers in K39R **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**15.28**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K39R-03-BAC** **Adams Swamp**

Cause Location: This cause encompasses the Swamp in its entirety located in Suffolk from NC/VA border near Route 673 to headwaters.

City / County: Chesapeake City Suffolk City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use is impaired based on E.coli data collected at station 5BADA002.34 with 6 viol / 11 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K39R_ADA01A18 / Adams Swamp / Swamp in its entirety located in Suffolk from NC/VA border near Route 673 to headwaters.	5A	Escherichia coli	2018	L	2.99

Adams Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.99**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K39R-03-DO** **Adams Swamp**

Cause Location: This cause encompasses the Swamp in its entirety located in Suffolk from NC/VA border near Route 673 to headwaters.

City / County: Chesapeake City Suffolk City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

The Aquatic Life Use is impaired based on pH and DO data collected at station 5BADA002.34. Data collected at the station has 7 viol / 11 obs for DO and 8 viol / 11 obs for pH.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K39R_ADA01A18 / Adams Swamp / Swamp in its entirety located in Suffolk from NC/VA border near Route 673 to headwaters.	5C	Oxygen, Dissolved	2018	L	2.99

Adams Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.99**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K39R-03-PH** **Adams Swamp**

Cause Location: This cause encompasses the Swamp in its entirety located in Suffolk from NC/VA border near Route 673 to headwaters.

City / County: Chesapeake City Suffolk City

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

The Aquatic Life Use is impaired based on pH and DO data collected at station 5BADA002.34. Data collected at the station has 7 viol / 11 obs for DO and 8 viol / 11 obs for pH.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K39R_ADA01A18 / Adams Swamp / Swamp in its entirety located in Suffolk from NC/VA border near Route 673 to headwaters.	5C	pH	2018	L	2.99

Adams Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.99**

Sources:

Natural Sources

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K40R-01-DO** **Unnamed tributary to Northwest River**

Cause Location: This cause encompasses the Unnamed trib to Northwest River from St Brides Rd crossing to confluence with Northwest River. Within PWS area.

City / County: Chesapeake City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

Aquatic Life Use impairment is due to low dissolved oxygen concentrations (20/30) at DEQ (AQM) station @ 5BXAM000.60. A Total Maximum Daily Load was development for the Northwest River Watershed for Total Phosphorus due to Low Dissolved Oxygen. EPA Approved 4/26/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K40R_XAM01A02 / Unnamed tributary to Northwest River (PWS) / Unnamed trib to Northwest River from St Brides Rd crossing to confluence with Northwest River. Within PWS area.	4A	Oxygen, Dissolved	2002	L	4.06

Unnamed tributary to Northwest River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**4.06**

Sources:

Contaminated Groundwater	Municipal Point Source Discharges	Non-Point Source	Runoff from Forest/Grassland/Parkland

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

Cause Group Code: **K40R-02-BAC** **Northwest River - Middle (PWS)**

Cause Location: This cause encompasses Northwest River from RM 16.63 (start of PWS) to RM 12.0 near 168 . Upstream of Pine Grove Lane, downstream to 168.

City / County: Chesapeake City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

E. coli data impaired with 5 viol/ 32 obs at station 5BNTW012.86

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K40R_NTW02A00 / Northwest River - Middle (PWS) / Northwest River from RM 16.63 (start of PWS) to RM 12.0 near 168 . Upstream of Pine Grove Lane, downstream to 168.	5A	Escherichia coli	2006	L	5.69

Northwest River - Middle (PWS) **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.69**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K40R-02-DO** **Northwest River (Upper, Middle, Lower & Mouth)**

Cause Location: This cause encompasses all of the Northwest River.

