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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 3/12 at station 5AMMR000.69. During the 2022 cycle no new data was collected.

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 (E. 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 (E. coli)	2014	L	11.26

Middle Meherrin River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			18.41

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Lunenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for benthics with new data collected in 2018 at station 5AMMR008.77. During the 2022 cycle no new data was collected.

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 Macroinvertebrates Bioassessments	2014	L	11.26

Middle Meherrin River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			11.26

Sources: Source Unknown

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

Cause City/County: Mecklenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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 Macroinvertebrates Bioassessments	2008	L	5.12

Finneywood Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.12

Sources: Grazing in Riparian or Shoreline Zones; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K01R-04-BEN Blackstone Creek

Cause Location: Blackstone Creek from its headwaters to its mouth

Cause City/County: Mecklenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: Blackstone Creek was impaired of the Aquatic Life Use in the 2018 cycle due to an altered benthic community at 5ABKS001.60. During the 2020 cycle no new data was collected. During the 2022 cycle the segment had new benthic data that remained impaired.

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 Macroinvertebrates Bioassessments	2018	L	4.47

Blackstone Creek

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

Sources: Source Unknown; Streambank Erosion

Chowan River and Dismal Swamp Basins

Cause Group Code: K01R-05-BEN Kitts Creek

Cause Location: Kitts Creek from its headwaters to its mouth

Cause City/County: Mecklenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2020 cycle Kitts Creek was impaired for Aquatic Life Use due to an altered benthic community at 5AKTS002.63. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K01R_KTS01A14 / Kits Creek / From its headwaters to the mouth	5A	Benthic Macroinvertebrates Bioassessments	2020	L	4.76

Kitts Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.76

Sources: Source Unknown

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli at station 5ANMR013.95 with an exceedance rate of 4/34.

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 (E. coli)	2014	L	7.55

North Meherrin River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.55

Sources: Agriculture; Livestock (Grazing or Feeding Operations); Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Lunenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2010	L	7.55
VAP-K02R_NMR02B04 / North Meherrin River / Confluence with Reedy Creek to unnamed tributary below unimproved road.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	2.64

North Meherrin River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			10.19

Sources: Erosion and Sedimentation; Source Unknown

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. During the 2020 and 2022 cycle no new data was collected.

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 (E. coli)	2006	L	6.69

Big Juniper Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.69

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K02R-03-BAC Kits Creek

Cause Location: Kits Creek from its headwaters to the mouth

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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 (E. coli)	2018	L	4.83

Kits Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.83

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K02R-03-BEN Kits Creek

Cause Location: Kits Creek from its headwaters to the mouth

Cause City/County: Lunenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/4A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for benthics at both stations. During the 2022 cycle the segment remained impaired, no new data was collected.

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	Benthic Macroinvertebrates Bioassessments	2008	L	4.83

Kits Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.83

Sources: Agriculture; Urban Runoff/Storm Sewers

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

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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 (E. coli)	2008	L	10.41

Reedy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.41

Sources: Agriculture; Livestock (Grazing or Feeding Operations); Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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

Cause City/County: Lunenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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. During the 2020 cycle both stations remain impaired for Benthics. During the 2022 cycle new data was collected and the segment remains impaired for benthics at both stations.

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 Macroinvertebrates Bioassessments	2010	L	7.38

Couches Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.38

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K02R-05-BAC Ledbetter Creek

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

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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 (E. coli)	2010	L	9.08

Ledbetter Creek

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

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 3/12 at station 5ACHS003.42. During the 2022 cycle new data was collected but was insufficient due to new bacteria standards and will remain impaired.

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 (E. coli)	2014	L	7.38

Couches Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.38

Sources: Agriculture; Livestock (Grazing or Feeding Operations); Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K02R-07-BAC Little Tussekiah Creek

Cause Location: Headwaters to the mouth

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2020: 38418, 4/12/2010

In the 2020 cycle, Little Tussekiah Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5ALLT000.32. 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. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_LLT01C20 / Little Tussekiah Creek / Headwaters to the mouth	4A	Escherichia coli (E. coli)	2020	L	1.82

Little Tussekiah Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.82

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K02R-08-BAC North Meherrin River

Cause Location: Confluence with Spring Creek to the confluence with Ledbetter Creek

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2020: 38418, 4/12/2010

In the 2020 cycle, North Meherrin River was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 5ANMR024.14. 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. During the 2022 cycle no new data was collected and the E.coli impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K02R_NMR01C20 / North Meherrin River / Confluence with Spring Creek to the confluence with Ledbetter Creek	4A	Escherichia coli (E. coli)	2020	L	0.58

North Meherrin River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.58

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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. Segment extent corrected and merged in the 2018 cycle.	4A	Escherichia coli (E. coli)	2008	L	9.76

Flat Rock Creek

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

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Lunenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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. Segment extent corrected and merged in the 2018 cycle.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	9.76
VAP-K03R_FRC01B18 / Flat Rock Creek / Kenbridge WTP intake to the first confluence downstream of the Route 647 bridge AU split off in the 2018 cycle to correct segmentation. Segment extent corrected and merged in the 2018 cycle.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	4.70
VAP-K03R_FRC02A06 / Flat Rock Creek / Route 652 to Kenbridge PWS intake. Segment split in the 2018 cycle.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	1.74
VAP-K03R_FRC02B18 / Flat Rock Creek / Headwaters to Route 652. Segment split in the 2018 cycle.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	3.89

Flat Rock Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			20.09

Sources: Erosion and Sedimentation; Source Unknown

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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. Segment split in the 2018 cycle.	4A	Escherichia coli (E. coli)	2006	L	1.74

Flat Rock Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.74

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K03R-03-BAC Broad Branch

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

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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 (E. coli)	2006	L	3.54

Broad Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.54

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Lunenburg County; Mecklenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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

During the 2020 and 2022 cycle no new data was collected.

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 (E. coli)	2012	L	5.04
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 (E. 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 (E. 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 (E. coli)	2008	L	3.17

Meherrin River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.44

Sources: Agriculture; Livestock (Grazing or Feeding Operations); Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2008	L	3.44

XFH - Flat Rock Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.44

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K03R-06-BEN Mason Creek

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

Cause City/County: Lunenburg County; Mecklenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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.

During the 2020 and 2022 cycle no new data was collected.

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 Macroinvertebrates Bioassessments	2014	L	2.07
VAP-K03R_MSC01B14 / Mason Creek / Mason Creek from its headwaters to a point 5 miles upstream of the PWS intake Segment adjusted in the 2018 cycle.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	5.98

Mason Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.05

Sources: Erosion and Sedimentation; Source Unknown

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle no new data was collected.

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 AU split off in the 2018 cycle to correct segmentation. Segment extent corrected and merged in the 2018 cycle.	4A	Escherichia coli (E. coli)	2008	L	4.7

Flat Rock Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.7

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 and 2022 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-K03R_FRC02B18 / Flat Rock Creek / Headwaters to Route 652. Segment split in the 2018 cycle.	4A	Escherichia coli (E. coli)	2008	L	3.89

Flat Rock Creek

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

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K04R-01-BAC Stony Creek

Cause Location: Stony Creek from its headwaters to it mouth

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	14.24

Stony Creek

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K04R-02-BAC Shining Creek

Cause Location: Shining Creek from its headwaters to it mouth

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.)

During the 2020 and 2022 cycle no new data was collected.

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 (E. coli)	2010	L	7.74

Shining Creek

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K04R-03-BAC Taylors Creek

Cause Location: Taylors Creek from its headwaters to it mouth

Cause City/County: Brunswick County; Mecklenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	10.35

Taylors Creek

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Brunswick County; Lunenburg County; Mecklenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	6.95

Meherrin River

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K05R-01-BAC Genito Creek

Cause Location: Mainstem from its headwaters to its mouth

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2006	L	8.14

Genito Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.14

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle the E.coli exceedance rate was 9/35 at station 5AMHN082.13 and 7/23 at 5AMHN068.30. During the 2022 cycle the segment remained impaired for E.coli due to exceedances rates of 9/30 at 5AMHN082.13

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 (E. coli)	2006	L	6.99
VAP-K05R_MHN02B98 / Meherrin River / Hicks Creek to Lawrenceville PWS Intake.	4A	Escherichia coli (E. coli)	2006	L	5.00
VAP-K05R_MHN03B98 / Meherrin River / Lawrenceville PWS intake to Reedy Creek.	4A	Escherichia coli (E. coli)	2006	L	14.23

Meherrin River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			26.22

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K05R-03-BAC Briery Branch

Cause Location: The mainstem of Briery Branch.

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	4.01

Briery Branch

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

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K05R-04-BAC Hicks Creek

Cause Location: Headwaters to mouth at the Meherrin River.

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	7.37

Hicks Creek

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K05R-05-DO Hays Creek

Cause Location: The mainstem of Hayes Creek.

Cause City/County: Brunswick County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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.)

During the 2020 cycle the segment remained impaired for DO with an exceedance rate of 3/24 at station 5AHAY000.38. During the 2022 cycle no new data was collected the segment remains impaired for DO.

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	Dissolved Oxygen	2010	L	6.39

Hays Creek

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

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

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

Cause Location: Headwaters to mouth at Genito Creek.

Cause City/County: Brunswick County; Mecklenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2010	L	12.06

Little Genito Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			12.06

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K05R-07-BAC Evans Creek

Cause Location: Headwaters to mouth at the Meherrin River.

Cause City/County: Brunswick County; Mecklenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	11.73

Evans Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.73

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K05R-08-BAC Totaro Creek

Cause Location: Headwaters to mouth at the Meherrin River.

Cause City/County: Brunswick County; Mecklenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. 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 (E. coli)	2010	L	0.47

Totaro Creek

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K05R-09-BAC Allen Creek

Cause Location: Headwaters to mouth

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2016	L	6.96

Allen Creek

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

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Brunswick County; Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. 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 (E. coli)	2006	L	2.19

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K06R_GTC04B00 / Great Creek / Great Creek Reservoir dam to the Lawrenceville PWS intake (PWS Section 5a-3b).	4A	Escherichia coli (E. coli)	2008	L	2.75
VAP-K06R_GTC05B00 / Great Creek / Lawrenceville PWS intake to its mouth.	4A	Escherichia coli (E. coli)	2018	L	7.57

Great Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			18.95

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	4.31

Stevens Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.31

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	3.24

Tea Branch

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 / Great Creek, UT / Headwaters to mouth at Great Creek	4A	Escherichia coli (E. coli)	2010	L	2.12

XHQ - Great Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.12

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K07R-03-BAC Rocky Run

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

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	21.28

Rocky Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			21.28

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K07R-03-BEN Rocky Run

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

Cause City/County: Brunswick County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2008	L	21.28

Rocky Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			21.28

Sources: Source Unknown

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.

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. During the 2022 cycle new data was collected and the segment remains impaired for E.coli.

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 (E. coli)	2010	L	1.96

Roses Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.96

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K07R-05-BAC Soloman Creek

Cause Location: Headwaters to mouth at Roses Creek.

