Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: APPTF-SAV-BAY Appomattox River

Cause Location: Tidal Appomattox River Estuary

Cause City/County: Chesterfield County; Colonial Heights; Hopewell; Petersburg; Prince George County

Use(s): Aquatic Life; Shallow-Water Submerged Aquatic Vegetation

Causes(s)/VA Category: Aquatic Plants (Macrophytes)/4A

Cause Description: The Chesapeake Bay Water Quality Standards were adopted during the 2006 cycle. During the 2008 cycle, the Appomattox River Tidal Fresh segment (APPTF) failed the Submerged Aquatic Vegetation acreage requirements, and the water clarity Acreage criteria.

During the 2012 cycle, the Appomattox River Tidal Fresh segment (APPTF) failed the Submerged Aquatic Vegetation acreage requirements, and the water clarity Acreage criteria. But the Bay TMDL was Completed and is Cat 4A.

During the 2014 cycle, the Appomattox River Tidal Fresh segment (APPTF) failed the Submerged Aquatic Vegetation acreage requirements, and the water clarity Acreage criteria. But the Bay TMDL was Completed and is Cat 4A.

During the 2016 cycle, the Appomattox River Tidal Fresh segment (APPTF) failed the Submerged Aquatic Vegetation acreage requirements, and the water clarity Acreage criteria. But the Bay TMDL was Completed and is Cat 4A.

During the 2018, 2020, 2022 and 2024 cycle, the Appomattox River Tidal Fresh segment (APPTF) failed the Submerged Aquatic Vegetation acreage requirements, and the water clarity Acreage remained impaired due to no new data. But the Bay TMDL was Completed and is Cat 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15E_APP01A98 / Lower Appomattox River/Ashton Creek / The estuarine Appomattox River from the fall line to river mile 6.49. APPTF. Virginia Scenic River	4A	Aquatic Plants (Macrophytes)	2006	L	0.507
VAP-J15E_APP02A98 / Appomattox River / The estuarine portion of the Appomattox River from The confluence of Walthall Channel to the end of APPTF. Virginia Scenic River	4A	Aquatic Plants (Macrophytes)	2006	L	1.361
VAP-J15E_APP02B12 / Appomattox River / The estuarine portion of the Appomattox River from the start of PWS at river mile 6.49 to the confluence of Walthall Channel APPTF. Virginia Scenic River	4A	Aquatic Plants (Macrophytes)	2006	L	0.703
VAP-J15E_ZZZ01A14 / Unsegmented portion of J15E / HUC: 02080207 JA45	4A	Aquatic Plants (Macrophytes)	2014	L	0.032
VAP-J17E_SFT01D04 / Swift Creek / Tidal Swift Creek from the confluence with Timsbury Creek downstream to the mouth at the Appomattox River APPTF.	4A	Aquatic Plants (Macrophytes)	2006	L	0.087

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17E_ZZZ02A02 / Unsegmented portion in J17E watershed / Unsegmented portion of J17E watershed HUC: 02080207 APPTF	4A	Aquatic Plants (Macrophytes)	2006	L	0.051

Appomattox River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	2.74		

Appomattox River

Shallow-Water Submerged Aquatic Vegetation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	2.74		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: CHKOH-DO-BAY Chickahominy River

Cause Location: The oligohaline Chickahominy River and its tidal tributaries.

Cause City/County: Charles City County; James City County; New Kent County

Use(s): Aquatic Life; Open-Water Aquatic Life

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

Cause Description: During the 2006 cycle, the Chesapeake Bay Water Quality Standards were adopted. The oligohaline Chickahominy River estuary failed the summer 30-day mean dissolved oxygen criteria in the 2022 and 2024 cycles.

The Chesapeake Bay TMDL was approved on 12/29/2010; therefore, it is Cat. 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_CHK01A00 / Chickahominy River / The Chickahominy River from Walkers Dam to the confluence with Diascund Creek. CHKOH	4A	Dissolved Oxygen	2018	L	1.373
VAP-G08E_CHK02A00 / Chickahominy River / The Chickahominy River from the confluence with Diascund Creek downstream to the James River, excluding 0.5 mile upstream and downstream of station 2CCHK002.40. CHKOH	4A	Dissolved Oxygen	2018	L	5.468
VAP-G08E_CHK02B18 / Chickahominy River / Approximately 0.5 mile upstream and downstream of station 2CCHK002.40 CHKOH	4A	Dissolved Oxygen	2018	L	0.452
VAP-G08E_DSC01A00 / Diascund Creek / Diascund Creek from the Diascund Reservoir dam downstream to the mouth at the Chickahominy River. CHKOH	4A	Dissolved Oxygen	2018	L	0.271
VAP-G08E_GOR01A06 / Gordon Creek / Tidal limit to mouth CHKOH	4A	Dissolved Oxygen	2018	L	0.330
VAP-G08E_MOC01A02 / Morris Creek / The tidal portion of Morris Creek. CHKOH	4A	Dissolved Oxygen	2018	L	0.394
VAP-G08E_THD01A16 / Tomahund Creek / Tidal Tomahund Creek CHKOH	4A	Dissolved Oxygen	2018	L	0.112
VAP-G08E_XAC01A10 / XAC - Chickahominy River, UT / XAC in its entirety CHKOH	4A	Dissolved Oxygen	2018	L	0.017
VAP-G08E_YRM01A04 / Yarmouth Creek / Headwaters to confluence with Little Creek CHKOH	4A	Dissolved Oxygen	2018	L	0.119

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_ZZZ01A14 / Unsegmented estuaries in G08 / Unsegmented portion of watershed JL25 CHKOH	4A	Dissolved Oxygen	2018	L	0.121
VAP-G08E_ZZZ01B14 / Unsegmented estuaries in G08 / Unsegmented portion of watershed JL27 CHKOH	4A	Dissolved Oxygen	2018	L	0.159
VAP-G08E_ZZZ01C14 / Unsegmented estuaries in G08 / Unsegmented portion of watershed JL28 CHKOH	4A	Dissolved Oxygen	2018	L	0.478
VAP-G08E_ZZZ01D14 / Unsegmented estuaries in G08 / Unsegmented portion of watershed JL29 CHKOH	4A	Dissolved Oxygen	2018	L	0.326

Chickahominy River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	9.618		

Chickahominy River

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	9.618		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Natural Sources; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: EBEMH-DO-BAY Eastern Branch, Elizabeth River and Indian River

Cause Location: This cause encompasses the Eastern Branch of the Elizabeth River, from Broad Creek (RM 4.0) downstream to the confluence with Elizabeth River mainstem, and the entirety of Indian River. CBP segment EBEMH. Located between Tanglewood area to mouth.