City / County: Chesapeake City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

The Aquatic Life Use is impaired based on low dissolved oxygen. The DO was assessed using Stations 5BNTW012.86 (21/32), 5BNTW011.90(19/32), 5BNTW008.97 (8/32), 5BNTW009.49 (9/32), 5BNTW010.23 (10/32), & Station 5BNTW007.49(9 violates /32 obs.). EPA approved TMDL April 26,2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K40R_NTW01A00 / Northwest River - Upper (Non-PWS) / Northwest River from mile 22.15 to 16.63, upstream of Chesapeake's intake and PWS area. From the headwaters downstream to start of PWS area, upstream of Pine Grove Lane.	4A	Oxygen, Dissolved	1998	L	7.43
VAT-K40R_NTW02A00 / Northwest River - Middle (PWS) / Northwest River from RM 16.63 (start of PWS) to RM 12.0 near 168 . Upstream of Pine Grove Lane, downstream to 168.	4A	Oxygen, Dissolved	1998	L	5.69
VAT-K40R_NTW03A08 / Northwest River - Lower (PWS) / Northwest River from 168 to the Indian Creek Confluence	4A	Oxygen, Dissolved	1998	L	2.82
VAT-K40R_NTW04A08 / Northwest River - Mouth (PWS) / Northwest River below Indian Creek confluence downstream to the VA state line @ RM 7.49.	4A	Oxygen, Dissolved	2010	L	1.90

Northwest River (Upper, Middle, Lower & Mouth) **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**17.84**

Sources:

Agriculture	Contaminated Groundwater	Discharges from Municipal Separate Storm Sewer Systems (MS4)	Municipal Point Source Discharges
Non-Point Source	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Runoff from Forest/Grassland/Parkland	Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K40R-04-HG** **Northwest River - Middle**

Cause Location: This cause encompasses the Northwest River from RM 16.63 (start of PWS) to RM 12.0 near 168 . Upstream of Pine Grove Lane, downstream to 168.

City / County: Chesapeake City

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

The Fish Consumption Use is impaired based on FT data collected at Station 5BNTW011.90. The mercury Fish Tissue Value was violated in 2007 (07-IM- FT_Met Hg Largemouth Bass & Bowfin).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K40R_NTW02A00 / Northwest River - Middle (PWS) / Northwest River from RM 16.63 (start of PWS) to RM 12.0 near 168 . Upstream of Pine Grove Lane, downstream to 168.	5A	Mercury in Fish Tissue	2010	L	5.69

Northwest River - Middle **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**5.69**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K40R-06-DO** **Indian Creek tributary to Northwest River**

Cause Location: This cause encompasses the area from the St. Brides Rd. crossing downstream to the confluence with the Northwest River. Located southeast of Saint Brides.

City / County: Chesapeake City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

The Aquatic Life Use impairment is due to low dissolved oxygen concentrations (8/33) at DEQ (AQM) stations @ 5BIND001.15. Not determined to be natural conditions therefore a TMDL was completed and EPA approved 4/26/2011 that assigned a TP endpoint for the DO impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K40R_IND01A02 / Indian Creek tributary to Northwest River / From the St. Brides Rd. crossing downstream to the confluence with the Northwest River. Located southeast of Saint Brides.	4A	Oxygen, Dissolved	2002	L	3.46

Indian Creek tributary to Northwest River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.46**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K40R-09-BAC** **Indian Creek tributary to Northwest River**

Cause Location: From the St. Brides Rd. crossing downstream to the confluence with the Northwest River. Located southeast of Saint Brides.

City / County: Chesapeake City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on E.coli data collected at station 5BIND001.15 with 8 viol / 31 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K40R_IND01A02 / Indian Creek tributary to Northwest River / From the St. Brides Rd. crossing downstream to the confluence with the Northwest River. Located southeast of Saint Brides.	5A	Escherichia coli	2006	L	3.46

Indian Creek tributary to Northwest River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.46**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-01-BEN** **Pocaty River**

Cause Location: This cause encompasses the Pocaty River and selected tribs. from headwaters at mile 3.92 to confluence with North Landing River at mile 0.00.