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2018	L	4.98

Soloman Creek

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

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

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

Cause Location: Emporia Lake

Cause City/County: Greensville County

Use(s): Fish Consumption

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

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

During the 2020 cycle new fish tissue data was collected and Mercury in Fish tissue was in 1 species (largemouth bass) (OE). Fish Tissue and Sediment PCB were within acceptable limits at station 5AMHN053.00.

A VDH Fish Consumption Advisory is in effect for Emporia Reservoir for Mercury, no more than two meals per month for Largemouth Bass (9/16/2008).

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: Atmospheric Deposition - Toxics

Chowan River and Dismal Swamp Basins

Cause Group Code: K08L-02-CHLA Brunswick Lake

Cause Location: Brunswick Lake

Cause City/County: Brunswick County

Use(s): Aquatic Life

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

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

no new data has been collected. new Chlorophyll a data was collected but is insufficient to determine status.

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 (now DWR) 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; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K08L-02-DO Brunswick Lake

Cause Location: Brunswick Lake

Cause City/County: Brunswick County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: 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. During the 2022 cycle new data was collected at station 5ARDC007.30. The station remained impaired for DO with an exceedance rate of 3/18.

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 (now DWR) lake on Reedy Creek.	5A	Dissolved Oxygen	2006	L	160.33

Brunswick Lake

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

Sources: Agriculture; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K08R-02-BAC Robinson Creek

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

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	6.08

Robinson Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.08

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Brunswick County; Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2012	L	2.75

Wilson Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.75

Sources: Source Unknown

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.

Cause City/County: Brunswick County; Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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.

During the 2020 cycle new benthic data was collected but remained impaired. During the cycle no new data was collected.

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 Macroinvertebrates Bioassessments	2016	L	2.75

Wilson Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.75

Sources: Non-Point Source

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

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 / UT to Dukes Branch / Headwaters to mouth	5A	Escherichia coli (E. coli)	2016	L	1.71

XII - UT to Dukes Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.71

Sources: Non-Point Source; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K08R-05-BAC Dukes Branch

Cause Location: Headwaters to the mouth

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

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-K08R_DUK01A16 / Dukes Branch / Headwaters to the mouth	5A	Escherichia coli (E. coli)	2016	L	2.58

Dukes Branch

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

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K08R-06-BAC Greensville Creek

Cause Location: Headwaters to mouth at Meherrin

Cause City/County: Brunswick County; Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: During the 2020 cycle the segment was impaired for E.coli with an exceedance rate of 2/12. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K08R_GRS01C20 / Greensville Creek / Headwaters to mouth at Meherrin	5A	Escherichia coli (E. coli)	2020	L	3.78

Greensville Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.78

Sources: Source Unknown

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

Cause City/County: Emporia; Greensville County; Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remains impaired from E.coli with exceedance rates of 8/23 at station 5AMHN026.54 and 8/36 at station 5AMHN052.34.

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 (E. coli)	2016	L	26.76
VAP-K09R_MHN02D00 / Meherrin River / Route 730 bridge to Fontaine Creek (CM21/CM29 watershed boundary).	5A	Escherichia coli (E. coli)	2018	L	2.27

Meherrin River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			29.03

Sources: Non-Point Source; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K09R-01-HGFT 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

Cause City/County: Emporia; Greensville County; Southampton County

Use(s): Fish Consumption

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

Cause Description: 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.

During the 2020 cycle new Fish Tissue data was analyzed at station 5AMHN051.43 Mercury in 2 species (Golden Redhorse, Largemouth Bass)(IM)

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	26.76
VAP-K09R_MHN02D00 / Meherrin River / Route 730 bridge to Fontaine Creek (CM21/CM29 watershed boundary).	5A	Mercury in Fish Tissue	2010	L	2.27
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:			67.76

Sources: Atmospheric Deposition - Toxics; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K09R-01-PCBFT Meherrin River

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

Cause City/County: Emporia

Use(s): Fish Consumption

Causes(s)/VA Category: PCBs in Fish Tissue/5A

Cause Description: 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.

During the 2020 cycle new Fish Tissue data was analyzed at station 5AMHN051.43 PCB 1species (gizzard shad)(OE); 2017 SED PCB ok.

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	PCBs in Fish Tissue	2004	L	26.76

Meherrin River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			26.76

Sources: Atmospheric Deposition - Toxics; Source Unknown

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

Cause City/County: Brunswick County; Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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.

During 2020 cycle new data was collected at station 5ARSK003.08. This data was acceptable but follow up monitoring at the other stations is recommended. During the 2022 cycle no new data was collected.

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	Dissolved Oxygen	2010	L	17.19

Rattlesnake Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			17.19

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	0.57

Fontaine Creek (Fountains Creek)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.57

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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, 2020 and 2022 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	Dissolved Oxygen	2010	L	4.60
VAP-K11R_FON01A02 / Fontaine Creek / Rocky Run to tributary XGV	5C	Dissolved Oxygen	2010	L	12.04

Fontaine Creek (Fountains Creek)

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

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Brunswick County; Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2016	L	3.34

Quarrel Creek

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

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Brunswick County; Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2010	L	3.34

Quarrel Creek

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

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

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.

Cause City/County: Brunswick County; Greensville County

Use(s): Aquatic Life

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

Cause Description: 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 Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

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.

Cause City/County: Brunswick County; Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2010	L	4.18

Beddingfield Creek

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

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Greensville County

Use(s): Aquatic Life

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

Cause Description: 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	0.87

Rocky Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.87

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K11R-03-BAC Cattail Creek

Cause Location: Cattail Creek upstream of Collier Branch.

Cause City/County: Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	5.34

Cattail Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.34

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K11R-05-BAC Beaverpond Creek

Cause Location: VA-NC state line to mouth at Fontaine Creek

Cause City/County: Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2020 cycle the segment became impaired for E.coli with an exceedance rate of 2/11 at station 5ABVC000.48, this segment will be nested in the Fontaine Creek TMDL (39701) approved on 1/13/2011.

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_BVC01A04 / Beaverpond Creek / VA-NC state line to mouth at Fontaine Creek	4A	Escherichia coli (E. coli)	2020	L	3.35

Beaverpond Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.35

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K11R-05-DO Beaverpond Creek

Cause Location: The mainstem of Beaverpond Creek within Virginia.

Cause City/County: Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2010	L	3.35

Beaverpond Creek

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

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

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

Cause Location: Headwaters to mouth

Cause City/County: Greensville County

Use(s): Aquatic Life

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

Cause Description: 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	1.96

XGV - Fontaine Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.96

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

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

Cause Location: Headwaters to mouth

Cause City/County: Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2010	L	1.83

XGU - Fontaine Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.83

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

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

Cause Location: Headwaters to mouth

Cause City/County: Greensville County

Use(s): Aquatic Life

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

Cause Description: 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	1.83

XGU - Fontaine Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.83

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2006	L	14.48

Fontaine Creek

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: E.coli is impaired with 5 exceedances out of 35 observations at station 5ATRR002.50 due to having 2 or more STV hits in the same 90-day period with < 10 samples.. 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 (E. coli)	2008	L	14.5

Tarrara Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			14.5

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: E. coli data at station 5AFTS002.93 marks 6 exceedances out of 12 samples. This creates the impaired status due to 2 or more STV hits in the same 90-day period with < 10 samples. 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 (E. coli)	2016	L	8.48

Flat Swamp

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

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K13R-05-BAC Meherrin River (Lower)

Cause Location: Two miles upstream (33.40) and 2.07 miles downstream (13.40) of station @ 5AMHN023.40.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E. coli is impaired at station 5AMHN023.40 (4 exceedances/ 25 samples) for the 2020 IR cycle. The 2022 IR cycle lists E. coli with 3 exceedances out of 32 samples and a status of insufficient due to one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean.. The AU retains the impaired status.

Probabilistic monitoring station 5AMHN003.95 has E. coli data with 0 exceedances out of 1 sample and is insufficient as there are no STV exceedances but insufficient data to analyze geomean.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K13R_MHN01A00 / Meherrin River (Lower) / Two miles upstream (33.40) and 2.07 miles downstream (13.40) of station @ 5AMHN023.40.	5A	Escherichia coli (E. coli)	2020	L	4.53

Meherrin River (Lower)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.53

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K14L-02-HGFT Nottoway Falls Lake

Cause Location: Nottoway Falls Lake

Cause City/County: Lunenburg County; Nottoway County

Use(s): Fish Consumption

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

Cause Description: Station ID: 5ANTW143.06 (2007 FT Sampling) During the 2016 Fish tissue monitoring had results of Hg in 2 Species. During the 2018, 2020 and 2022 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	32.2

Nottoway Falls Lake

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		32.2	

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K14R-01-BAC Nottoway River

Cause Location: Headwaters to the backwater of Nottoway Falls Lake

Cause City/County: Lunenburg County; Nottoway County; Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. In the 2020 cycle, the E. coli exceedance rate is 9/35 at DEQ station 5ANTW155.06. During the 2022 cycle the segment remained impaired for E.coli with an exceedance rate of 8/34 at 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 (E. 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 (E. coli)	2006	L	4.03

Nottoway River

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

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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).

During the 2020 cycle the segment remains impaired for E.coli with an exceedance rate of 3/12 at station 5ABHC003.73. During the 2022 cycle no new data was collected.

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 (E. coli)	2006	L	10.34

Big Hounds Creek

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

Sources: Agriculture; Livestock (Grazing or Feeding Operations); Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K14R-02-BEN Big Hounds Creek

Cause Location: From Lunenburg Lake dam to the Nottoway River.

Cause City/County: Lunenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2020 cycle the segment was Impaired for Benthics at station 5ABHC006.57. Bio sampling was also performed at 5ABHC006.59 but was insufficient and referenced to use station 6.57 instead. High levels of Nutrients and periphyton growth during certain times of the year. During the 2022 cycle no new data was collected, 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-K14R_BHC01B98 / Big Hounds Creek / From Lunenburg Lake dam to the Nottoway River.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	10.34

Big Hounds Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			10.34

Sources: Source Unknown

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

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.)

During the 2020 and 2022 cycle no new data was collected.

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 (E. coli)	2018	L	4.86

Modest Creek

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

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K14R-04-BAC Nottoway River

Cause Location: Big Hounds Creek to a point 5 miles upstream of Fort Pickett's raw water intake.

Cause City/County: Lunenburg County; Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: During the 2020 cycle the segment became impaired for E.coli with an exceedance rate of 5/12 at station 5ANTW132.93. During the 2022 cycle no new data was collected.

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	Escherichia coli (E. coli)	2020	L	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	Escherichia coli (E. coli)	2020	L	0.89

Nottoway River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.27

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K14R-05-BAC Falls Creek

Cause Location: Falls Creek, Headwaters to the mouth

Cause City/County: Lunenburg County; Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: During the 2020 cycle the segment became impaired for E.coli with an exceedance rate of 3/12. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14R_FLS01A20 / Falls Creek / Headwaters to the mouth	5A	Escherichia coli (E. coli)	2020	L	5.29

Falls Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.29

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K14R-06-BEN UT to Big Hounds Creek

Cause Location: Headwaters to the Mouth at Big Hounds Creek

Cause City/County: Lunenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2020 cycle the segment became impaired for Benthics. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K14R_XIV01B20 / UT to Big Hounds Creek / Headwaters to the mouth at Big Hounds Creek	5A	Benthic Macroinvertebrates Bioassessments	2020	L	3.58

UT to Big Hounds Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.58

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K15L-01-HGFT Nottoway Pond

Cause Location: Nottoway Pond

Cause City/County: Nottoway County

Use(s): Fish Consumption

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

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

No new data during the 2018, 2020 and 2022 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	50.7

Nottoway Pond

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		50.7	

Sources: Source Unknown

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.