Cause City/County: Chesapeake; Norfolk; Virginia Beach

Use(s): Aquatic Life; Open-Water Aquatic Life

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

Cause Description: The Aquatic Life and Open-Water Aquatic Life Uses are impaired based on failure to meet the CBP dissolved oxygen criteria for Open Water - ROY & Summer. EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_BRO01A02 / Broad Creek, Eastern Br. Elizabeth R. / Located between Ingleside and Thomas Corner areas. North shore tributary to Eastern Br. Elizabeth R. Entirety of Broad Creek. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 065-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	0.371
VAT-G15E_EBE01A00 / Eastern Branch, Elizabeth R. - Upper / Located between Carolanne Farms and Tanglewood areas. Upper Eastern Br., from headwaters to confluence of Broad Creek (RM 4.0). CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	0.377
VAT-G15E_EBE02A06 / Eastern Branch, Elizabeth R. - Lower / From Broad Creek (RM 4.0) downstream to mouth of Elizabeth River mainstem. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	1.015
VAT-G15E_IND01A02 / Indian River - Eastern Branch, Elizabeth R. / Located southwest of Broad Creek. Between Campostella Heights and Tanglewood. Entirety of creek including tribs. CBP segment EBEMH. Portion of the DSS (ADMINISTRATIVE) shellfish harvesting condemnation # 056-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	0.268
VAT-G15E_STM01A10 / Steamboat Creek / South Shore trib to E. Branch. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	0.058
VAT-G15E_ZZZ03A08 / Unsegmented estuaries in EBEMH / CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.261

Eastern Branch, Elizabeth River and Indian River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	2.35		

Eastern Branch, Elizabeth River and Indian River

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	2.35		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: ELIPH-DO-BAY Chesapeake Bay segment ELIPH (Elizabeth River Mainstem)

Cause Location: This cause encompasses the complete CBP segment ELIPH.

Cause City/County: Norfolk; Portsmouth

Use(s): Aquatic Life; Open-Water Aquatic Life

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

Cause Description: The Aquatic Life and Open-Water Aquatic Life Use is impaired based on failure to meet the dissolved oxygen criteria for Open Water - Summer. The Aquatic Life and Open-Water Aquatic Life Use for "Rest of Year, ROY" is supporting. EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_ELI01A06 / Elizabeth River Mainstem - Upper / From start of mainstem downstream to line between Hospital Pt and Smiths Cr. (Incl. Hague). Segment ELIMHa (downstream Lamberts Pt.). DSS (ADMIN) cond # 056-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	0.468
VAT-G15E_ELI03A08 / Elizabeth River Mainstem - Mouth / From start BIBI segment ELIPHa (SE corner Craney Isl. line to east) downstream to mouth (NE corner Craney Isl. east to S Glenwood Pk). BIBI segment ELIPHa. CBP segment ELIPH. DSS (ADMIN) condemnation # 056-007 A (effective 20120529).	4A	Dissolved Oxygen	2024	L	3.445
VAT-G15E_SCO01A06 / Scott Creek / South shore tributary of Elizabeth River mainstem. Upstream of Pinner Point. CBP segment ELIPH. BIBI segment ELIMHa. Portion of the DSS (ADMINISTRATIVE) shellfish harvesting condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2024	L	0.194

Chesapeake Bay segment ELIPH (Elizabeth River Mainstem)

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	4.107		

Chesapeake Bay segment ELIPH (Elizabeth River Mainstem)

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	4.107		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Source Unknown; Sources Outside State Jurisdiction or Borders; Urban Runoff/Storm Sewers; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G01E-01-BAC James River

Cause Location: Estuarine James River from the fall line at Mayos Bridge downstream to Kingsland Creek

Cause City/County: Chesterfield County; Henrico County; Richmond

Use(s): Recreation

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

Cause Description: The James River from the fall line to the Appomattox River was initially assessed as not supporting of the Recreation Use based on the results of a summer special study in the fall zone. The special study was designed to monitor the effects of summertime rain and combined sewer overflow (CSO) events on water quality in the James River and to monitor the effects of Richmond's CSO abatement efforts. The segment has been included on the Impaired Waters list for fecal coliform since 1996.

During the 2004 and 2006 cycles, the bacteria standard changed to E.coli for those stations with enough data. During the 2008 cycle, the impairment converted solely to E. coli.

The James River and Tributaries - City of Richmond Bacterial TMDL was approved by the EPA on 11/4/2010. The river is considered Category 4A.

Bacteria impairment was noted at multiple stations in the river during the 2020 cycle. The lower portion of the segment showed acceptable levels; however, the segment extent remained unchanged until additional monitoring could confirm in the next cycle.

2-JMS110.30 - 8/65 2-JMS109.16 - 3/10 2-JMS104.16 - 9/63 2-JMS099.30 - 8/64 2-JMS087.11 - 0/1 (W) 2-JMS087.01 - 5/62 (S)

New bacteria criteria were implemented in the 2022 cycle. The upper portion remained impaired due to geometric mean and STV exceedances at multiple DEQ and citizen monitoring stations. There was insufficient information to assess the criteria in the lower segment; therefore, the impairment was carried over.

In the 2024 cycle, monitored stations near the fall line continue to be impaired (2CJMS-J08-JRA and 2CJMS-J10-JRA). Several downstream stations are fully supporting: 2CJMS-J09-JRA (near previous DEQ station 2-JMS099.30) 2CJMS097.40 2-JMS091.00

The remaining monitoring stations were insufficient for assessment.

The impairment will be shortened to extend from the fall line to Kingsland Creek at approximately rivermile 99.40. The lower portion will be partially delisted. Additional monitoring is recommended at station 2-JMS104.16, which was previously impaired for E. coli but was not monitored in the 2024 cycle, to further define the segmentation.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01E_JMS01A02 / James River / The James River from the fall line near Mayos Bridge to river mile 108.76. State Scenic River JMSTFu	4A	Escherichia coli (E. coli)	1996	L	0.239
VAP-G01E_JMS02A02 / James River / The James River from river mile 108.76 to river mile 108.63. JMSTFu	4A	Escherichia coli (E. coli)	1996	L	0.016
VAP-G01E_JMS03A02 / James River / The James River from river mile 108.63 to the confluence with Kingsland Creek. JMSTFu	4A	Escherichia coli (E. coli)	1996	L	1.012

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02E_JMS01A00 / James River / The James River from Proctors Creek to 5 miles above the old American Tobacco raw water intake. JMSTFu	4A	Escherichia coli (E. coli)	2008	L	0.078

James River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	1.345		

Sources: Agriculture; Combined Sewer Overflows; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01E-02-EBEN James River

Cause Location: The James River estuary within CB segment JMSTFa

Cause City/County: Chesterfield County; Henrico County

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: DELIST

During the 2012-2016 cycles, the mainstem of the tidal freshwater James River (JMSTFa) was impaired of the Aquatic Life Use due to an inadequate benthic community based on the Chesapeake Bay Benthic Index of Biological Integrity.

In addition, there was benthic alteration at 2010 Coastal 2000 stations 2CJMS055.04 and 2CJMS084.70, which were considered Category 5A. The source is "possibly cumulative chronic effects of metals and PAHs in the sediment".

The JMSTFa B-IBI segment met the goal in the 2018 cycle. The impairment was shortened to those areas around the two Coastal 2000 stations. The remainder was partially delisted.

During the 2022 cycle, the mainstem of the tidal freshwater James River was impaired of the Aquatic Life Use due to an inadequate benthic community based on the Chesapeake Bay Benthic Index of Biological Integrity.

Benthic segment JMSTFa was acceptable in the 2024 cycle and will be delisted. The weight of evidence impairments are being split off into separate fact sheets due to the potential sediment local causes and are now included under G02E-05-EBEN (2CJMS084.70) and G04E-06-EBEN (2CJMS055.04).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02E_JMS02A00 / James River / The James River from 5 miles above the old American Tobacco intake to 1/2 mile upstream of 2CJMS084.70. JMSTFu	5A	Estuarine Bioassessments	2012	L	2.048

James River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.048		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G01E-03-PCBFT James River and Various Tributaries

Cause Location: Estuarine James River from the fall line to the Hampton Roads Bridge Tunnel, including several tributaries listed below.