City / County: Chesapeake City Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use impairment is retained based on benthic impairment. Data collected at station 5BPCT002.16 MI: S-03 and VI:F-03.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_PCT01A02 / Pocaty River / Pocaty River and selected tribs. from headwaters at mile 3.92 to confluence with North Landing River at mile 0.00.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	7.43

Pocaty River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**7.43**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-01-DO** **Pocaty River**

Cause Location: This cause encompasses the Pocaty River and selected tribs. from headwaters at mile 3.92 to confluence with North Landing River at mile 0.00.

City / County: Chesapeake City Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

The Aquatic Life Use is impaired based on low dissolved oxygen concentrations. The cause of the depressed dissolved oxygen concentrations is suspected to be naturally occurring. DO violates 17/ 34 obs at Station 5BPCT001.79

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_PCT01A02 / Pocaty River / Pocaty River and selected tribs. from headwaters at mile 3.92 to confluence with North Landing River at mile 0.00.	4A	Oxygen, Dissolved	2002	L	7.43

Pocaty River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**7.43**

Sources:

Crop Production (Crop Land or Dry Land)	Non-Point Source	Source Unknown	Urban Runoff/Storm Sewers

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-02-BAC** **Milldam Creek - Lower**

Cause Location: This cause encompasses the tidally influenced portion of Milldam Creek from Blackwater Rd. crossing (RM 1.92) to confluence with North landing River @ RM 0.00.

City / County: Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Recreation Use is impaired due to E.coli concentrations exceeding the swimming indicator criteria (4/32) at DEQ (AQM) station @ 5BMLD001.92. TMDL EPA approved 9/27/2005.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_MLD02A06 / Milldam Creek - Lower / Tidally influenced portion of Milldam Creek from Blackwater Rd. crossing (RM 1.92) to confluence with North landing River @ RM 0.00.	4A	Escherichia coli	1998	M	2.54

Milldam Creek - Lower **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.54**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-02-DO** **Milldam Creek - Lower**

Cause Location: This cause encompasses the tidally influenced portion of Milldam Creek from Blackwater Rd. crossing (RM 1.92) to confluence with North Landing River @ RM 0.00.

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

Aquatic Life Use is impairment due to low dissolved oxygen concentrations (12 viol /34 obs) at DEQ (AQM) station @ 5BMLD001.92. The pH is supporting (0 viol / 35 obs). A Stressor Report was developed for the Dissolved Oxygen Assessment for Virginia Beach (Albemarle Canal/ North Landing River, Milldam Creek, West Neck Creek (middle), and Nawney Creek). EPA Approved letter for 4A 12/14/2010. It was determined that the approved bacterial TMDL should significantly reduce organic matter and nutrients and thus a TMDL specifically addressing DO is not required. However, if conditions do not improve through implementation of the Bacteria TMDL consideration will be given to develop an additional TMDL for DO.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_MLD02A06 / Milldam Creek - Lower / Tidally influenced portion of Milldam Creek from Blackwater Rd. crossing (RM 1.92) to confluence with North landing River @ RM 0.00.	4A	Oxygen, Dissolved	2006	L	2.54

Milldam Creek - Lower **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.54**

Sources:

Grazing in Riparian or Shoreline Zones	Non-Point Source	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Rural (Residential Areas)

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-03-DO** **Albemarle Canal & North Landing River - Middle**

Cause Location: This cause encompasses the Albemarle Canal (Intracoastal Waterway) and North Landing River from the Great Bridge Locks downstream to confluence with West Neck Creek.

City / County: Chesapeake City Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

The Aquatic Life Use impairment is retained. Current data within assessment window is 0 viol / 1 obs for dissolved oxygen at Station 5BAAC000.49. Low DO impairment at 5BNLR013.61 has 14 viol / 36 obs. EPA approved TMDL 1/13/2011 for Albemarle Canal/North Landing River.