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.)

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 5/12 at station 5ALNT004.68. During the 2022 cycle no new data was collected.

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 (E. coli)	2006	L	9.09
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 (E. coli)	2006	L	0.89

Little Nottoway River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.98

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K15R-02-BAC Carys Creek

Cause Location: Carys Creek from its headwaters to the mouth

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2006	L	6.35

Carys Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.35

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	3.92
VAP-K15R_LZT01B18 / Lazaretto Creek / Lazaretto Creek from its headwaters to a point five miles upstream of the Crewe WTP intake.	4A	Escherichia coli (E. coli)	2010	L	1.06

Lazaretto Creek

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

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K15R-04-BEN Mallorys Creek

Cause Location: Mallorys Creek from its headwaters to the mouth

Cause City/County: Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2014	L	7.12

Mallorys Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.12

Sources: Source Unknown

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.

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2014	L	8.42

Whetstone Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.42

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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.

Cause City/County: Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 Macroinvertebrates Bioassessments	2018	L	9.09

Little Nottoway River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.09

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

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

Cause Location: Fort Pickett Reservoir

Cause City/County: Brunswick County; Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: During the 2018 cycle the segment became impaired for DO at station 5ANTW127.14 with an exceedance rate of 5/46. During the 2022 cycle no new data was collected.

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	Dissolved Oxygen	2018	L	318.95

Fort Pickett Reservoir

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

Sources: Natural Sources; Source Unknown

Chowan River and Dismal Swamp Basins

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

Cause Location: Fort Pickett Reservoir

Cause City/County: Brunswick County; Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Phosphorus, Total/5A

Cause Description: 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. During the 2022 cycle no new data was collected.

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: Natural Sources; Source Unknown

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.

Cause City/County: Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/4A

Cause Description: 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 Macroinvertebrates Bioassessments	1994	L	1.08

XBL - Hurricane Branch, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.08

Sources: Non-Point Source; Unspecified Urban Stormwater

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

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2004	L	7.44

Beaver Pond Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.44

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

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

Cause City/County: Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/4A

Cause Description: 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 / An unnamed tributary of Hurricane Branch from its headwaters to the Town of Blackstone STP outfall.	4A	Benthic Macroinvertebrates Bioassessments	2008	L	2.1

XBL - Hurricane Branch, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.1

Sources: Non-Point Source; Unspecified Urban Stormwater

Chowan River and Dismal Swamp Basins

Cause Group Code: K16R-03-DO Hurricane Branch

Cause Location: Hurricane Branch from Gettysburg Road crossing to its confluence with Nottoway River

Cause City/County: Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: During the 2020 cycle the segment became impaired again for Dissolved Oxygen with an exceedance rate of 4/24. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K16R_HUR01A04 / Hurricane Branch / Hurricane Branch from Gettysburg Road crossing to its confluence with Nottoway River	5C	Dissolved Oxygen	2020	L	2

Hurricane Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2

Sources: Natural Sources

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.

Cause City/County: Brunswick County; Dinwiddie County; Lunenburg County; Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 3/24. During the 2022 cycle no new data was collected.

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 (E. coli)	2016	L	7.63

Tommeheton Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.63

Sources: Source Unknown

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.

Cause City/County: Brunswick County; Dinwiddie County; Lunenburg County; Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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.

During the 2020 cycle the segment remained impaired for DO with an exceedance rate of 8/24. During the 2022 cycle no new data was collected.

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	Dissolved Oxygen	2010	L	7.63

Tommeheton Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			7.63

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K16R-07-BAC Seay Creek

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

Cause City/County: Lunenburg County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: During the 2020 cycle the segment is impaired for E.coli with an exceedance rate of 2/12. During the 2022 cycle no new data was collected.

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	Escherichia coli (E. coli)	2020	L	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	Escherichia coli (E. coli)	2020	L	0.51

Seay Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.5

Sources: Source Unknown

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.

Cause City/County: Lunenburg County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for Benthics, new data was collected in 2017 and appears to be negatively affected by sedimentation. Riffles consisted of sand and gravel while banks had erosion scars. During the 2022 cycle no new data was collected.

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 Macroinvertebrates Bioassessments	2014	L	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 Macroinvertebrates Bioassessments	2014	L	0.51

Seay Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.5

Sources: Source Unknown

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.

Cause City/County: Brunswick County; Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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. During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 7/12 at station 5ANTW109.02. During the 2022 cycle the segment remained impaired.

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 (E. coli)	2010	L	9.99

Nottoway River

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

Sources: Source Unknown

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.

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with exceedance rates at 5AWAQ019.29 (7/24), 5AWAQ020.52(6/12), 5AWAQ022.17(4/10). During the 2022 cycle no new data was collected.

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 (E. coli)	2012	L	9.62

Waqua Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.62

Sources: Source Unknown

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

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 3/23. During the 2022 cycle no new data was collected.

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 (E. coli)	2016	L	5.59

Waqua Creek

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

Sources: Agriculture; Non-Point Source; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K17R-04-BAC Great Creek

Cause Location: Great Creek from the headwaters to the mouth

Cause City/County: Brunswick County; Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2016	L	5.45

Great Creek

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

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K17R-05-BAC Reedy Creek

Cause Location: Reedy Creek from the headwaters to the mouth

Cause City/County: Brunswick County; Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2016	L	6.03

Reedy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.03

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K17R-05-DO Reedy Creek

Cause Location: Reedy Creek from the headwaters to the mouth

Cause City/County: Brunswick County; Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2016	L	6.03

Reedy Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.03

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Cause City/County: Brunswick County; Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2016	L	5.64

Turkey Egg Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.64

Sources: Non-Point Source; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K17R-07-DO Hickory Run

Cause Location: Hickory Run from its headwaters to its mouth.

Cause City/County: Brunswick County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2016	L	4.95

Hickory Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.95

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K17R-07-PH Hickory Run

Cause Location: Hickory Run from its headwaters to its mouth.

Cause City/County: Brunswick County

Use(s): Aquatic Life

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

Cause Description: 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	4.95

Hickory Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.95

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K19R-01-BAC Masons Branch

Cause Location: Masons Branch from Headwaters to RM 2.77.

Cause City/County: Brunswick County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.)

During the 2020 cycle this segment was split from VAP-K19R_MSN01A10 and includes the upper station 5AMSN003.24. The new segment remained impaired for E.coli with an exceedance rate of 3/22 at station 5AMSN003.24.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_MSN01B20 / Masons Branch / Headwaters to RM 2.77	5A	Escherichia coli (E. coli)	2012	L	2.12

Masons Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.12

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K19R-03-BAC Buckskin Creek

Cause Location: Buckskin Creek from RM 3.46 to its mouth at the Nottoway River.

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle this segment was split off VAP-K19R_BSK01A00 and only has station 5ABSK000.60. This segment remains impaired for E.coli with an exceedance rate of 5/12 at 5ABSK000.60.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_BSK01C20 / Buckskin Creek / From the mouth to rivermile 6.65 (at the 4th UT from the mouth)	5A	Escherichia coli (E. coli)	2010	L	3.46

Buckskin Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.46

Sources: Source Unknown

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.

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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.

During the 2020 cycle the segment remained impaired for DO with exceedances at 5ABSK007.40(6/23) and 5ABSK008.75(9/24). The segment will be delisted for E.coli with exceedance rates at 5ABSK007.40(0/11) and 5ABSK008.75(1/11). During the 2022 cycle no new data was collected.

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	Dissolved Oxygen	2012	L	1.96

Buckskin Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.96

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K19R-04-HGFT 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.

Cause City/County: Brunswick County; Dinwiddie County; Emporia; Greensville County; Prince George County; Southampton County; Sussex County

Use(s): Fish Consumption

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

Cause Description: 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 Blue Catfish, 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.

Fish Tissue samples at station 5ANTW005.07 (18-IM-Hg, 2 exceedances) Blue Catfish .

Fish Tissue samples at station 5ANTW011.18 (18-IM-Hg, 2 exceedances) Blue Catfish.

Fish tissue samples at station 5ANTW003.30 (07-IM-FT_Met Hg (8 exceedances - Largemouth Bass, Bowfin, Pickerel, Yellow Perch, Sunfish & Catfish)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K19R_NTW01A00 / Nottoway River / 5 miles upstream of the Town of Jarrett PWS Intake (approximately Hardwood Creek) to Route 619 near Purdy.	5A	Mercury in Fish Tissue	2020	L	0.49
VAP-K19R_NTW01B00 / Nottoway River / Town of Jarrett intake to Stony Creek	5A	Mercury in Fish Tissue	2008	L	13.84
VAP-K19R_NTW01C08 / Nottoway River / Rt. 619 near Purdy to the Town of Jarrett PWS Intake	5A	Mercury in Fish Tissue	2008	L	4.51
VAP-K19R_NTW02A06 / Nottoway River / The Nottoway River from Sturgeon Creek to Buckskin Creek	5A	Mercury in Fish Tissue	2020	L	5.38
VAP-K19R_NTW02B08 / Nottoway River / The Nottoway River from Buckskin Creek to an UT at approx the Dinwiddie/Sussex Co. line	5A	Mercury in Fish Tissue	2020	L	1.04
VAP-K19R_NTW02C08 / Nottoway River / The Nottoway River from the UT at approx the Dinwiddie/Sussex Co. line to 5 miles above the Jarratt PWS intake	5A	Mercury in Fish Tissue	2020	L	3.85
VAP-K23R_ATH01A08 / Arthur Swamp / I-85 bridge to RM 4.66	5A	Mercury in Fish Tissue	2010	L	3.72

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_ATH01C20 / Arthur Swamp / RM 4.669 to the mouth	5A	Mercury in Fish Tissue	2010	L	4.67
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	3.90
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. State Scenic River (9 VAC 25-260-320)	5A	Mercury in Fish Tissue	2008	L	16.66
VAP-K23R_ROW03B10 / Rowanty Creek / Rowanty Creek downstream of Gravelly Run.	5A	Mercury in Fish Tissue	2010	L	14.08
VAP-K24R_NTW04B00 / Nottoway River / Nebletts Mill Run downstream to Three Creek State Scenic River Merged in the 2018 cycle	5A	Mercury in Fish Tissue	2008	L	19.17
VAP-K26R_TRE01B98 / Three Creek / I-95 to Otterdam Swamp.	5A	Mercury in Fish Tissue	2010	L	5.11
VAP-K26R_TRE02B98 / Three Creek / Otterdam Swamp to Browns Branch.	5A	Mercury in Fish Tissue	2010	L	5.44
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 river mile 2.5 to mouth.	5A	Mercury in Fish Tissue	2008	L	2.44
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	10.68
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	4.45
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	5.54

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
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	0.46
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:			197.38

Sources: Atmospheric Deposition - Toxics; Source Unknown

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.