Cause City/County: Charles City County; Chesapeake; Chesterfield County; Colonial Heights; Dinwiddie County; Hampton; Henrico County; Hopewell; Isle Of Wight County; James City County; New Kent County; Newport News; Norfolk; Petersburg; Portsmouth; Prince George County; Richmond; Suffolk; Surry County; Virginia Beach

Use(s): Fish Consumption

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

Cause Description: During the 2002 cycle, the James River from the fall line to Queens Creek was considered not supporting of the Fish Consumption Use due to PCBs in several fish species at multiple DEQ monitoring locations.

During the 2004 cycle, a VDH Fish Consumption Restriction was issued from the fall line to Flowerdew Hundred and the segment was adjusted slightly to match the restriction. In addition, in the 2004 cycle, the Chickahominy River from Walkers Dam to Diascund Creek was assessed as not supporting of the Fish Consumption Use because the DEQ screening value for PCBs was exceeded in three species during 2001 sampling st 2-CHK023.64. 2003 monitoring exceeded at 2-JMS108.71 and 2-JMS110.00, among others.

The VDH restriction was extended on 12/13/2004 to stretch from the I-95 bridge downstream to the Hampton Roads Bridge Tunnel and include the tidal portions of the following tributaries: Appomattox River up to Lake Chesdin Dam Bailey Creek up to Route 630 Bailey Bay Chickahominy River up to Walkers Dam Skiffes Creek up to Skiffes Creek Dam Pagan River and its tributary Jones Creek Chuckatuck Creek Nansemond River and its tributaries Bennett Creek and Star Creek Hampton River Willoughby Bay and the Elizabeth R. system (Western, Eastern, and Southern Branches and Lafayette R.) and tributaries St. Julian Creek, Deep Creek, and Broad Creek

The advisory was modified again on 10/10/2006 to add Poythress Run.

The impairments were combined. The TMDL for the lower extended portion is due in 2018.

PCB sampling in 2012 showed exceedances in four species (sp) at 2-JMS087.01, three sp at 2-JMS097.77, four sp at 2-JMS110.00, two sp at 2-PTH000.23, two sp at 2-BLY000.65, three sp at 2-JMS074.44, two sp at 2-JMS066.88, two sp at 2-JMS057.69, and three sp at 2-JMS052.67, among others.

Additional sampling occurred in 2016. The results are as follows: 2-JMS110.00 - 7 sp 2-JMS097.77 - 4 sp 2-JMS074.44 - 4 sp 2-JMS066.88 - 3 sp 2-JMS049.00 - 1 sp 2-CHK002.17 - 2 sp

2021 monitoring continued to confirm the impairment: 2-JMS110.00 - 8 sp 2-JMS103.15 - 2 samples of largemouth bass 2-JMS093.21 - 2 sp 2-JMS091.00 - 1 sp 2-JMS074.44 - 4 sp 2-JMS066.88 - 2 sp 2-JMS052.67 - 3 sp 2-BLY000.65 - 4 sp 2-CHK023.64 - 2 sp 2-CHK002.17 - 3 sp During the 2024 cycle, new fish tissue data was collected at station 2-APP001.53 in 2021 for three species (blue catfish, white perch, largemouth bass). PCB levels were all below criteria and fully supporting. The VDH fish consumption advisory is still in effect so the impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01E_JMS01A02 / James River / The James River from the fall line near Mayos Bridge to river mile 108.76. State Scenic River JMSTFu	5A	PCBs in Fish Tissue	2002	H	0.239

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01E_JMS02A02 / James River / The James River from river mile 108.76 to river mile 108.63. JMSTFu	5A	PCBs in Fish Tissue	2002	H	0.016
VAP-G01E_JMS03A02 / James River / The James River from river mile 108.63 to the confluence with Kingsland Creek. JMSTFu	5A	PCBs in Fish Tissue	2002	H	1.012
VAP-G01E_JMS03B24 / James River / The James River from Kingsland Creek downstream to the confluence with Proctors Creek at river mile 2-JMS097.94. JMSTFu	5A	PCBs in Fish Tissue	2002	H	0.217
VAP-G02E_APP01A12 / Appomattox River / Portion of the Appomattox River within CB segment JMSTFl State Scenic River	5A	PCBs in Fish Tissue	2002	H	0.113
VAP-G02E_JMS01A00 / James River / The James River from Proctors Creek to 5 miles above the old American Tobacco raw water intake. JMSTFu	5A	PCBs in Fish Tissue	2002	H	0.078
VAP-G02E_JMS02A00 / James River / The James River from 5 miles above the old American Tobacco intake to 1/2 mile upstream of 2CJMS084.70. JMSTFu	5A	PCBs in Fish Tissue	2002	H	2.048
VAP-G02E_JMS02B18 / James River / The James River from 5 miles above City Point at Hopewell to the downstream extent of JMSTFu. JMSTFu	5A	PCBs in Fish Tissue	2002	H	1.182
VAP-G02E_JMS02C24 / James River / The James River 1/2 mile upstream and downstream of 2CJMS084.70. JMSTFu	5A	PCBs in Fish Tissue	2002	H	0.178
VAP-G02E_JMS02D24 / James River / The James River from 1/2 mile downstream of 2CJMS084.70 to 5 miles above City Point at Hopewell. JMSTFu	5A	PCBs in Fish Tissue	2002	H	0.564
VAP-G02E_JMS03A06 / James River / The James River from the upstream extent of JMSTFl to the downstream extent of PWS. JMSTFl	5A	PCBs in Fish Tissue	2002	H	0.633
VAP-G03E_BLY01A98 / Bailey Creek/Cattail Creek / The tidal portions of Bailey Creek and Cattail Creek. JMSTFl	5A	PCBs in Fish Tissue	2002	H	0.114
VAP-G03E_JMS01A00 / James River / The mainstem of the James River from the confluence with the Appomattox River downstream to Powell Creek. JMSTFl	5A	PCBs in Fish Tissue	2002	H	10.194

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03E_JMS01B10 / James River / The mainstem of the James River from the confluence with Powell Creek downstream to Queen Creek. JMSTFl	5A	PCBs in Fish Tissue	2002	H	3.485
VAP-G03E_PTH01A00 / Poythress Run / The tidal portion of Poythress Run. JMSTFl	5A	PCBs in Fish Tissue	2008	H	0.002
VAP-G04E_JMS01A02 / James River / The James River from the confluence with Queens Creek downstream to Buoy 74 at Brandon Point JMSTFl	5A	PCBs in Fish Tissue	2006	H	7.756
VAP-G04E_JMS02A02 / James River / The James River from the tidal freshwater/oligohaline boundary at approx. river mile 51.94 to the limit of the PRO watershed (approx. rm 42.7). JMSOH	5A	PCBs in Fish Tissue	2006	H	20.409
VAP-G04E_JMS03A04 / James River / Buoy 74 at Brandon Point (rivermile 55.94) to 1/2 mile upstream of station 2CJMS055.04. JMSTFl	5A	PCBs in Fish Tissue	2006	H	0.294
VAP-G04E_JMS03B24 / James River / James River 1/2 mile upstream and downstream of station 2CJMS055.04. JMSTFl	5A	PCBs in Fish Tissue	2006	L	1.050
VAP-G04E_JMS03C24 / James River / James River from 1/2 mile downstream of station 2CJMS055.04 to the tidal freshwater/oligohaline boundary at approximately river mile 52.08. JMSTFl	5A	PCBs in Fish Tissue	2006	L	2.412
VAP-G08E_CHK01A00 / Chickahominy River / The Chickahominy River from Walkers Dam to the confluence with Diascund Creek. CHKOH	5A	PCBs in Fish Tissue	2004	H	1.373
VAP-G08E_CHK02A00 / Chickahominy River / The Chickahominy River from the confluence with Diascund Creek downstream to the James River, excluding 0.5 mile upstream and downstream of station 2CCHK002.40. CHKOH	5A	PCBs in Fish Tissue	2006	H	5.468
VAP-G08E_CHK02B18 / Chickahominy River / Approximately 0.5 mile upstream and downstream of station 2CCHK002.40 CHKOH	5A	PCBs in Fish Tissue	2006	H	0.452
VAP-J15E_APP01A98 / Lower Appomattox River/Ashton Creek / The estuarine Appomattox River from the fall line to river mile 6.49. APPTF. Virginia Scenic River	5A	PCBs in Fish Tissue	2002	H	0.507