1999 CD segment for DO (Attachment B) VAT-K41R-03.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_AAC01A06 / Albemarle Canal (upstream of North Landing River) / Albemarle and Chesapeake Canal (Intracoastal Waterway) from Great Bridge Locks downstream to confluence with North Landing River (RM 13.65).	4A	Oxygen, Dissolved	2002	L	8.55
VAT-K41R_NLR02A06 / North Landing River - Middle / From confluence with Intracoastal Waterway (RM 13.65) downstream to instream Island (RM 12.01, upstream of confluence of West Neck Creek).	4A	Oxygen, Dissolved	2006	L	2.15

Albemarle Canal & North Landing River - Middle **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**10.70**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-05-BAC** **West Neck Creek - Middle**

Cause Location: This cause encompasses the segment from southside of Princess Anne Road crossing (RM 6.20) downstream to widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossing.

City / County: Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

Recreation Use is impaired based on E.coli data collected at station 5BWNC003.65 with 4 viol / 15 obs. Initial impairment (2002 cycle) (TMDL ID: VAT-K41R-05) based on fecal coliform.

A Bacterial TMDL was developed for the Virginia Beach Coastal Area (London Bridge Creek & Canal # 2, Milldam Creek, Nawney Creek, West Neck Creek (Middle), and West Neck Creek (Upper)) and was approved by EPA 9/05.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_WNC01A00 / West Neck Creek - Middle / Segment from south side of Princess Anne Road crossing (RM 6.20) downstream to widening of creek (RM 3.10) near Indian River Road crossing.	4A	Escherichia coli	2002	M	3.40

West Neck Creek - Middle **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.40**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-05-DO** **West Neck Creek - Middle**

Cause Location: This cause encompasses the area from southside of Princess Anne road crossing (RM 6.20) downstream to widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossing.

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

Aquatic Life Use is impaired for DO (12 obs / 33 obs) at DEQ station 5BWNC003.65. The high nutrient and total organic solids concentrations indicate that anthropogenic sources are exacerbating the naturally low DO conditions in the stream.
A Stressor Report was developed for the Dissolved Oxygen Assessment for Virginia Beach (Albemarle Canal/ North Landing River, Milldam Creek, West Neck Creek (middle), and Nawney Creek). EPA Approved letter for 4A classification , 12/14/2010. It was determined that the approved bacterial TMDL should significantly reduce organic matter and nutrients and thus a TMDL specifically addressing DO is not required. However, if conditions do not improve through implementation of the Bacteria TMDL consideration will be given to develop an additional TMDL for DO.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_WNC01A00 / West Neck Creek - Middle / Segment from south side of Princess Anne Road crossing (RM 6.20) downstream to widening of creek (RM 3.10) near Indian River Road crossing.	4A	Oxygen, Dissolved	2002	L	3.40

West Neck Creek - Middle **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.40**

Sources:

Livestock (Grazing or Feeding Operations)	Natural Conditions - Water Quality Standards Use Attainability Analyses Needed	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Urban Runoff/Storm Sewers

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-05-PCB** **West Neck Creek - Middle**

Cause Location: This cause encompasses the area from southside of Princess Anne road crossing (RM 6.20) downstream to widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossing.

City / County: Virginia Beach City

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Fish Tissue / 5A

The Fish Consumption Use is impaired based on Fish Tissue data collected at Station 5BWNC003.65. 07-IM, FT_PCB White Catfish, Carp & FT-OE, Met_As Carp.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_WNC01A00 / West Neck Creek - Middle / Segment from south side of Princess Anne Road crossing (RM 6.20) downstream to widening of creek (RM 3.10) near Indian River Road crossing.	5A	PCB in Fish Tissue	2010	L	3.40

West Neck Creek - Middle **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**3.40**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-08-BAC** **Blackwater Creek**

Cause Location: This cause encompasses the area of Blackwater Creek from headwaters at RM 3.2 to confluence with North Landing River RM 0.0.