Cause City/County: Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 / UT to Nottoway River / Headwaters to mouth at Nottoway River	5A	Benthic Macroinvertebrates Bioassessments	2008	L	2.88

XEJ - Nottoway River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.88

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K19R-06-BAC Nottoway River

Cause Location: Town of Jarrett intake to Stony Creek

Cause City/County: Greensville County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: During the 2020 cycle the segment became impaired for E.coli with an exceedance rate of 5/30 at station 5ANTW078.20. During the 2022 cycle the segment remained impaired for E.coli.

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	Escherichia coli (E. coli)	2020	L	13.84

Nottoway River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.84

Sources: Source Unknown

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.

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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. In the 2022 cycle no new data was collected. 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.

During the 2020 cycle the segment remained impaired for DO with an exceedance rate of 5/24at 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	Dissolved Oxygen	2012	L	2.91

XAD - Buckskin Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.91

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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.

During the 2020 cycle the segment had exceedance rates for DO 1/12(S). This was due to 4 new samples collected. It should remain impaired for DO due to the violation rate being so close to exceeding and not a lot of new data to analyze. Follow up monitoring recommended. During the 2022 cycle no new data was collected.

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	Dissolved Oxygen	2012	L	1.63

XHW - Buckskin Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.63

Sources: Dam or Impoundment; Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle, the segment remained impaired due to an E. coli exceedance rate of 3/23 at 5AXHX001.19. During the 2022 cycle no new data was collected.

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 (E. coli)	2012	L	2.66

XHX - Buckskin Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.66

Sources: Source Unknown

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.

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2012	L	1.62

XHY - Buckskin Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.62

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K19R-11-BAC Moores Swamp

Cause Location: Headwaters to mouth

Cause City/County: Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2016	L	4.98

Moores Swamp

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

Sources: Source Unknown

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

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4C

Cause Description: 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	Dissolved Oxygen	NA	NA	2.21

White Oak Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.21

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Reduced Freshwater Flows

Chowan River and Dismal Swamp Basins

Cause Group Code: K20R-01-PH White Oak Swamp

Cause Location: Headwaters of White Oak Swamp

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/4C

Cause Description: 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 an 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	NA	NA	2.21

White Oak Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			2.21

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Reduced Freshwater Flows

Chowan River and Dismal Swamp Basins

Cause Group Code: K20R-02-BAC White Oak Swamp

Cause Location: The lower portion of White Oak Swamp

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2018	L	14.83

White Oak Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			14.83

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K20R-02-DO White Oak Swamp

Cause Location: The lower portion of White Oak Swamp

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2018	L	14.83

White Oak Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			14.83

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K20R-02-PH White Oak Swamp

Cause Location: The lower portion of White Oak Swamp

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

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

Cause Description: 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

Chowan River and Dismal Swamp Basins

Cause Group Code: K21R-03-HGFT Stony Creek

Cause Location: Stony Creek from Mortar Branch downstream to its mouth.

Cause City/County: Dinwiddie County; Sussex County

Use(s): Fish Consumption

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

Cause Description: 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 Merged in the 2018 cycle.	5A	Mercury in Fish Tissue	2010	L	8.36

Stony Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			8.36

Sources: Atmospheric Deposition - Toxics; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K21R-05-BAC Mortar Branch

Cause Location: Headwaters to mouth at Stony Creek

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 8/12 at station 5AMTR001.65. During the 2022 cycle no new data was collected.

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 (E. coli)	2014	L	6.13

Mortar Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.13

Sources: Source Unknown

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.

Cause City/County: Dinwiddie County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 7/36 at station 5ASTO001.20. During the 2022 cycle the segment remained impaired.

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 Merged in the 2018 cycle.	5A	Escherichia coli (E. coli)	2016	L	8.36

Stony Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.36

Sources: Source Unknown

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

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

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

Cause Description: 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	1.33

Chamberlains Bed

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.33

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K21R-08-DO Chamberlains Bed

Cause Location: Headwaters to Wheelers Pond

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2016	L	2.83

Chamberlains Bed

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.83

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K21R-08-PH Chamberlains Bed

Cause Location: Headwaters to Wheelers Pond

Cause City/County: Dinwiddie County

Use(s): Aquatic Life

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

Cause Description: 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	2.83

Chamberlains Bed

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			2.83

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Dinwiddie County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli at station 5ASAP007.77(4/12) and 5ASAP013.69(8/24). During the 2022 cycle new data was collected and the segment remains impaired for E.coli.

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 (E. coli)	2006	L	11.87

Sappony Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.87

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K22R-04-BAC Sappony Creek

Cause Location: Spiers Pond Dam to mouth at Stony Creek

Cause City/County: Dinwiddie County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2016	L	4.35

Sappony Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.35

Sources: Agriculture; Non-Point Source; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K23R-01-BAC Arthur Swamp

Cause Location: Arthur Swamp from its RM 4.66 to its mouth

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 2/12 at station 5AATH003.28. This cycle the segment was shortened to exclude the upper portion of Arthur Swamp. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_ATH01C20 / Arthur Swamp / RM 4.669 to the mouth	5A	Escherichia coli (E. coli)	2016	L	4.67

Arthur Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.67

Sources: Source Unknown

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.

Cause City/County: Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 8/12. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_XDV01A02 / UT to Nebletts Mill Run / An unnamed tributary (XDV) of Nebletts Mill Run from its headwaters to its mouth.	4A	Escherichia coli (E. coli)	2006	L	1.78

XDV - Nebletts Mill Run, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.78

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Dinwiddie County; Prince George County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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

During the 2020 cycle the segment remained impaired for E.coli at all stations. During the 2022 cycle no new data was collected.

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 (E. coli)	2010	L	70.68

Jones Hole Swamp/Moores Swamp and all tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			70.68

Sources: Source Unknown

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

Cause City/County: Prince George County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 6/12 at station 5AGSE003.12. During the 2022 cycle no new data was collected.

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 (E. coli)	2014	L	27.72

Gosee Swamp and Tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			27.72

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K23R-09-BAC Fox Branch

Cause Location: Fox Branch mainstem

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 (E. coli)	2018	L	3.46

Fox Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.46

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K23R-10-BAC Rowanty Creek

Cause Location: Rowanty Creek mainstem downstream of Gravelly Run.

Cause City/County: Dinwiddie County; Prince George County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 During the 2022 cycle no new data was collected.

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 (E. coli)	2012	L	14.08

Rowanty Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			14.08

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K23R-11-BAC Hatcher Run

Cause Location: Pond at Rt. 627 to mouth at Rowanty Creek

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: During the 2020 cycle the segment became impaired for E.coli with an exceedance rate of 5/24 at station 5AHRA002.92. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_HRA01B10 / Hatcher Run / Pond at Rt. 627 to mouth at Rowanty Creek	5A	Escherichia coli (E. coli)	2020	L	16.22

Hatcher Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			16.22

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K23R-12-BAC Warren Swamp

Cause Location: Mainstem of Warren Swamp

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: During the 2020 cycle the segment became impaired for E.coli with an exceedance rate of 5/24 at station 5AWRN000.42. During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_WRN01A18 / Warren Swamp / Mainstem of Warren Swamp	5A	Escherichia coli (E. coli)	2020	L	1.22

Warren Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.22

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K23R-13-BAC Joseph Swamp, UT

Cause Location: Headwaters to mouth at Joseph Swamp

Cause City/County: Prince George County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: During the 2020 cycle the segment was Impaired due to E.coli exceedances at station 5AXFZ000.38 (4/10). During the 2022 cycle no new data was collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-K23R_XFZ01A08 / Joseph Swamp, UT / Headwaters to mouth at Joseph Swamp	5A	Escherichia coli (E. coli)	2020	L	1.39

Joseph Swamp, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.39

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K24R-03-BAC Hunting Quarter Swamp

Cause Location: The mainstem of Hunting Quarter Swamp.

Cause City/County: Southampton County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 (E. coli)	2008	L	16.68
VAP-K24R_HQS01B08 / Hunting Quarter Swamp Tributaries / All tributaries to Hunting Quarter Swamp. Includes Thweatt Branch, Anderson Branch, and Lees Branch	5A	Escherichia coli (E. coli)	2020	L	56.97

Hunting Quarter Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			73.65

Sources: Source Unknown

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

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 State Scenic River Merged in the 2018 cycle	5A	Escherichia coli (E. coli)	2016	L	19.17

Nottoway River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			19.17

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K24R-05-BAC Thweatt Branch and Tributaries

Cause Location: Thweatt Branch watershed

Cause City/County: Southampton County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 (E. coli)	2016	L	7.27

Thweatt Branch and Tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.27

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K25R-02-BAC Raccoon Creek

Cause Location: The entire mainstem of Raccoon Creek.

Cause City/County: Southampton County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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). During the 2022 cycle no new data was collected.

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 (E. coli)	2008	L	19.91

Raccoon Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			19.91

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. During the 2022 cycle no new data was collected. 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 (E. coli)	2018	L	6.55

Three Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.55

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Greensville County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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. During the 2022 cycle no new data was collected.

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	Dissolved Oxygen	2018	L	6.55

Three Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.55

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K26R-02-BAC Three Creek

Cause Location: From Otterdam Swamp downstream to Browns Branch.

Cause City/County: Greensville County; Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.
During the 2022 cycle no new data was collected. 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 (E. coli)	2006	L	5.44

Three Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.44

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K26R-04-BAC Maclins Creek

Cause Location: Maclins Creek in its entirety.

Cause City/County: Greensville County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 (E. coli)	2012	L	8.8

Maclins Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.8

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K27R-02-BAC Three Creek - Lower and Upper and 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.

Cause City/County: Southampton County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: E.coli is insufficient for the 2022 IR cycle based on data collected at station 5ATRE016.02 with 4 exceedances out of 33 samples, as there was one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. E. coli remains impaired based on previous IR cycle data. 2018 nested new impairment at station 5AXEE001.44 with 3 exceedances out of 11 samples. 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

E. coli data is insufficient with 7 exceedances out of 33 samples at station 5ATRE008.48 due to there being one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. E. coli retains the Not Supporting status based on previous IR cycles. Probabilistic monitoring station 5ATRE003.38 also insufficient with 0 exceedances out of 1 sample.

E. coli is impaired based on data collected from station 5AXEE001.44 with 2 exceedances out of 11 samples, as there were 2 or more STV hits in the same 90-day period with < 10 samples. Station 5AXEE000.93 has 1 exceedance out of 1 samples. This is marked observed effect due to one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K27R_ANG01A12 / Angelico Creek / Lower portion of Angelico Creek south of Highway 58 near Drewryville.	4A	Escherichia coli (E. coli)	2020	L	1.90
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 (E. 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 (E. coli)	2002	L	10.68
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 (E. coli)	2018	L	4.06

Three Creek - Lower and Upper and UT to Angelico Cr

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			25.81

Sources: Agriculture; Crop Production (Crop Land or Dry Land); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers; Wildlife Other than Waterfowl

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.

Cause City/County: Southampton County; Sussex County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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.