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15E_APP02A98 / Appomattox River / The estuarine portion of the Appomattox River from The confluence of Walthall Channel to the end of APPTF. Virginia Scenic River	5A	PCBs in Fish Tissue	2002	H	1.361
VAP-J15E_APP02B12 / Appomattox River / The estuarine portion of the Appomattox River from the start of PWS at river mile 6.49 to the confluence of Walthall Channel APPTF. Virginia Scenic River	5A	PCBs in Fish Tissue	2002	H	0.703
VAP-J15R_APP01A12 / Appomattox River / The Appomattox River from the Rohoic Creek to the fall line at the Route 1/301 bridge. Virginia Scenic River	5A	PCBs in Fish Tissue	2006	H	1.950
VAP-J15R_APP01A98 / Appomattox River / The Appomattox River from the Lake Chesdin dam to the confluence of Rohoic Creek	5A	PCBs in Fish Tissue	2006	H	5.580
VAT-G10E_JMS01A06 / James River Mainstem - Chickahominy R. to Hog Point / From confluence with Chickahominy R. coincident with watershed line (RM 48.40) downstream to line between Hog Pt. and mouth College Cr. N shore James R. CBP segment JMSOH. DSS (ADMIN) shellfish condemn # 059-069 A (effective 20141219).	5A	PCBs in Fish Tissue	2006	H	17.843
VAT-G10E_JMS01B08 / James River - Carters Grove Area (G10) / Mainstem along north shore, Camp Wallace to Carters Grove. Area shoreline upstream of Skiffes Creek. Portion of CBP segment JMSOH. DSS (ADMIN PROHIB) shellfish direct harvesting condemnation # 059-067 A&B (effective 20100901).	5A	PCBs in Fish Tissue	2006	H	0.985
VAT-G10E_JMS02A06 / James River - Hog Point Area (Open Shellfish Area) / Triangular area in mainstem around Walnut Point, from Hog Pt. to G11 watershed line. CBP segment JMSOH. DSS (OPEN) shellfish direct harvesting condemnation # 057-069 (effective 20201113).	5A	PCBs in Fish Tissue	2006	H	2.240
VAT-G11E_CKT01A04 / Chuckatuck & Brewers Creeks / South shore trib to James R., confluence upstream of Nansemond R. From headwaters of Brewers and Chuckatuck Creeks downstream to end of SF condemnation at Route 17 Bridge, Carrollton Blvd. Portion of CBP segment JMSMH. DSS shellfish harvesting condemnation # 062-080 (effective 20221015).	5A	PCBs in Fish Tissue	2006	H	0.977

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_CKT02A12 / Chuckatuck Creek and Mouth in James / South shore trib to James R, confluence upstream of Nansemond River. Segment includes DSS OPEN shellfish area from Carrollton Bridge downstream to mouth. Portion of CBP segment JMSMH. DSS OPEN shellfish direct harvesting condemnation # 062-080 (effective 20221015).	5A	PCBs in Fish Tissue	2006	H	0.304
VAT-G11E_JMS01A06 / James River - Gravel Neck to Pagan River / From start of JMSMH salinity boundary (Hog Isl. Cr.) downstream to line between Jail Pt (Mulberry Isle) to Days Pt (mouth Pagan R). CBP segment JMSMH. DSS (OPEN) shellfish condemnation # 059-069 & 058-183(effective 20201113).	5A	PCBs in Fish Tissue	2002	H	40.260
VAT-G11E_JMS01B08 / James River - Hog Island Area [JMSOH area] / From area of Homewood (G11 watershed line) downstream to start of JMSMH salinity boundary (Hog Isl. Cr.). CBP segment JMSOH. DSS (OPEN) shellfish direct harvesting condemnation # 059-069 (effective 20201113).	5A	PCBs in Fish Tissue	2006	H	3.846
VAT-G11E_JMS01C08 / James River - Carter Grove Area / Mainstem along north shore, from near Carter Grove. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 059-067 A (effective 20100901).	5A	PCBs in Fish Tissue	2006	H	0.404
VAT-G11E_JMS01D14 / James River - Carters Grove Area (G11) / Mainstem along north shore, Camp Wallace to Carters Grove. Area shoreline upstream of Skiffes Creek. Portion of CBP segment JMSOH. DSS (ADMIN PROHIB) shellfish direct harvesting condemnation # 059-067 A&B (effective 20100901).	5A	PCBs in Fish Tissue	2006	H	1.218
VAT-G11E_JMS02A06 / James River - Jail Point to Hilton Village / Mainstem from line between Jail Pt (Mulberry Isle) to Days Pt (Mouth Pagan R) downstream to line Hilton Village (Newport News)/Kings Creek (Isle of Wight). CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 058-034 (effective 20201113) & 061-064 (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	24.697
VAT-G11E_JMS03A06 / James River - Along Lower North Shore / Mainstem along north shore, from Jail Point (Mulberry Isle) downstream to line following Rt. 664. CBP segment JMSMH. Portions of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518) & 056-007 A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	3.943

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JMS03B06 / James River - Hilton Beach Area / North shore James R. NW of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518).	5A	PCBs in Fish Tissue	2006	H	0.110
VAT-G11E_JMS03C06 / James River - Huntington Beach Area / North shore James R. near foot of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518).	5A	PCBs in Fish Tissue	2006	H	0.008
VAT-G11E_JMS04A06 / James River - Hilton Village to Craney Island / Mainstem from a line between Hilton Village (Newport News)/Kings Creek (Isle of Wight) downstream to the end of DSS (OPEN) shellfish direct harvesting condemnation # 059-007 (effective 20210615) & Conditionally Approved 062-080 C8 (effective 20221015) CBP segment JMSMH.	5A	PCBs in Fish Tissue	2006	H	24.105
VAT-G11E_JMS06A10 / James River - Outside Mouth Streeter & Hoffler Creeks / Mainstem area at Mouth of Streeter & Hoffler Creeks @ SW corner Craney Island. CBP segment JMSMH. DSS (ADMIN) shellfish condemnation # 064-018 A (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.156
VAT-G11E_JOG01A08 / Jones Creek - Tributary to Pagan River / South shore trib. to Pagan R. near confluence with James R. From headwaters to SR 669, including tidal tributaries. CBP segment JMSMH. Portion of DSS shellfish harvesting (Admin-PROHIBITED) # 061-064 B, D, E, F (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	0.229
VAT-G11E_JOG02A08 / Jones Creek - Tributary to Pagan River / South shore trib. to Pagan R. near confluence with James R. From SR 669 to mouth, including tidal tributaries. CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	0.102
VAT-G11E_PGN01A08 / Pagan River - Upstream of Chalmers Point / Located in Smithfield area. South shore tributary to James R. From end of tidal water downstream to approx. RM 7.00. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	0.062