City / County: Chesapeake City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

Recreation Use is not supported based on E.coli data collected in the 2018 IR with 4 viol/ 32 obs at station 5BBKW002.50. This station was previously impaired in 2006 and 2008. Then in 2010 this station was delisted. From 2010 to 2016 this station was fully supporting Recreation Use with 2 viol / 34 obs in 2014 and 3 viol / 31 obs in 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_BKW01A00 / Blackwater Creek / Blackwater Creek from headwaters at RM 3.2 to confluence with North Landing River RM 0.0.	5A	Escherichia coli	2006	L	4.47

Blackwater Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.47**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-09-BAC** **Pocaty River**

Cause Location: This cause encompasses Pocaty River and selected tribs. from headwaters at mile 3.92 to confluence with North Landing River at mile 0.00.

City / County: Chesapeake City Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

The Recreation Use is not supported based on data at Station 5BPCT001.79 with 5 viol / 32 obs.

A Total Maximum Daily Load has been Developed for the Back Bay, North Landing River, and Pocaty River Watersheds for E. coli and Enterococci due to Recreation Use Impairments and Total Phosphorus Due to Low Dissolved Oxygen in Aquatic Life Use impairments. EPA approved 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_PCT01A02 / Pocaty River / Pocaty River and selected tribs. from headwaters at mile 3.92 to confluence with North Landing River at mile 0.00.	4A	Escherichia coli	2012	L	7.43

Pocaty River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.43**

Sources:

Agriculture Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-12-BEN** **Unnamed Trib to Milldam Creek**

Cause Location: This cause encompasses the area from the confluence with Milldam Creek to Crags Cswy.

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Aquatic Life Use is not supported based on benthic data from Station 5BXAT000.30. Benthic IM [VI:S&F-09 & S-10; MI:F-10]

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_XAT01A12 / Unnamed Trib to Milldam Creek / From Confluence with Milldam Creek to Crags Cswy	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	0.66

Unnamed Trib to Milldam Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.66**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-12-DO** **Unnamed Trib to Milldam Creek**

Cause Location: This cause encompasses the area from the confluence with Milldam Creek to Crags Cswy.

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

Aquatic Life Use is not supported based DO data from Station 5BXAT000.30, DO with 4 viol / 4 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_XAT01A12 / Unnamed Trib to Milldam Creek / From Confluence with Milldam Creek to Crags Cswy	5A	Oxygen, Dissolved	2014	L	0.66

Unnamed Trib to Milldam Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**0.66**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K41R-13-DO** **Blackwater Creek**

Cause Location: This cause encompasses the Blackwater Creek from headwaters at RM 3.2 to confluence with North Landing River RM 0.0.

City / County: Chesapeake City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

Dissolved oxygen is impaired. 4 viol/ 34 obs at station 5BBKW002.50.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_BKW01A00 / Blackwater Creek / Blackwater Creek from headwaters at RM 3.2 to confluence with North Landing River RM 0.0.	5A	Oxygen, Dissolved	2008	L	4.47

Blackwater Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**4.47**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-01-BAC** **Nawney Creek - Upper**

Cause Location: This cause encompasses the Upper portion of Nawney Creek, 0.8 mi. upstream of Nawney Creek Road bridge (RM 1.92) downstream 0.6 mi. from Nawney Creek Road bridge to RM 1.24.