No new data to assess in the 2022 IR cycle.

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 Macroinvertebrates Bioassessments	2008	L	8.17

Applewhite Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.17

Sources: Source Unknown

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).

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2006	L	9.17

Three Creek - Upper

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.17

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Recreation Use is impaired based on E. coli data from Station 5AMSP000.16 with 6 exceedances out of 12 samples due to 2 or more STV hits in the same 90-day period with < 10 samples. 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 (E. coli)	2006	L	10.49

Mill Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.49

Sources: Agriculture; Crop Production (Crop Land or Dry Land); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K28R-01-PH Mill Swamp

Cause Location: 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.

Cause City/County: Southampton County

Use(s): Aquatic Life

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

Cause Description: pH is impaired with 4 exceedances out of 23 samples at Station 5AMSP000.16. pH was delisted in 2016 IR: K28R-01-PH (2012). pH was being relisted in the 2020 IR.

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	pH	2012	L	10.49

Mill Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			10.49

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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.

No new data to assess in the 2022 IR cycle.

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 Macroinvertebrates Bioassessments	2008	L	5.68

Buckhorn Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.68

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2014	L	1.86

Unnamed Tributary to Mill Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.86

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E.coli data impaired with 6 exceedances out of 12 samples at Station 5BKH003.89 due to having 2 or more STV hits in the same 90-day period with < 10 samples.

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 (E. coli)	2012	L	4.23

Buckhorn Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.23

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: DO is impaired at Station 5ABKH003.89 with 7 exceedances out of 23 samples. 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	Dissolved Oxygen	2014	L	4.23

Buckhorn Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.23

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Naturally Occurring Organic Acids

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

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

Cause Description: pH is impaired with 5 exceedances out of 23 samples. Impairment thought to be from natural causes. 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	pH	2016	L	4.23

Buckhorn Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.23

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Naturally Occurring Organic Acids

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E. coli is insufficient at station 5ANTT002.96 for the 2022 IR with 2 exceedances out of 12 samples, as there was one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. E. coli was impaired in the 2020 IR. In 2016 IR was supporting with E.coli data from Station 5ANTT002.96 with 2 exceedance/ 23 samples and now in the 2020 IR data remains impaired (5 exceedances/ 24 samples) at that same station. Citmon station 5ANTT-ORP-BNR has insufficient data due to collection methods (level II). E. coli remains impaired.

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 (E. coli)	2018	L	8.13

Nottoway Swamp

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

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: DO is impaired at Station 5ANT002.96 with 8 exceedances out of 23 samples in the 2022 IR cycle.

CMON Station 5ANTT-ORP-BNR (Level II data) has an observed effect for DO with 6 exc/ 10 samp in the 2020 IR cycle.

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	Dissolved Oxygen	2012	L	8.13

Nottoway Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			8.13

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

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

Cause Description: pH 2 exc/ 23 samp at Station 5ANT002.96.

2020 IR - pH is supporting at Citmon Station 5ANTT-ORP-BNR (0 exc/ 11 samp).

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	8.13

Nottoway Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			8.13

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K28R-07-BAC Nottoway River - Upper

Cause Location: 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.).

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E. coli is insufficient with 2 exceedances out of 33 samples as there is one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. Station 5ANTW035.62 has 0 exceedances out of 1 sample and is insufficient with no STV exceedances but insufficient data to analyze geomean. E. coli retains the impaired status from the 2020 IR cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
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	Escherichia coli (E. coli)	2020	L	4.45

Nottoway River - Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.45

Sources: Source Unknown

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.

Cause City/County: Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	2.62
VAP-K29R_SRE01A02 / Seacorrie Swamp / Seacorrie Swamp from its headwaters to its mouth	4A	Escherichia coli (E. coli)	2006	L	7.03
VAP-K29R_XDW01A02 / XDW - UT to Assamoosick Swamp / UT to Assamoosick Swamp	4A	Escherichia coli (E. coli)	2006	L	2.05
VAP-K29R_XDX01A02 / Seacorrie Swamp, UT / Unnamed tributary to Seacorrie Swamp	4A	Escherichia coli (E. coli)	2006	L	1.47

Seacorrie Swamp, German Swamp, XDW and XDX

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.17

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 (E. coli)	2010	L	2.44

Assamoosick Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.44

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: 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 / Assamoosick Swamp, UT - XGT / Headwaters to mouth at Assamoosick Swamp	5A	Escherichia coli (E. coli)	2010	L	1.94

XGT - Assamoosick Swamp, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.94

Sources: Source Unknown

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.

Cause City/County: Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	2.36

XGS - Assamoosick Swamp, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.36

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Recreation Use is not supporting based on E.coli bacteria data with 9 exceedances out of 35 samples for station 5ADMR008.42. This creates the impaired status due to 2 or more STV hits in the same 90-day period with < 10 samples. 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 (E. coli)	2006	L	10.72

Darden Mill Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.72

Sources: Agriculture; Crop Production (Crop Land or Dry Land); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: DO is impaired at station 5ADMR008.42 with 19 exceedances out of 35 samples. Impairment is suspected to be the result of natural swamp conditions present in these waters, including low flow and high organic content.

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	Dissolved Oxygen	2002	L	10.72

Darden Mill Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			10.72

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K30R-01-PCB Nottoway River -Lower Middle

Cause Location: Lower/middle portion of Nottoway River in watershed K30. Segment starts below Route 671 downstream just below Point Beach.

Cause City/County: Southampton County

Use(s): Fish Consumption

Causes(s)/VA Category: PCBs in Fish Tissue/5A

Cause Description: Fish Tissue samples at station 5ANTW005.07 (18-IM-Hg, 2 exceedances) Blue Catfish . OE for As (3 exceedances). Impaired for PCBs (18-IM-PCB, 2 exceedances) Blue Catfish.

Fish Tissue samples at station 5ANTW011.18 (18-IM-Hg, 2 exceedances) Blue Catfish. OE for As (1 exceedance). OE for PCBs (18-O-PCB, 1 exceedance).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
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	PCBs in Fish Tissue	2020	L	10.96

Nottoway River -Lower Middle

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			10.96

Sources: Source Unknown

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

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

Cause Description: pH is impaired with 11 exceedances out of 35 samples at station 5ADMR008.42. Impairment is suspected due to natural swamp conditions present in these waters, low flow and high organic content.

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

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: DO is impaired at Station 5ANTW003.30 (6 exc/ 46 samp) and NCDNR station 5NTW-D0000050-NCDENR (18 exc/ 89 samp). K30R-02-DO

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	Dissolved Oxygen	2014	L	4.54

Nottoway River - Lower

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.54

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K30R-02-PCB Nottoway River - Lower

Cause Location: Lower portion of Nottoway River in watershed K30. Segment starts below Mill Creek near Point Beach to VA/NC state line.

Cause City/County: Southampton County

Use(s): Fish Consumption

Causes(s)/VA Category: PCBs in Fish Tissue/5A

Cause Description: 17-IM-PCB Fish species utilized for PCB testing at stations 5ANTW003.30 included Blue Catfish (2 exceedances).

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	PCBs in Fish Tissue	2020	L	4.54

Nottoway River - Lower

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			4.54

Sources: Source Unknown

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.

Cause City/County: Dinwiddie County; Petersburg; Prince George County; Surry County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 7/12 at station 5ABKR003.68. During the 2022 cycle no new data was collected.

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 (E. coli)	2006	L	22.91
VAP-K31R_WKS01A00 / Warwick Swamp / Warwick Swamp from its headwaters to the Route 627 bridge.	4A	Escherichia coli (E. coli)	2008	L	13.21

Blackwater Swamp, Warwick Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			36.12

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Petersburg; Prince George County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 and 2022 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 (E. coli)	2010	L	9.52

Second Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.52

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	3.03

Warwick Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.03

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Prince George County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.
During the 2022 cycle no new data was collected. 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 (E. coli)	2010	L	6.11

North Fork Blackwater Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.11

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Prince George County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2012	L	2.42

XHO - Warwick Swamp, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.42

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Prince George County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2012	L	2.22

XGX - Warwick Swamp, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.22

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Isle Of Wight County; Southampton County; Surry County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: E. coli is impaired based on data from station 5ABLW058.22 with 5 exceedances out of 30 samples. The impaired status is given due to 2 or more STV hits in the same 90-day period with < 10 samples. 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 exc/42 samp at 5ABLW058.22
1 exc/11 samp at 5ABLW064.46 3 exc/11 samp at 5ABLW069.30 3 exc/40 samp at 5ABLW074.66 2 exc/12 samp at 5ABLW087.70

During the 2016 cycle the segment remained impaired for Recreation use due to an E.coli exceedance rate of 6 exc/40 samp at 5ABLW074.66. During the 2018 cycle the segment remained impaired for Recreation use due to an E.coli exceedance rate of 7 exc/42 samp at 5ABLW074.66.

During the 2020 cycle the segment remained impaired for Recreation use due to an E.coli exceedance rate of 9 exc/42 samp at 5ABLW074.66. During the 2022 cycle the segment remained impaired for Recreation use due to an E.coli exceedance rate of 5/36 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 (E. coli)	2006	L	18.56
VAP-K32R_BLW02B98 / Blackwater River / Route 31 to Cypress Swamp	4A	Escherichia coli (E. 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 (E. coli)	2008	L	2.33

Blackwater River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			26.28

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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).

Cause City/County: Isle Of Wight County; Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2008	L	2.33

Blackwater River - Lower

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.33

Sources: Source Unknown

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

Cause City/County: Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 (E. coli)	2012	L	4.16
VAP-K32R_SRN02A06 / Spring Branch / Headwaters to Spurlock Adhesives	4A	Escherichia coli (E. coli)	2018	L	0.11

Spring Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.27

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Sussex County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/4A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 Macroinvertebrates Bioassessments	1998	L	4.16

Spring Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.16

Sources: Industrial Point Source Discharge; Municipal Point Source Discharges; Non-Point Source

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

Cause City/County: Sussex County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/4A

Cause Description: 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. During the 2022 cycle no new data was collected.

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	4.16

Spring Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.16

Sources: Industrial Point Source Discharge; Municipal Point Source Discharges; Non-Point Source

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.

Cause City/County: Prince George County; Surry County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle the segment remained impaired with 8/24 exceedance rate at station 5AOTR004.31. During the 2022 cycle no new data was collected.

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 (E. coli)	2016	L	7.44
VAP-K32R_OTR02A00 / Otterdam Swamp / Below Averys Pond to Blackwater River	4A	Escherichia coli (E. coli)	2006	L	5.86

Otterdam Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.3

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K32R-05-BAC Coppahaunk Swamp, UT - XDT

Cause Location: Mainstem from its headwaters to mouth

Cause City/County: Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2006	L	0.92

Coppahaunk Swamp, UT - XDT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.92

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Surry County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 (E. coli)	2006	L	143.63

Cypress Swamp Tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			143.63

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K32R-08-BAC Cypress Swamp

Cause Location: Mainstem from its headwaters to its mouth.

Cause City/County: Surry County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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.

During the 2020 cycle the segment was impaired for E.coli with an exceedance rate of 2/12 at station 5ACPP003.20. During the 2022 cycle no new data was collected.