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_PGN01B18 / Pagan River - Upper Middle / Located in Smithfield area. South shore tributary to James R. From downstream of Crook Ln to Unnamed N Trib at Goose Hill Way. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	0.065
VAT-G11E_PGN01C18 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. Middle Pagan segment that Includes Morris Cr ends before Battery Park. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	0.058
VAT-G11E_PGN02A08 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. North of Town of Smithfield downstream Azalea Dr. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	1.030
VAT-G11E_PGN02B14 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. Lower portion from Moonefield Dr to Morris Cr. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	0.162
VAT-G11E_PGN02C18 / Pagan River - Lower SF Open / Located in Smithfield area. South shore tributary to James R. From Morris Creek downstream to River Ave. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	0.084
VAT-G11E_PGN02D16 / Pagan River - Middle / Located in Smithfield area. South shore tributary on the East shore to James R. Portion near Battery Park. Portion of CBP segment JMSMH. Portion of DSS shellfish Restricted-condemnation # 061-064 (20220615)	5A	PCBs in Fish Tissue	2006	H	0.020
VAT-G11E_PGN03A10 / Pagan River - Mouth Area / Located in Smithfield area. South shore tributary to James R. From the edge of shellfish condemnation #061-064A to. downstream to mouth. Portion of CBP segment JMSMH. DSS Restricted shellfish direct harvesting designations # 061-064 A 20220615	5A	PCBs in Fish Tissue	2006	H	0.889
VAT-G11E_SFF02A08 / Skiffes Creek System [Admin Cond] / Located west of Lee Hall area, flows along the James City Co./NN City boundary. From dam downstream to mouth, including tidal tribs. Portion of CBP segment JMSMH. DSS (ADMIN) shellfish direct harvesting condemnation # 059-023 A (effective 20081215).	5A	PCBs in Fish Tissue	2006	H	0.452

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_SFF03A10 / Skiffes Creek - Mouth / Located west of Lee Hall area, flows across the James City Co./NN City boundary. From Goose Island to point on opposite shore. Portion of CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 059-069 (effective 20201113).	5A	PCBs in Fish Tissue	2006	H	0.060
VAT-G11E_WIL01A18 / Williams Creek / Located off of North shore tributary to Pagan River. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting ADMIN condemnation # 061-064 C (effective 20220615).	5A	PCBs in Fish Tissue	2006	H	0.060
VAT-G13E_BEN01A04 / Bennett Creek - Tributary to Nansemond R. [No TMDL] / Eastern shore trib. to Nansemond R., near confluence with James R. Bennett Harbor area. From headwaters to mouth, including tidal tributaries. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 063-046 A (20220915).	5A	PCBs in Fish Tissue	2004	H	0.542
VAT-G13E_NAN01A00 / Nansemond River - Upper / Upper Nansemond River, within city of Suffolk. Extends from most upstream point in river at Lake Meade Dam (RM 19.8) downstream to Rt. 58/460 crossing (RM 15.2). CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (effective 2020915).	5A	PCBs in Fish Tissue	2006	H	0.263
VAT-G13E_NAN02A06 / Nansemond River - Upper Middle / Downstream of Suffolk. From Rt 58/460 (RM 15.1) crossing downstream to confluence with the Western Branch Reservoir (RM 11.9). CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	5A	PCBs in Fish Tissue	2006	H	0.209
VAT-G13E_NAN03A06 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	5A	PCBs in Fish Tissue	2006	H	2.636
VAT-G13E_NAN03A24 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS Shellfish Open Condemnation # 063-008 (20220915)	5A	PCBs in Fish Tissue	2006	L	0.197
VAT-G13E_NAN04A00 / Nansemond River - Lower [No TMDL] / Nansemond R mouth. From Olds Cove downstream to mouth. CBP segment JMSMH. DSS (OPEN) condemnation 063-046 (effective 20220915) & 063-008 (effective 20220915).	5A	PCBs in Fish Tissue	2006	H	6.303

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_NAN04C10 / Nansemond River - Lower DSS Condemned at Knotts Cr / Nansemond R at confluence Knotts Cr. CBP segment JMSMH. DSS condemnation # 063-046 A (effective 20220915).	5A	PCBs in Fish Tissue	2006	H	0.467
VAT-G13E_STR01A04 / Star & Oyster House Creeks - Tributary to Nansemond R. / Eastern shore tributary to Nansemond R. Adjacent to the Naval Communication station at Driver. From headwaters to confluence with Nansemond R. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	5A	PCBs in Fish Tissue	2006	H	0.046
VAT-G15E_BLM01A22 / Bells Mill Creek - SB Elizabeth R. S. shore tributary / SB Elizabeth R S shore tributary SW of Great Bridge Locks. CBP & BIBI segment SBEMHa. Portion of DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.027
VAT-G15E_BRO01A02 / Broad Creek, Eastern Br. Elizabeth R. / Located between Ingleside and Thomas Corner areas. North shore tributary to Eastern Br. Elizabeth R. Entirety of Broad Creek. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 065-007 E (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.371
VAT-G15E_DEC01A06 / Deep Creek, Southern Br. Elizabeth R. / South of I-64 crossing of Southern Br. E shore trib to Southern Br. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.209
VAT-G15E_DEC02A18 / Deep Creek, Southern Br. Elizabeth R.- Mouth / South of I-64 crossing of Southern Br. E shore trib to Southern Br. Mouth of Creek North of Interstate 64. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.075
VAT-G15E_EBE01A00 / Eastern Branch, Elizabeth R. - Upper / Located between Carolanne Farms and Tanglewood areas. Upper Eastern Br., from headwaters to confluence of Broad Creek (RM 4.0). CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.377
VAT-G15E_EBE02A06 / Eastern Branch, Elizabeth R. - Lower / From Broad Creek (RM 4.0) downstream to mouth of Elizabeth River mainstem. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	1.015

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_ELI01A06 / Elizabeth River Mainstem - Upper / From start of mainstem downstream to line between Hospital Pt and Smiths Cr. (Incl. Hague). Segment ELIMHa (downstream Lamberts Pt.). DSS (ADMIN) cond # 056-007 E (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.468
VAT-G15E_ELI02A06 / Elizabeth River Mainstem - Middle / From a line between Hospital Pt and Smiths Cr down stream to the end of CBP-BIBI segment ELIMHa (downstream of Lamberts Pt.). BIBI segment ELIMHa. CBP segment ELIPH. DSS (ADMIN) condemnation # 056-007 E and A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	4.005
VAT-G15E_ELI03A08 / Elizabeth River Mainstem - Mouth / From start BIBI segment ELIPHa (SE corner Craney Isl. line to east) downstream to mouth (NE corner Craney Isl. east to S Glenwood Pk). BIBI segment ELIPHa. CBP segment ELIPH. DSS (ADMIN) condemnation # 056-007 A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	3.445
VAT-G15E_GIL01A10 / Gilligan Cr - Upper, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Upper portion no Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.012
VAT-G15E_GIL02A10 / Gilligan Cr - Lower, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Lower portion with Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.011
VAT-G15E_HAI01A06 / Hampton River / Located between Cherry Acres & East Hampton areas of Hampton, north shore tributary to Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.547
VAT-G15E_JMS01A00 / James River at Hampton Roads Harbor / Mainstem from a line between Lincoln Park and the NW corner of Craney Isl. downstream to mouth at Hampton Roads Tunnel. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	25.575
VAT-G15E_JMS01B06 / James River - King/Lincoln Park Beach Area / Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.009