City / County: Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

The Recreation Use is impaired based on Enterococci data that exceed the swimming criteria indicator with 10 violate/ 33 observations. A Bacterial TMDL was developed for the Virginia Beach Coastal Area (London Bridge Creek & Canal # 2, Milldam Creek, Tawney Creek, West Neck Creek (Middle), and West Neck Creek (Upper)) EPA approved 9/ 2005.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_NWN01A00 / Nawney Creek - Upper / Upper portion of Nawney Creek, 0.8 mi. upstream of Nawney Creek Road bridge (RM 1.92) downstream 0.6 mi. from Nawney Creek Road bridge to RM 1.24.	4A	Enterococcus	2004	M	0.016

Nawney Creek - Upper **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.016**		

Sources:

Animal Feeding Operations (NPS)	Crop Production (Crop Land or Dry Land)	Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
Runoff from Forest/Grassland/Parkland	Waterfowl	Wildlife Other than Waterfowl	

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-01-DO** **Nawney Creek - Upper**

Cause Location: This cause encompasses the Upper portion of Nawney Creek, 0.8 mi. upstream of Nawney Creek Road bridge (RM 1.92) downstream 0.6 mi. from Nawney Creek Road bridge to RM 1.24.

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

Aquatic Life Use impaired due to low dissolved oxygen concentrations below the criteria minimum (4.0 mg/l) in the headwaters of the segment. Station 5BNWN001.84 violates 13 out of 33 observations for DO. pH is supporting with 0 viol / 35 obs. High nutrients and organic solids concentrations are present in the stream, which are exacerbating the naturally low DO conditions. Therefore, impairment is a result of anthropogenic impacts. The implementation of the Bacteria TMDL approved in 2005 will improve excessive nutrients and organic solids concentrations. If conditions do not improve through implementation of the Bacteria TMDL consideration will be given to develop an additional TMDL for DO.

EPA understands DEQ intends to revise WQS for this stream in the next triennial review to reflect natural low DO conditions in this stream.

Dissolved Oxygen Assessment for Virginia Beach EPA approved 10/26/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_NWN01A00 / Nawney Creek - Upper / Upper portion of Nawney Creek, 0.8 mi. upstream of Nawney Creek Road bridge (RM 1.92) downstream 0.6 mi. from Nawney Creek Road bridge to RM 1.24.	4A	Oxygen, Dissolved	2002	L	0.016

Nawney Creek - Upper **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:	**0.016**		

Sources:

Livestock (Grazing or Feeding Operations)	Natural Conditions - Water Quality Standards Use Attainability Analyses Needed	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Runoff from Forest/Grassland/Parkland
Urban Runoff/Storm Sewers			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-02-BAC** **Nawney Creek - Lower**

Cause Location: This cause encompasses the lower portion of Nawney Creek, from 0.6 mi. downstream from Nawney Creek Road bridge (RM 1.24) downstream to RM 0.00 (confluence with Redhead/Back Bay).

City / County: Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Recreation Use is not supported based on Enterococcus data (13 violations/ 34 observations) at DEQ station @ 5BNWN000.00.

A Bacterial TMDL for the Virginia Beach Coastal Area (London Bridge Creek and Canal #2, Milldam Creek, Tawney Creek, West Neck Creek (Middle), and West Neck Creek (Upper)) was approved on 09/27/2005.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_NWN02A00 / Nawney Creek - Lower / Lower portion of Nawney Creek, from 0.6 mi. downstream from Nawney Creek Road bridge (RM 1.24) downstream to RM 0.00 (confluence with Redhead/Back Bay).	4A	Enterococcus	2006	M	0.017

Nawney Creek - Lower **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.017**		

Sources:

Crop Production (Crop Land or Dry Land)	Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Runoff from Forest/Grassland/Parkland
Waterfowl	Wildlife Other than Waterfowl		

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-02-DO** **Nawney Creek - Lower**

Cause Location: This cause encompasses the lower portion of Nawney Creek, from 0.6 mi. downstream from Nawney Creek Road bridge (RM 1.24) downstream to RM 0.00 (confluence with Redhead/Back Bay).

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

Aquatic Life Use impairment based on DO data violates 7 out of 33 observations at DEQ station @ 5BNWN000.00. High nutrients and organic solids concentrations are present in the stream, which are exacerbating the naturally low DO conditions. Therefore, impairment is a result of anthropogenic impacts. The implementation of the Bacteria TMDL approved in 2005 will improve excessive nutrients and organic solids concentrations. If conditions do not improve through implementation of the Bacteria TMDL consideration will be given to develop an additional TMDL for DO.