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 (E. coli)	2006	L	17.06

Cypress Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			17.06

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers; Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K32R-11-BAC XDR - UT to Otterdam Swamp

Cause Location: Headwaters to mouth

Cause City/County: Surry County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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 (E. coli)	2010	L	2.61

XDR - UT to Otterdam Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.61

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

Chowan River and Dismal Swamp Basins

Cause Group Code: K32R-13-HGFT Blackwater River Basin

Cause Location: Blackwater River and tributaries from its headwaters to the VA-State Line

Cause City/County: Dinwiddie County; Isle Of Wight County; Petersburg; Prince George County; Southampton County; Suffolk; Surry County; Sussex County

Use(s): Fish Consumption

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

Cause Description: 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 Blue Catfish, 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.

17-IM-FT_Met Hg (7 exceedances) - Largemouth Bass, Carp, Channel Catfish, Redear Sunfish, Bluegill Sunfish, and Bowfin were used in the testing to determine this fish tissue impairment at station 5ABLW031.90.

Station 5ABLW022.84 - 17-IM FT_met; 5 exceedances of TV for Hg (Redear Sunfish, Largemouth Bass, Bluegill Sunfish, Bowfin, Chain Pickerel), 2 exceedances of TSV for As (Bowfin and chain pickerel).

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	22.91
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	3.44
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	6.92
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	6.24
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	3.03
VAP-K31R_XAT01A10 / Blackwater Swamp, UT / Headwaters to mouth at Blackwater Swamp	5A	Mercury in Fish Tissue	2008	L	1.46

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
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	2.83
VAP-K31R_XFX01A10 / Warwick Swamp, UT / Headwaters to mouth at Warwick Swamp	5A	Mercury in Fish Tissue	2008	L	2.96
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 to mouth at XES	5A	Mercury in Fish Tissue	2008	L	2.42
VAP-K31R_XHP01A10 / Blackwater Swamp, UT / Headwaters to mouth at Blackwater Swamp	5A	Mercury in Fish Tissue	2008	L	2.51
VAP-K31R_XHS01A12 / XHS - Second Swamp, UT / Headwaters to mouth at Second Swamp	5A	Mercury in Fish Tissue	2008	L	4.40
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	18.56
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	12.34
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	143.63
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	7.32
VAP-K32R_SRN01A94 / Spring Branch / Spurlock Adhesives discharge to Blackwater River.	5A	Mercury in Fish Tissue	2008	L	4.16
VAP-K32R_SRN02A06 / Spring Branch / Headwaters to Spurlock Adhesives	5A	Mercury in Fish Tissue	2008	L	0.11

(continued)

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.	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	0.92
VAP-K32R_XFM01A08 / Blackwater River, UT / Headwaters to mouth at Blackwater River	5A	Mercury in Fish Tissue	2008	L	3.14
VAP-K32R_XFV01A10 / XFV - Otterdam Swamp, UT / Headwaters to mouth	5A	Mercury in Fish Tissue	2008	L	1.21
VAP-K32R_XGC01A10 / XGC - Coppahaunk Swamp, UT / Headwaters to mouth at Coppahaunk Swamp	5A	Mercury in Fish Tissue	2008	L	2.98
VAP-K32R_ZZZ01A14 / Unsegmented Rivers in K32R / Unsegmented portion of watershed CU55.	5A	Mercury in Fish Tissue	2008	L	30.89
VAP-K32R_ZZZ01B14 / Unsegmented Rivers in K32R / Unsegmented portion of watershed CU56.	5A	Mercury in Fish Tissue	2008	L	40.82
VAP-K32R_ZZZ01C14 / Unsegmented Rivers in K32R / Unsegmented portion of watershed CU57	5A	Mercury in Fish Tissue	2008	L	110.77
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	2.33
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	19.11
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	4.19

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K33R_BLW04A08 / Blackwater River / From connection of Antioch Swamp to the Watershed line of K33.	5A	Mercury in Fish Tissue	2008	L	1.82
VAT-K33R_BMS01A12 / Burnt Mills Swamp / At confluence of Antioch Swamp to Route 258.	5A	Mercury in Fish Tissue	2008	L	5.17
VAT-K33R_ZZZ01A00 / Unsegmented rivers in K33R, Villines Swamp / Evaluated non-segmented rivers/swamps in K33.	5A	Mercury in Fish Tissue	2008	L	199.38
VAT-K34R_GHB01A18 / Golden Hill Branch / Tributary to Mill Swamp; North of Elberon	5A	Mercury in Fish Tissue	2010	L	3.48
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	8.45
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	5.15
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	6.43
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_RHS02A20 / Roundhill Swamp / Round Hill Swamp east of Appleton Road, north of Quaker Road, to the west of Seacock Swamp.	5A	Mercury in Fish Tissue	2010	L	3.89
VAT-K35R_RHS03A20 / Roundhill Swamp / Round Hill Swamp from the confluence of Horsepen Branch and Indigo Branch, north of Round Hill Road, west of Appleton Road.	5A	Mercury in Fish Tissue	2010	L	4.03
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	0.85

(continued)

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	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	2.60
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	0.82
VAT-K35R_XDY01A04 / UT Seacock Swamp / 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	3.76
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	199.07
VAT-K35R_ZZZ02A18 / Unsegmented Seacock Swamp - No Station / Unsegmented portions K35R Seacock Swamp	5A	Mercury in Fish Tissue	2010	L	13.30
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	4.96
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

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
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	3.86
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	3.01
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.	5A	Mercury in Fish Tissue	2004	L	2.24
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	0.70
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	4.07
VAT-K36R_BLW05A08 / Blackwater River - Lower / From Cox Landing downstream to downstream to VA/NC state line	5A	Mercury in Fish Tissue	2004	L	5.11
VAT-K36R_BLW06A20 / Blackwater River - Lower Middle / Blackwater River south of Route 58 and north of South Quay Road.	5A	Mercury in Fish Tissue	2012	L	0.69
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	5.17
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

(continued)

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	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	2.76
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	3.21

Blackwater River Basin

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			1800.39

Sources: Atmospheric Deposition - Toxics; Source Unknown

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.

Cause City/County: Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 (E. coli)	2010	L	1.07

Spring Branch, UT (XAW)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.07

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Prince George County; Surry County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: 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. During the 2022 cycle no new data was collected.

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 (E. coli)	2012	L	0.72

Spring Branch, UT (XAL)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.72

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Sussex County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2008	L	3.14

Blackwater River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.14

Sources: Source Unknown

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.

Cause City/County: Isle Of Wight County; Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E. coli data from station 5ABLW040.22 was marked as insufficient (3 exc/ 34 samp) for the 2022 IR due to one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. Recreation Use retains the impaired status based on data from the 2020 IR.

The Recreation Use is impaired based on the E.coli bacteria data (7 exc/ 33 samp) at DEQ (AQM) station 5ABLW040.22 from the 2020 IR.

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 (E. coli)	2012	L	1.04

Blackwater River - Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.04

Sources: Source Unknown

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).

Cause City/County: Isle Of Wight County; Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2008	L	19.11

Blackwater River - Upper

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			19.11

Sources: Source Unknown

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

Cause City/County: Isle Of Wight County; Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: There is no new data to assess in the 2022 IR cycle.

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 Macroinvertebrates Bioassessments	2008	L	4.19
VAT-K33R_BMS01A12 / Burnt Mills Swamp / At confluence of Antioch Swamp to Route 258.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	5.17

Blackwater River - Lower and Burnt Mills Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.36

Sources: Source Unknown

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).

Cause City/County: Isle Of Wight County; Surry County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: The 2022 IR cycle lists E. coli as insufficient with 2 exceedances out 12 samples due to one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. The impaired status is retained from the 2020 IR.

Recreation Use is impaired based on E.coli data with 8 exceedances out of 24 samples at DEQ (AQM) station 5AMSW006.77 from the 2020 IR.

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 (E. coli)	2010	L	8.45

Mill Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.45

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Isle Of Wight County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: E.coli bacteria data is impaired with 7 exceedances out of 34 samples at DEQ (AQM) station @ 5ARKN006.40 due to 2 or more STV hits in the same 90-day period with < 10 samples.

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 (E. coli)	2010	L	6.43

Rattlesnake Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.43

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Sussex County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: 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	Dissolved Oxygen	2008	L	120.07

Airfield Pond

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		120.07	

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

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.

Cause City/County: Sussex County

Use(s): Fish Consumption

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

Cause Description: 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

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Fecal Coliform/5A

Cause Description: There is no new data to assess in the 2022 IR cycle.

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	2.6

Seacock Swamp - Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			2.6

Sources: Source Unknown

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

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: There is no new data to assess in the 2022 IR cycle.

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 Macroinvertebrates Bioassessments	2008	L	2.6

Seacock Swamp - Lower

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.6

Sources: Source Unknown

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.

Cause City/County: Surry County

Use(s): Recreation

Causes(s)/VA Category: Fecal Coliform/5A

Cause Description: There is no new data to assess in the 2022 IR cycle.

Recreational Use is not supported based on data over 5 years old (2004 IR FC data: 6 exc/ 7 samp.) 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 / 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

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.

Cause City/County: Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E. coli data was insufficient from the 2022 IR at Station 5AXDZ001.73 with 1 exceedance out of 6 samples due to one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. E. coli retains the impaired status based on 2015 E. coli data from Station 5AXDZ001.73 with 2 exc/ 6 samp.

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 (E. coli)	2004	L	0.68

UT Airfield Pond - Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.68

Sources: Animal Feeding Operations (NPS); Source Unknown

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.

Cause City/County: Southampton County; Surry County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A; Fecal Coliform/5A

Cause Description: There is no new data to assess for station 5ASCK018.65 in the 2022 IR cycle.

E.coli is impaired based on data at Station 5ASCK006.96 with 9 exceedances out of 34 samples, as there are 2 or more STV hits in the same 90-day period with < 10 samples.

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	0.85

Seacock Swamp - Upper and Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			0.85

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 (E. coli)	2012	L	2.5

Seacock Swamp - Upper and Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.5

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K35R-07-BAC Roundhill Swamp

Cause Location: Round Hill Swamp from the confluence of Horsepen Branch and Indigo Branch, north of Round Hill Road, west of Appleton Road.

Cause City/County: Southampton County; Surry County; Sussex County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E. coli data from the 2022 IR states there are 0 exceedances out of 12 samples and is given the status of insufficient due to no STV exceedances but insufficient data to analyze geomean. E. coli retains the status of impaired. E. coli is impaired from data collected at Station 5ARHS004.20 (2 exc / 12 samp) from the 2020 IR.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K35R_RHS03A20 / Roundhill Swamp / Round Hill Swamp from the confluence of Horsepen Branch and Indigo Branch, north of Round Hill Road, west of Appleton Road.	5A	Escherichia coli (E. coli)	2020	L	4.03

Roundhill Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.03

Sources: Source Unknown

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

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2008	L	0.64

Round Hill Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.64

Sources: Source Unknown

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).

Cause City/County: Isle Of Wight County; Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4C

Cause Description: 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. DO data within the 2022 IR cycle is impaired (9 exc/ 31 samp). 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.