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_JMS01C06 / James River - Anderson Park Beach Area / Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.011
VAT-G15E_JMS05A06 / James River - Newport News Point to NW Corner Craney Isl. / Line following the Rt. 664 crossing mid-river, SW to mid-mouth Nansemond R. to SW tip Craney Isl. Line. The NW line from NW tip Craney Isl. to Lincoln Pk. CBP segment JMSMH. DSS (ADMIN) cond # 056-007 A, B, C (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	4.509
VAT-G15E_JON01A10 / Jones Cr - Upper, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Upper portion no Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.027
VAT-G15E_JON02A10 / Jones Cr - Lower, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Lower portion with Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.017
VAT-G15E_LAF01A06 / Lafayette River - Upper / Located east of Craney Isl. From headwaters (approx. RM 7.5) downstream to past Rt 337 (Hampton Blvd bridge, RM 1.75) near Edgewater Haven. CBP segment LAFMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	1.743
VAT-G15E_LAF02A06 / Lafayette River - Lower / Located east of Craney Isl. From Rt. 337 (Hampton Blvd bridge, RM 1.75) downstream to the mouth. CBP segment LAFMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.404
VAT-G15E_MAI01A10 / Mains Cr. - SB Eliz R. E shore Tributary / SB Eliz R. E shore upstream tributary, SE of Deep Cr. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.013
VAT-G15E_MDM01A10 / Milldam Cr trib S. Br. Elizabeth R. / Tributary to E shore SB Elizabeth R. N of Gilmerton Br. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.071
VAT-G15E_MIG01A10 / Mill Creek, Trib to Hampton Roads Harbor / Mill Creek, north shore tributary to Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.915

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_NMC01A00 / New Mill Creek - Southern Br. Elizabeth R. / Located south of I-64 crossing of Southern Br. Eastern shore trib to Southern Br, downstream of locks. Entirety of Creek. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.082
VAT-G15E_NTN01A10 / Newton Cr trib to SB Eliz R / Tributary to E shore SB Eliz R. NE of Deep Cr. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.038
VAT-G15E_PAR01A06 / Paradise Creek - Upper, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. No Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.025
VAT-G15E_PAR02A10 / Paradise Creek - Lower, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. With Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.028
VAT-G15E_SBE01A00 / Southern Branch, Elizabeth R. - Upper / South of I-64 crossing. From headwaters @ Great Br Locks downstream to I-64 crossing @ Deep Cr. (RM 6.86). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.636
VAT-G15E_SBE02A06 / Southern Branch, Elizabeth R. - Middle / From I-64 crossing @ Deep Cr. confluence (RM 6.86) downstream to the Jordan Bridge (RM 2.30). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	1.055
VAT-G15E_SBE02B20 / Southern Branch, Elizabeth R. - Middle / Shore along Chesapeake Deep Water Terminal south of Paradise Creek. CBP segment SBEMH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.015
VAT-G15E_SBE02C22 / Southern Branch, Elizabeth R. - Middle / Buffer of station 2CSBE005.84 outside of Newton Creek tributary. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.005

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_SBE03A06 / Southern Branch, Elizabeth R. - Lower / North of the Jordan Bridge. From the Jordan Bridge, Rt. 337 (RM 2.30) downstream to the mouth, confluence with the mainstem Elizabeth R. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMIN) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.545
VAT-G15E_SCU02A24 / Scuffeltown Creek / CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	L	0.029
VAT-G15E_STJ01A04 / Saint Julian Creek / Northwest of Gilmerton Bridge. Eastern shore tributary to Southern Br. Entirety of Creek. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.133
VAT-G15E_WBE01A02 / Western Branch, Elizabeth R. - Upper / Located between Stewart Manor and Point Elizabeth areas. From headwaters (RM 8.5) downstream to Sterns Creek (RM 3.5). BIBI segment WBEMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.561
VAT-G15E_WBE02A00 / Western Branch, Elizabeth R. - Lower / Located between the Point Elizabeth and Lovett Point areas. From Sterns Creek confluence (RM 3.5) downstream to the mouth. CBP segment WBEMH. BIBI segment WBEMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	1.457
VAT-G15E_WLY01A06 / Willoughby Bay [Less Beach Area] / Located adjacent to mouth of James River at Hampton Roads, southeast of Hampton Roads Bridge Tunnel. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	2.476
VAT-G15E_WLY03A06 / Willoughby Bay - Beach Area / Located along the northern shore portion of Willoughby Bay along Willoughby Spit. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	PCBs in Fish Tissue	2006	H	0.142
VAT-G15E_XFR01A10 / UT to SB Elizabeth R. S shore estuary SE of Mill Cr. / SB Eliz S shore estuary SE of Mill Cr. CBP & BIBI segment SBEMH. DSS (ADMIN-COND) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.008

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_XQT01A10 / UT to SB Elizabeth R. N shore creek near Great Bridge Locks / SB Elizabeth R. upstream N shore creek north of Great Bridge Locks. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.045
VAT-G15E_XQU01A10 / SB Eliz N shore creek SW of Mains Cr. / SB Elizabeth R. upstream N shore creek SW of Mains Cr. CBP & BIBI segment SBEMHa. DSS (ADMIN-COND) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.020
VAT-G15E_ZZZ02A08 / Unsegmented estuaries in SBEMH / CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	PCBs in Fish Tissue	2006	H	0.030

James River and Various Tributaries

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	248.069		7.53

Sources: Atmospheric Deposition - Toxics; Contaminated Sediments; Source Unknown; Sources Outside State Jurisdiction or Borders

James River Basin

Cause Group Code: G01E-04-CHLA James River

Cause Location: The mainstem James River within the upper James River Tidal Freshwater segment (JMSTFu)

Cause City/County: Charles City County; Chesterfield County; Henrico County; Richmond

Use(s): Aquatic Life; Open-Water Aquatic Life

Causes(s)/VA Category: Chlorophyll-a/4A

Cause Description: The James River from the Appomattox River to the Chickahominy River was originally listed on the 1998 list as fully supporting but threatened of the Aquatic Life Use goal based on chlorophyll a exceedances. During the 1998 cycle, EPA extended the segment upstream to the fall line and downgraded the river to not supporting the Aquatic Life Use, citing nutrient concerns.

A special site-specific chlorophyll standard for the mainstem James River was adopted during the 2008 cycle.

During the 2024 cycle, JMSTFU failed the chlorophyll a summer mean criteria in three summer seasons. The spring mean criterion and the short-term duration summer criterion were met.