EPA understands DEQ intends to revise WQS for this stream in the next triennial review to reflect natural low DO conditions in this stream.

Dissolved Oxygen Assessment for Virginia Beach EPA approved 10/26/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_NWN02A00 / Nawney Creek - Lower / Lower portion of Nawney Creek, from 0.6 mi. downstream from Nawney Creek Road bridge (RM 1.24) downstream to RM 0.00 (confluence with Redhead/Back Bay).	4A	Oxygen, Dissolved	2008	L	0.017

Nawney Creek - Lower **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:	**0.017**		

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-04-BAC** **Muddy Creek**

Cause Location: This cause encompasses area at confluence with Ashville Bridge Creek and ends at the mouth, the confluence with North Bay.

City / County: Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

The Recreation Use is impaired due to Enterococci bacteria concentrations exceeding the swimming criteria (8 viol /35 obs) at DEQ station @ 5BMDY000.00.

A Total Maximum Daily Load has been Developed for the Back Bay, North Landing River, and Pocaty River Watersheds for E. coli and Enterococci due to Recreation Use Impairments and Total Phosphorus Due to Low Dissolved Oxygen in Aquatic Life Use impairments. EPA approved 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_MDY01A04 / Muddy Creek / Located southeast of Pungo. Segment begins at confluence with Ashville Bridge Creek and ends at the mouth, the confluence with North Bay.	4A	Enterococcus	2004	L	0.026

Muddy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.026**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-05-BAC** **Beggars Bridge Creek**

Cause Location: This cause encompasses the area southeast of Dawley Corners, tributary to Shipps Bay. 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.

City / County: Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Recreation Use is impaired based on Enterococci data collected at station 5BBBC000.76 with 7 viol / 35 obs.

A Total Maximum Daily Load has been Developed for the Back Bay, North Landing River, and Pocaty River Watersheds for E. coli and Enterococci due to Recreation Use Impairments and Total Phosphorus Due to Low Dissolved Oxygen in Aquatic Life Use impairments. EPA approved 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_BBC01A04 / Beggars Bridge Creek / Located southeast of Dawley Corners, tributary to Shipps Bay. 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.	4A	Enterococcus	2004	L	0.042

Beggars Bridge Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.042**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

Cause Group Code: **K42E-06-BAC** **Ashville Bridge Creek - Lower**

Cause Location: This cause encompasses the lower portion of Ashville Bridge Creek, between Hell Point and Muddy Creeks.

City / County: Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Recreation Use is impaired based on 2 violates out of 10 observations for Enterococci data at station 5BASH002.20. This was last sampled in 2006, no new data therefore it is retained.

A Total Maximum Daily Load has been Developed for the Back Bay, North Landing River, and Pocaty River Watersheds for E. coli and Enterococci due to Recreation Use Impairments and Total Phosphorus Due to Low Dissolved Oxygen in Aquatic Life Use impairments. EPA approved 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_ASH01A06 / Ashville Bridge Creek - Lower / Lower portion of Ashville Br. Cr., between Hell Point and Muddy Creeks.	4A	Enterococcus	2006	L	0.022

Ashville Bridge Creek - Lower **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.022**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-06-DO** **Ashville Bridge Creek - Lower**

Cause Location: This cause encompasses the lower portion of Ashville Bridge Creek, between Hell Point and Muddy Creeks.

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

Aquatic Life Use is impaired due to low dissolved oxygen concentrations 2 exceedances / 15 observations below the criteria minimum (4.0 mg/l) at DEQ station @5BASH002.20.

Asheville Bridge has one permitted discharge- City of Virginia Beach MS4. Land Use is primarily crop, wetland and forest. Nutrient Monitoring data used in the TMDL exceed screening levels and are evidence of human impact to the stream. The phosphorus load reduction for Asheville Bridge is 34.59%.