Station 5ABLW014.28 DO (12 exc/ 31 samp) and 5ABLW014.88 DO (11 exc/ 31 samp).

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	Dissolved Oxygen	NA	NA	3.86
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	Dissolved Oxygen	NA	NA	2.24
VAT-K36R_BLW05A08 / Blackwater River - Lower / From Cox Landing downstream to downstream to VA/NC state line	4C	Dissolved Oxygen	NA	NA	5.11

Blackwater - Lower Middle

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			11.21

Sources: Natural Sources

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.

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2008	L	4.96

Black Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.96

Sources: Source Unknown

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.

Cause City/County: Isle Of Wight County; Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4C

Cause Description: The Aquatic Life Use is impaired based on DO data at DEQ (AQM) stations @ 5ABLW002.54 (5 exceedances / 11 observations), 5ABLW009.14 (15 exceedances / 45 observations), 5ABLW009.80 (11 exceedances / 31 observations), 5ABLW012.28 (12 exceedances / 31 observations), 5ABLW013.16 (11 exceedances / 28 observations), 5ABLW014.28 (12 exceedances / 31 observations), 5ABLW014.88 (11 exceedances / 31 observations), 5ABLW016.27 (9 exceedances / 31 observations), 5AWAC000.03 (11 exceedances / 31 observations), 5BLW-D0001800-NCDEQ (35 exceedances / 103 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	Dissolved Oxygen	NA	NA	2.83
VAT-K36R_BLW04B12 / Blackwater River - Lower Middle / From Industrial Waste Ponds near Isle of Wight and Suffolk line to US-58.	4C	Dissolved Oxygen	NA	NA	0.70
VAT-K36R_BLW04C12 / Blackwater River - Lower Middle / South of the Isle of Wight / Suffolk line beginning at Rt 58 downstream to Cox Landing	4C	Dissolved Oxygen	NA	NA	4.07
VAT-K36R_BLW06A20 / Blackwater River - Lower Middle / Blackwater River south of Route 58 and north of South Quay Road.	4C	Dissolved Oxygen	NA	NA	0.69

Blackwater River - Lower Middle

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			8.29

Sources: Natural Sources

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.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E.coli data collected at station 5ABLC006.97 is impaired with 3 exceedances out of 12 samples, due to there being 2 or more STV hits in the same 90-day period with < 10 samples.

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 (E. coli)	2010	L	3.29

Black Creek- Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.29

Sources: Source Unknown

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.

Cause City/County: Isle Of Wight County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4C

Cause Description: 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	Dissolved Oxygen	NA	NA	0.55

Washole Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.55

Sources: Natural Sources

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.

Cause City/County: Isle Of Wight County; Southampton County; Suffolk

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: The Recreation Use is impaired based on 2 or more STV hits in the same 90-day period with < 10 samples 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 (E. coli)	2012	L	5.17

Cypress Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.17

Sources: Source Unknown

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.

Cause City/County: Southampton County; Suffolk

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: The Aquatic Life Use is impaired based on Benthic Impairments. The Benthic ProbMon is impaired at station 5AXGI001.79 (X-Trib to Blackwater River). Spring Score 2007 = 16.4, Fall Score 2007 = 8.9.

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 Macroinvertebrates Bioassessments	2008	L	2.76

Unsegmented Tributary to Blackwater

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.76

Sources: Source Unknown

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

Cause City/County: Isle Of Wight County; Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: E. coli data saw an observed effect with 3 exceedances out of 43 samples and 0 geomean exceedances out of 5 geomean samples. The observed effect is due to no geomean exceedances and only 1 STV exceedance in one or multiple 90-day periods represented by < 10 samples. E. coli impairment was retained from the 2016 IR cycle.

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 (E. coli)	2016	L	2.47

Blackwater River - Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.47

Sources: Source Unknown

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.

Cause City/County: Isle Of Wight County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: Recreation Use is not supported based on data collected at station 5ADKS000.09 (2 or more STV hits in the same 90-day period with < 10 samples). Station was supporting based on Ecoli 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 (E. coli)	2018	L	2.61

Ducks Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.61

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K36R-09-BAC Black Creek

Cause Location: Located NW of Burdette. From Wades Pond downstream to mouth. Tributary to Blackwater R. with confluence at RM 22.0.

Cause City/County: Southampton County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: Station 5ABLC002.00 had an observed effect with 1 exceedance out of 1 sample and station 5ABLC002.55 had an observed effect with 1 exceedance out of 12 samples. This gives the status of insufficient to both stations due to one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. E. coli retains the impaired status from the 2020 IR. There is currently no TMDL to account for the E. coli impairment.

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	Escherichia coli (E. coli)	2020	L	4.96

Black Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.96

Sources: Source Unknown

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).

Cause City/County: Southampton County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/4C

Cause Description: 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	NA	NA	1.53

Buckhorn Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.53

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Suffolk

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2006	L	9.39

Somerton Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.39

Sources: Source Unknown

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.

Cause City/County: Suffolk

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: The Recreation Use is impaired based on E.coli data at DEQ (AQM) station @ 5AMAR001.65 with 1 exceedance / 9 observations.

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 (E. coli)	2008	L	7.72

March Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.72

Sources: Source Unknown

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.

Cause City/County: Suffolk

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: The Recreation Use was impaired for E. coli in the 2020 IR cycle. Due to a water quality standard change, the E. coli data at station 5AJNS001.89 now has insufficient information - one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. The impairment will carry over for this IR cycle until there is enough data to assess its status.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K38R_JNS01A14 / Jones Swamp - Lower / Trib to Spivey Swamp near Rt. 643 (Arthur Dr) upstream to confluence with Quaker Swamp near Route 664.	5A	Escherichia coli (E. coli)	2014	L	3.8

Jones Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.8

Sources: Source Unknown

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.

Cause City/County: Suffolk

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: The Recreation Use is impaired for the current cycle based on E.coli data at DEQ (AQM) station 5ASTN008.78. There were 2 or more STV hits in the same 90-day period with < 10 samples.

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 (E. coli)	2016	L	9.39

Somerton Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.39

Sources: Source Unknown

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.

Cause City/County: Suffolk

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: The Aquatic Life Use is not supported based on DO data collected at station 5AJNS001.89 with 15 exceedances / 23 observations. 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 - Lower / Trib to Spivey Swamp near Rt. 643 (Arthur Dr) upstream to confluence with Quaker Swamp near Route 664.	5C	Dissolved Oxygen	2018	L	3.8

Jones Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.8

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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.

Cause City/County: Chesapeake; Suffolk

Use(s): Fish Consumption

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

Cause Description: 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	3241.97

Lake Drummond

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		3241.97	

Sources: Source Unknown

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.

Cause City/County: Chesapeake; Suffolk

Use(s): Aquatic Life

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

Cause Description: 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	3241.97

Lake Drummond

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		3241.97	

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K39R-01-HG Dismal Swamp Canal and 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.

Cause City/County: Chesapeake

Use(s): Fish Consumption

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

Cause Description: 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	13.22

Dismal Swamp Canal and Feeder Ditch to Lake Drummond

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			13.22

Sources: Source Unknown

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.

Cause City/County: Chesapeake; Suffolk

Use(s): Fish Consumption

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

Cause Description: 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	15.29

Unsegmented rivers in K39R

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			15.29

Sources: Source Unknown

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.

Cause City/County: Chesapeake; Suffolk

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: Recreation Use is impaired based on E. coli data collected at station 5BADA002.34 with 2 or more STV hits in the same 90-day period with < 10 samples.

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 (E. coli)	2018	L	3

Adams Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3

Sources: Source Unknown

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.

Cause City/County: Chesapeake; Suffolk

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: The Aquatic Life Use is impaired based on pH and DO data collected at station 5BADA002.34. Data collected at the station has 15 exceedances / 23 observations for DO.

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	Dissolved Oxygen	2018	L	3

Adams Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

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.

Cause City/County: Chesapeake; Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired based on pH and DO data collected at station 5BADA002.34. Data collected at the station has 9 exceedances / 23 observations 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	3

Adams Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

Chowan River and Dismal Swamp Basins

Cause Group Code: K39R-04-DO Cypress Swamp

Cause Location: Cyprus Swamp from the confluence of Council Swamp and Dragon Swamp eastward to West Ditch.

Cause City/County: Chesapeake; Suffolk

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: The Aquatic Life Use is impaired due to DO data collected at Station 5BCYS001.65 (7 exceedances / 12 observations).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K39R_CYS01A20 / Cypress Swamp / Cyprus Swamp from the confluence of Council Swamp and Dragon Swamp eastward to West Ditch.	5A	Dissolved Oxygen	2020	L	4.56

Cypress Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.56

Sources: Source Unknown

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.

Cause City/County: Chesapeake

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: Aquatic Life Use impairment is due to low dissolved oxygen concentrations (20 exceedances / 33 observations) at DEQ (AQM) station @ 5BXAM000.60. A Total Maximum Daily Load was developed 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	Dissolved Oxygen	2002	L	4.07

Unnamed tributary to Northwest River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.07

Sources: Contaminated Groundwater; Municipal Point Source Discharges; Non-Point Source; Runoff from Forest/Grassland/Parkland

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.

Cause City/County: Chesapeake

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: Recreation Use impairment is retained based on E. coli data from stations 5BNTW012.14 and 5BNTW012.86 with 7viol / 33 obs and 0 viol / 1 obs. For the 2022 assessment cycle, there were no STV exceedances but insufficient data to analyze geomean for station 5BNTW012.14, and there was one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean for 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 (E. coli)	2006	L	5.69

Northwest River - Middle (PWS)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.69

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K40R-02-DO Northwest River (Upper, Middle, Lower and Mouth)

Cause Location: This cause encompasses all of the Northwest River.

Cause City/County: Chesapeake

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: DO impairment based on data from stations 5BNTW011.90 (32 exceedances / 44 observations), 5BNTW010.23 (14 exceedances / 33 observations), 5BNTW009.49 (11 exceedances / 33 observations), 5BNTW007.49 (12 exceedances / 33 observations), 5BNTW008.97 (9 exceedances / 33 observations).

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	Dissolved Oxygen	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	Dissolved Oxygen	1998	L	5.69
VAT-K40R_NTW03A08 / Northwest River - Lower (PWS) / Northwest River from 168 to the Indian Creek Confluence	4A	Dissolved Oxygen	1998	L	2.83
VAT-K40R_NTW04A08 / Northwest River - Mouth (PWS) / Northwest River below Indian Creek confluence downstream to the VA state line @ RM 7.49.	4A	Dissolved Oxygen	2010	L	1.91

Northwest River (Upper, Middle, Lower and Mouth)

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			17.86

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

Chowan River and Dismal Swamp Basins

Cause Group Code: K40R-04-BAC Northwest River - Lower (PWS)

Cause Location: Northwest River from 168 to the Indian Creek Confluence

Cause City/County: Chesapeake

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description:

The Recreation Use is impaired in the 2020 IR cycle due to impaired E. coli data collected at Stations 5BNTW009.49, 5BNTW010.23, and 5BNTW011.90 ((4 viol / 33 obs), (4 viol / 33 obs), (4 viol, 33 obs)).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K40R_NTW03A08 / Northwest River - Lower (PWS) / Northwest River from 168 to the Indian Creek Confluence	5A	Escherichia coli (E. coli)	2016	L	2.83

Northwest River - Lower (PWS)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.83

Sources: Source Unknown

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.