The Chesapeake Bay TMDL was approved by the EPA on 12/29/2010; therefore, it is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01E_JMS01A02 / James River / The James River from the fall line near Mayos Bridge to river mile 108.76. State Scenic River JMSTFu	4A	Chlorophyll-a	2024	L	0.239
VAP-G01E_JMS02A02 / James River / The James River from river mile 108.76 to river mile 108.63. JMSTFu	4A	Chlorophyll-a	2024	L	0.016
VAP-G01E_JMS03A02 / James River / The James River from river mile 108.63 to the confluence with Kingsland Creek. JMSTFu	4A	Chlorophyll-a	2024	L	1.012
VAP-G01E_JMS03B24 / James River / The James River from Kingsland Creek downstream to the confluence with Proctors Creek at river mile 2-JMS097.94. JMSTFu	4A	Chlorophyll-a	2024	L	0.217
VAP-G02E_JMS01A00 / James River / The James River from Proctors Creek to 5 miles above the old American Tobacco raw water intake. JMSTFu	4A	Chlorophyll-a	2024	L	0.078
VAP-G02E_JMS02A00 / James River / The James River from 5 miles above the old American Tobacco intake to 1/2 mile upstream of 2CJMS084.70. JMSTFu	4A	Chlorophyll-a	2024	L	2.048
VAP-G02E_JMS02B18 / James River / The James River from 5 miles above City Point at Hopewell to the downstream extent of JMSTFu. JMSTFu	4A	Chlorophyll-a	2024	L	1.182

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02E_JMS02C24 / James River / The James River 1/2 mile upstream and downstream of 2CJMS084.70. JMSTFu	4A	Chlorophyll-a	2024	L	0.178
VAP-G02E_JMS02D24 / James River / The James River from 1/2 mile downstream of 2CJMS084.70 to 5 miles above City Point at Hopewell. JMSTFu	4A	Chlorophyll-a	2024	L	0.564

James River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:	5.534		

James River

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:	5.534		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G01L-01-CHLA Falling Creek Reservoir

Cause Location: Falling Creek Reservoir headwaters to dam

Cause City/County: Chesterfield County; Richmond

Use(s): Aquatic Life

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

Cause Description: The lake was subject to historical chronic problems resulting from nutrients and organic loadings. It was listed in 1998 as not supporting the Public Water Supply use and threatened of the ALUS.

During the 2006 cycle, monitoring showed acceptable DO in the epilimnion, but showed depressed DO in the hypolimnion during stratification. The TSIs were:

TSI(CA) = 53 TSI(TP) = 59 TSI(SD) = 63

Although the secchi depth TSI exceeded the limit of 60, the Chlorophyll a and phosphorus TSIs were acceptable (mesotrophic); these are considered more reliable since an elevated secchi depth TSI may be due to inorganic turbidity and not an indication of excessive nutrients. Since the PWS Use for Falling Creek has been removed from the WQS and the TSIs meet acceptable limits the lake should be delisted for PWS. However due to the depressed dissolved oxygen in the bottom, the segment should be classified as Category 4C due to natural stratification; the segment is first listed for DO in 2006.

During the 2008 cycle the lake criteria was developed and the lake is fully supporting for DO and will be DELISTED.

During the 2012 cycle the segment became impaired for DO with a pooled violation rate of 11/60 at stations 2-FAC005.78,and 2-FAC003.85.

There was no new data for the 2014 cycle

During the 2018 cycle station 2-FAC003.85 Chlorophyll a is impaired with an exceedance rate of 2/2

No new data has been collected and the segment remains impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01L_FAC01A98 / Falling Creek Reservoir / Falling Creek Reservoir	5A	Chlorophyll-a	2018	L	88.38

Falling Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		88.38	

Sources: Non-Point Source

James River Basin

Cause Group Code: G01R-01-BAC Goode Creek

Cause Location: Goode Creek from the confluence with Broad Rock Creek to its mouth at the James River.

Cause City/County: Richmond

Use(s): Recreation

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

Cause Description: Goode Creek was initially assessed as not supporting the Recreation Use in the 2002 cycle based on sampling at 2-GOD000.77 (Commerce Road).

In the 2006 cycle, E. coli was added as an impairing cause based on exceedances at 2-GOD000.77. During the 2008 cycle, the impairment converted solely to E. coli.

The violation rate was 8/14 in the 2014 cycle at 2-GOD000.77.

The impairment was addressed in the report James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. Goode Creek is considered Category 4A.

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_GOD01A00 / Goode Creek / Goode Creek from the confluence with Broad Rock Creek to the James River.	4A	Escherichia coli (E. coli)	2006	L	1.21

Goode Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.21

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-01-PCB Goode Creek

Cause Location: Goode Creek from the confluence with Broad Rock Creek to its mouth at the James River.

Cause City/County: Richmond

Use(s): Fish Consumption

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2012 cycle, Goode Creek was impaired of the Fish Consumption Use due to two exceedances of the Human Health - Other Surface Waters WQS for water column PCBs. The samples were collected at 2-GOD000.77 as part of a 2009 source identification study for the VDH PCB advisory in the James River.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_GOD01A00 / Goode Creek / Goode Creek from the confluence with Broad Rock Creek to the James River.	5A	Polychlorinated biphenyls (PCBs)	2012	H	1.21

Goode Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			1.21

Sources: Source Unknown

James River Basin

Cause Group Code: G01R-02-BAC Almond Creek

Cause Location: Almond Creek from its headwaters to its tidal limit.

Cause City/County: Henrico County

Use(s): Recreation

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

Cause Description: Almond Creek was initially assessed as not supporting of the Recreation Use support goal in the 1998 cycle based on fecal coliform standard exceedances recorded at the Route 5 bridge (2-ALM000.42). During the 2006 cycle, E. coli was added as an impairment; the impairment converted solely to E. coli in the 2008 cycle.

The E. coli violation rate was 3/12 during the 2014 cycle.

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected, so the impairment is carried over.

Almond Creek was addressed in the James River and Tributaries - City of Richmond Bacterial TMDL which was approved by the EPA on 11/4/010 and by the SWCB on 6/29/2012; therefore, it is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_ALM01A98 / Almond Creek / Almond Creek from its headwaters to the tidal limit.	4A	Escherichia coli (E. coli)	2006	L	2.11

Almond Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.11

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-02-PCB Almond Creek

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

Cause City/County: Henrico County

Use(s): Fish Consumption

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2012 cycle, Almond Creek was impaired of the Fish Consumption Use due to two exceedances of the Human Health - Other Surface Waters WQS for water column PCBs. The samples were collected in 2009 as part of a source identification study for the PCB advisory in the James River.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_ALM01A98 / Almond Creek / Almond Creek from its headwaters to the tidal limit.	5A	Polychlorinated biphenyls (PCBs)	2012	H	2.11

Almond Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			2.11

Sources: Source Unknown

James River Basin

Cause Group Code: G01R-02-PH XVO and XVP - Almond Creek, UT

Cause Location: Unnamed tributaries of Almond Creek.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: In 2004, Almond Creek and tributaries XVO and XVP were considered impaired of the Aquatic Life Use due to pH exceedances at 2-ALM000.42 as well as pH exceedances at station located on UTs downstream of the BFI landfill (2-XVO000.10 and 2-XVP000.04).

Although there are numerous exceedances on the tributaries, the pH violation rates were acceptable during the 2010 cycle on mainstem Almond Creek; therefore, Almond Creek was partially delisted.

During the 2012 cycle, the exceedance rates were as follows: 2-XVO000.10 - 8/27 (2008 cycle) 2-XVO000.16 - 0/2 2-XVP000.04 - 3/5

The tributary XVO was re-sampled in the 2024 cycle and had acceptable pH (0/12 at 2CXVO000.12, which is directly upstream of the original listing station). XVO will be partially delisted. No additional data has been collected on XVP, so that stream will remain impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XVP01A08 / XVP - Almond Creek, UT / Headwaters to mouth at Almond Creek	5A	pH	2004	L	0.36

XVO and XVP - Almond Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.36

Sources: Landfills; Source Unknown

James River Basin

Cause Group Code: G01R-04-BAC Falling Creek

Cause Location: Falling Creek from its headwaters downstream to the extent of backwater at Falling Creek Reservoir.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: Falling Creek from its headwaters downstream to Falling Creek Reservoir was initially assessed as not supporting the Recreation Use during the 2006 cycle based on the bacteria exceedances at the Route 651 bridge (2-FAC009.46) and at the Route 720 bridge (2-FAC017.80).