A Total Maximum Daily Load has been Developed for the Back Bay, North Landing River, and Pocaty River Watersheds for E. coli and Enterococci due to Recreation Use Impairments and Total Phosphorus Due to Low Dissolved Oxygen in Aquatic Life Use impairments. EPA approved 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_ASH01A06 / Ashville Bridge Creek - Lower / Lower portion of Ashville Br. Cr., between Hell Point and Muddy Creeks.	4A	Oxygen, Dissolved	2006	L	0.022

Ashville Bridge Creek - Lower **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:	**0.022**		

Sources:

Contaminated Groundwater	Municipal Point Source Discharges	Non-Point Source	Runoff from Forest/Grassland/Parkland

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-06-PH** **Ashville Bridge Creek - Lower**

Cause Location: This cause encompasses the lower portion of Ashville Bridge Creek, between Hell Point and Muddy Creeks.

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Aquatic Life Use impairment based on pH will be retained in the 2018 IR. Data is from 2005-2006 with 1 viol / 15 obs. New data is needed to delist pH.

Asheville Bridge has one permitted discharge- City of Virginia Beach MS4. Land Use is primarily crop, wetland and forest. Nutrient Monitoring data used in the TMDL exceed screening levels and are evidence of human impact to the stream. The phosphorus load reduction for Asheville Bridge is 34.59%. The pH impairment was determined to be contributed by atmospheric deposition in the TMDL and will be addressed in a ecoregion/ statewide TMDL. The nutrient and bacteria TMDLs for Asheville Bridge will help eliminate pollutants that can also contribute to the low pH values.

A Total Maximum Daily Load has been Developed for the Back Bay, North Landing River, and Pocaty River Watersheds for E. coli and Enterococci due to Recreation Use Impairments and Total Phosphorus Due to Low Dissolved Oxygen in Aquatic Life Use impairments. EPA approved 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_ASH01A06 / Ashville Bridge Creek - Lower / Lower portion of Ashville Br. Cr., between Hell Point and Muddy Creeks.	5C	pH	2010	L	0.022

Ashville Bridge Creek - Lower **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	**0.022**		

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

***Cause Group Code:* K42E-07-DO** **Beggars Bridge Creek**

Cause Location: This cause encompasses the area located southeast of Dawley Corners, tributary to Shipps Bay. 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

City / County: Virginia Beach City

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

Dissolved oxygen is impaired. 7 viol/ 33 obs at station 5BBBC000.76.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_BBC01A04 / Beggars Bridge Creek / Located southeast of Dawley Corners, tributary to Shipps Bay. 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.	5A	Oxygen, Dissolved	2010	L	0.042

Beggars Bridge Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:	**0.042**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Chowan River and Dismal Swamp Basins

Cause Group Code: **K42E-10-BAC** **Hell Point Creek - Upper**

Cause Location: This cause encompasses the area west of Sandbridge. Segment from headwaters downstream to RM 0.73, intersection of creek with canal near mouth.

City / County: Virginia Beach City

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

The Recreation Use is not supported based on Enterococci bacteria data (8 violate / 34 obs.) at DEQ station @ 5BHPC001.46.

A Total Maximum Daily Load has been Developed for the Back Bay, North Landing River, and Pocaty River Watersheds for E. coli and Enterococci due to Recreation Use Impairments and Total Phosphorus Due to Low Dissolved Oxygen in Aquatic Life Use impairments. EPA approved 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_HPC01A00 / Hell Point Creek - Upper / Located west of Sandbridge. Segment from headwaters downstream to RM 0.73, intersection of creek with canal near mouth.	4A	Enterococcus	2006	L	0.030

Hell Point Creek - Upper **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.030**		

Sources:

Municipal Point Source Discharges	Source Unknown