Cause City/County: Chesapeake

Use(s): Fish Consumption

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

Cause Description: 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

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.

Cause City/County: Chesapeake

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: The Aquatic Life Use impairment is due to low dissolved oxygen concentrations (9 exceedances / 35 observations) 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	Dissolved Oxygen	2002	L	3.46

Indian Creek tributary to Northwest River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.46

Sources: Contaminated Groundwater; Municipal Point Source Discharges; Non-Point Source; Runoff from Forest/Grassland/Parkland

Chowan River and Dismal Swamp Basins

Cause Group Code: K40R-08-BAC Unnamed tributary to Northwest River (PWS)

Cause Location: Unnamed trib to Northwest River from St Brides Rd crossing to confluence with Northwest River. Within PWS area.

Cause City/County: Chesapeake

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: Recreation Use is impaired due to E. coli data collected at Station at 5BXAM000.60 with 2 or more STV hits in the same 90-day period with < 10 samples..

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.	5A	Escherichia coli (E. coli)	2006	L	4.07

Unnamed tributary to Northwest River (PWS)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.07

Sources: Source Unknown

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.

Cause City/County: Chesapeake

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: The Recreation Use is retained from the 2020 IR. The segment was impaired based on E.coli data collected at station 5BIND001.15 with 9 viol/ 34 obs. For the 2022 IR cycle, there was one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean.

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 (E. coli)	2006	L	3.46

Indian Creek tributary to Northwest River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.46

Sources: Source Unknown

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.

Cause City/County: Chesapeake; Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2010	L	7.43

Pocaty River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - 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

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.

Cause City/County: Chesapeake; Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: 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 25 exceedances / 43 observations 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	Dissolved Oxygen	2002	L	7.43

Pocaty River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - 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

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.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: The Recreation Use is impaired due to E.coli data with 2 or more STV exceedances in the same 90-day period with < 10 samples, no geomean exceedances.

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 (E. coli)	1998	L	2.55

Milldam Creek - Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.55

Sources: Agriculture; Confined Animal Feeding Operations (NPS); Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: Aquatic Life Use is impaired due to low dissolved oxygen concentrations (18 exceedances / 45 observations) at DEQ (AQM) station 5BMLD001.92.

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	Dissolved Oxygen	2006	L	2.55

Milldam Creek - Lower

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.55

Sources: Grazing in Riparian or Shoreline Zones; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Rural (Residential Areas)

Chowan River and Dismal Swamp Basins

Cause Group Code: K41R-03-DO Albemarle Canal and 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.

Cause City/County: Chesapeake; Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: Aquatic Life Use is impaired based on 2016 WoE station 5BAAC000.49 with 2 exceedances / 2 observations for DO. There is an observed effect for DO at station 5BAAC007.85 with 1 exceedance / 5 observations. Aquatic Life Use is impaired due to low dissolved oxygen concentrations (22 exceedances / 44 observations) at DEQ (AQM) station 5BNLR013.61. 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	Dissolved Oxygen	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	Dissolved Oxygen	2006	L	2.16

Albemarle Canal and North Landing River - Middle

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			10.71

Sources: Agriculture; Contaminated Groundwater; Municipal Point Source Discharges; Non-Point Source; Runoff from Forest/Grassland/Parkland

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.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Recreation Use is retained as impaired based on Ecoli data collected at station 5BWNC003.65. More data is necessary to analyze the geometric mean. 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 (E. coli)	2002	L	3.4

West Neck Creek - Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.4

Sources: Agriculture; Confined Animal Feeding Operations (NPS); Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: Aquatic Life Use is impaired for DO (5 exceedances / 23 observations) 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	Dissolved Oxygen	2002	L	3.4

West Neck Creek - Middle

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.4

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

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.

Cause City/County: Virginia Beach

Use(s): Fish Consumption

Causes(s)/VA Category: PCBs in Fish Tissue/5A

Cause Description: The Fish Consumption Use is retained as 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	PCBs in Fish Tissue	2010	L	3.4

West Neck Creek - Middle

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			3.4

Sources: Source Unknown

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.

Cause City/County: Chesapeake

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: Recreation Use is not supported based on E. coli data collected at station 5BBKW002.50. There are 2 or more STV exceedances in the same 90-day period with < 10 samples, no geomean exceedances.

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 (E. coli)	2006	L	4.47

Blackwater Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.47

Sources: Source Unknown

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.

Cause City/County: Chesapeake; Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: The Recreation Use is not supported based on E. coli data at Station 5BPCT001.79. There were multiple geometric mean exceedances within a 90 day period.

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 (E. coli)	2012	L	7.43

Pocaty River

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

Sources: Agriculture

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.

Cause City/County: Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 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 Macroinvertebrates Bioassessments	2012	L	0.67

Unnamed Trib to Milldam Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.67

Sources: Source Unknown

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.

Cause City/County: Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: Aquatic Life Use is retained as impaired based DO data from Station 5BXAT000.30 with 4 exceedances / 4 observations.

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	Dissolved Oxygen	2014	L	0.67

Unnamed Trib to Milldam Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.67

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K41R-13-DO Blackwater Creek

Cause Location: This cause encompasses Blackwater Creek from the headwaters at RM 3.2 to confluence with North Landing River RM 0.0.

Cause City/County: Chesapeake

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: Aquatic Life Use is not supporting based on dissolved oxygen data collected at station 5BBKW002.50 (9 exceedances / 46 observations).

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	Dissolved Oxygen	2008	L	4.47

Blackwater Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.47

Sources: Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: K41R-14-BAC North Landing River - Middle

Cause Location: From confluence with Intracoastal Waterway (RM 13.65) downstream to instream Island (RM 12.01, upstream of confluence of West Neck Creek).

Cause City/County: Chesapeake; Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Recreation Use is impaired based on the E. coli data collected at Station 5BNLR013.61. One STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. Additional monitoring is necessary for delisting. This is the first E. coli impairment recorded since the development of the Bacteria TMDL for this applicable watershed. An E. coli impairment was recorded in the 2006 IR cycle prior to the development of a TMDL. Therefore, this AU is nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
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	Escherichia coli (E. coli)	2006	L	2.16

North Landing River - Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.16

Sources: Livestock (Grazing or Feeding Operations); Wildlife Other than Waterfowl

Chowan River and Dismal Swamp Basins

Cause Group Code: K41R-15-BAC West Neck Creek - Lower

Cause Location: Segment and tribes. from widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossing downstream to mouth (RM 0.0) at confluence with North Landing River.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/5A

Cause Description: The Recreation Use is retained as impaired based on E. coli data collected at Station 5BWNC001.73.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K41R_WNC02A04 / West Neck Creek - Lower / Segment and tribes. from widening of creek (RM 3.10) approx. 0.55 mi downstream of Indian River Road crossing downstream to mouth (RM 0.0) at confluence with North Landing River.	5A	Escherichia coli (E. coli)	2006	L	6.12

West Neck Creek - Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.12

Sources: Source Unknown

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.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/4A

Cause Description: Recreation Use is not supporting based on Enterococci data from at station 5BNWN001.84. There were 2 or more STV hits in the same 90-day period with < 10 samples.

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	L	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

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.

Cause City/County: Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: 5BNWN001.84 exceeds 23 out of 34 observations for DO.

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	Dissolved Oxygen	2002	L	0.016

Nawney Creek - Upper

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - 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

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).

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/4A

Cause Description: Recreation Use is not supported based on Enterococcus data at DEQ station @ 5BNWN000.00. There were 2 or more STV hits in the same 90-day period with < 10 samples.

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	L	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

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).

Cause City/County: Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: Aquatic Life Use impairment based on DO data with 5 exceedances / 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	Dissolved Oxygen	2008	L	0.017

Nawney Creek - Lower

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	0.017		

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: K42E-03-BAC Hell Point Creek - Lower (at mouth)

Cause Location: Located southwest of Sandbridge. Segment begins at intersection of creek and canal upstream of monitoring station and ends at mouth, confluence with North Bay.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/4A

Cause Description: The Recreation Use is retained as not supporting due to Enterococci data collected at Station 5BHPC000.00. More monitoring data is needed to update the assessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42E_HPC02A04 / Hell Point Creek - Lower (at mouth) / Located southwest of Sandbridge. Segment begins at intersection of creek and canal upstream of monitoring station and ends at mouth, confluence with North Bay.	4A	Enterococcus	2006	L	0.015

Hell Point Creek - Lower (at mouth)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.015		

Sources: Livestock (Grazing or Feeding Operations); Wastes from Pets

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.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/4A

Cause Description: The Recreation Use is impaired due to Enterococci bacteria concentrations exceeding the water quality standards at DEQ station @ 5BMDY000.00. There were 2 or more STV hits in the same 90-day period with < 10 samples.

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: Agriculture; Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/4A

Cause Description: Recreation Use is impaired based on Enterococci data collected at station 5BBBC000.76. Enterococci has 2 or more STV hits in the same 90-day period with < 10 samples.

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: Agriculture; Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/4A

Cause Description: Recreation Use impairment is retained from previous assessments. Data collected from station 5BASH002.20 in the current cycle had one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean. More data is needed to update the assessment.

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: Agriculture; Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

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

Cause City/County: Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: Dissolved oxygen is impaired with 4 exceedances / 34 observations 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	Dissolved Oxygen	2010	L	0.042

Beggars Bridge Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	0.042		

Sources: Source Unknown

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.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/4A

Cause Description: The Recreation Use is not supported based on Enterococci bacteria data at DEQ station @ 5BHPC001.46. The station had 2 or more STV hits in the same 90-day period with < 10 samples.

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	0.03

Hell Point Creek - Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.03		

Sources: Municipal Point Source Discharges

Chowan River and Dismal Swamp Basins

Cause Group Code: K42E-12-BAC Lower Scopus Marsh

Cause Location: Tributary of Scopus March, west of Ocean Lakes High School southward to the north of Lago Mar Park.

Cause City/County: Virginia Beach

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/4A

Cause Description: The Recreation Use is not supporting due to impaired Enterococci data collected at Citizen Monitoring Stations 5SPS-OLABC1-VAMSC (2 viol / 2 obs), 5SPS-OLABC2-VAMSC (2 viol / 2 obs), and 5SPS-OLABC3-VAMSC (1 viol / 2 obs). This Assessment Unit falls within an existing TMDL for Enterococci. There was insufficient data to assess the Recreation Use in the 2022 IR Cycle. More sampling is necessary to delist.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-K42R_SPS02A20 / Lower Scopus Marsh / Tributary of Scopus Marsh, west of Ocean Lakes High School southward to the north of Lago Mar Park.	4A	Enterococcus	2020	L	1.37

Lower Scopus Marsh

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:			1.37

Sources: Agriculture; Crop Production (Crop Land or Dry Land); Residential Districts