During the 2008 cycle, the impairment converted solely to E. coli. The segment shows a history of exceedances at 2-FAC009.46, 2-FAC012.96 (Rt. 360 bridge), and 2-FAC017.80.

The E. coli impairment on Falling Creek from the Falling Creek Reservoir Dam to the tidal limit was addressed in the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. As this segment is within the watershed, it was considered nested (Category 4A) and will be addressed during implementation.

New bacteria criteria were implemented during the 2022 cycle. The segment remained impaired at 2-FAC009.46 due to two or more STV exceedances within a 90-day period with <10 samples. Level II monitoring at 2-FAC-72-CWT showed no violations (0/12 - IN); therefore, DEQ follow up monitoring was recommended.

There was insufficient information to assess station 2-FAC009.46 in the 2024 cycle (no STV exceedances but insufficient data to analyze geomean); the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_FAC02A04 / Falling Creek / Falling Creek from its headwaters to Gregorys Pond dam.	4A	Escherichia coli (E. coli)	2006	L	10.61
VAP-G01R_FAC02B08 / Falling Creek / Falling Creek from Gregorys Pond dam to the confluence with Horners Run	4A	Escherichia coli (E. coli)	2006	L	0.99
VAP-G01R_FAC02C08 / Falling Creek / Falling Creek from Horners Run to the extent of backwater of Falling Creek Reservoir.	4A	Escherichia coli (E. coli)	2006	L	5.40

Falling Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			17

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-04-DO Falling Creek

Cause Location: Falling Creek from Gregorys Pond downstream to the confluence with Horners Run.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, this segment of Falling Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/22 at DEQ station 2-FAC012.96, which is located at the Route 360 bridge.

The dissolved oxygen impairment was confirmed in the 2016 cycle with exceedance rates of 5/6 at 2-FAC012.96 and 2/2 at 2-FAC013.25.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_FAC02B08 / Falling Creek / Falling Creek from Gregorys Pond dam to the confluence with Horners Run	5A	Dissolved Oxygen	2008	L	0.99

Falling Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.99

Sources: Dam or Impoundment; Source Unknown

James River Basin

Cause Group Code: G01R-05-BAC Kingsland Creek

Cause Location: Kingsland Creek from its headwaters downstream to its mouth at the James River.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2006 cycle, Kingsland Creek was assessed as not supporting of the Recreation Use based on E. coli exceedances at the Route 1 bridge (2-KSL002.62). During the 2008 cycle, the violation rate was 4/11.

Kingsland Creek is within the study area for the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. As this segment is within the watershed, it is considered nested (Category 4A) and will be addressed during implementation.

Additional monitoring was conducted during the 2016 cycle; the exceedance rate was 7/12 at 2-KSL004.42 (Hopkins Road).

New bacteria criteria were implemented in the 2022 cycle. No additional monitoring has been conducted; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_KSL01A04 / Kingsland Creek / Headwaters to mouth	4A	Escherichia coli (E. coli)	2006	L	8.55

Kingsland Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.55

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-05-PH Kingsland Creek

Cause Location: Kingsland Creek from its headwaters downstream to its mouth at the James River.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: During the 2006 cycle, Kingsland Creek was assessed as not supporting the Aquatic Life Use based on pH exceedances at the Route 1 bridge (2CKSL002.62). The exceedance rate was 3/11 in the 2008 cycle.

A Natural Conditions Assessment was completed in February 2014. The report attributes the impairment to natural conditions and recommends that Kingsland Creek be reclassified as Class VII swampwaters. Due to an error, it remained 5C for the 2014 cycle.

Additional monitoring was conducted during the 2016 cycle. The exceedance rate was 2/13 at 2-KSL004.42 (Hopkins Road); however, the exceedance rate was acceptable at other stations.

Monitoring at the original listing station 2-KSL002.62 was acceptable in the 2022 cycle (0/2).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_KSL01A04 / Kingsland Creek / Headwaters to mouth	5C	pH	2006	L	8.55

Kingsland Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			8.55

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

James River Basin

Cause Group Code: G01R-06-BAC Gillies Creek

Cause Location: Gillies Creek from its headwaters to its mouth at the James River.

Cause City/County: Henrico County; Richmond

Use(s): Recreation

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

Cause Description: Gillies Creek was initially assessed as not supporting of the Recreation Use in 2004 based on monitoring at the Government Road Bridge (2-GIL001.00).

During the 2008 cycle, the impairment converted to E. coli.

During the 2020 cycle, the stations had the following violation rates: 2-GIL-GIL03-ACB - 3/5 (tidal) 2-GIL-STN01-ACB - 0/7 2-GIL-GIL02-ACB - 1/6 2-GIL000.42 - 11/26 (2018 cycle) 2-GIL001.00 - 6/12 (2010 cycle) 2-GIL001.77 - 19/27 (2012 cycle) 2-GIL002.84 - 2/12 (2010 cycle)

A Richmond CSO outfall is located on the creek. Gillies Creek was included in the James River and Tributaries - City of Richmond Bacterial TMDL which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. The stream is considered Category 4A.

The TMDL addressed Gillies Creek down to its mouth, however it was later determined that the mouth of Gillies Creek can be slightly tidal influenced. Due to monitoring at 2-GIL-GIL03-ACB in the 2020 cycle, the tidal portion was added to the impairment.

New bacteria were implemented in the 2022 cycle. No additional data has been collected in the riverine portion; therefore, the impairment was carried over. The 2020 data remains impaired at tidal station 2-GIL-GIL003-ACB under the new criteria due to two or more STV exceedances within 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
VAP-G01E_GIL01A18 / Gillies Creek / Tidal portion of Gillies Creek JMSTFu	4A	Escherichia coli (E. coli)	2020	L	0.001
VAP-G01R_GIL01A04 / Gillies Creek / Headwaters to mainstem	4A	Escherichia coli (E. coli)	2008	L	5.880

Gillies Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	0.001		5.88

Sources: Agriculture; Combined Sewer Overflows; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-06-PCB Gillies Creek

Cause Location: Gillies Creek from its headwaters to its mouth at the James River.

Cause City/County: Henrico County; Richmond

Use(s): Fish Consumption

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2012 cycle, Gillies Creek was impaired of the Fish Consumption Use due to two exceedances of the Human Health - Other Surface Waters WQS for water column PCBs. The samples were collected at 2-GIL000.42 as part of a 2009 source identification study for the PCB advisory in the James River.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_GIL01A04 / Gillies Creek / Headwaters to mainstem	5A	Polychlorinated biphenyls (PCBs)	2012	H	5.88

Gillies Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			5.88

Sources: Source Unknown

James River Basin

Cause Group Code: G01R-06-PH Gillies Creek

Cause Location: Gillies Creek from its headwaters to its mouth at the James River.

Cause City/County: Henrico County; Richmond

Use(s): Aquatic Life

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

Cause Description: Gillies Creek was initially assessed as not supporting the Aquatic Life Use in 2004 based on elevated pH at the Government Road Bridge (2-GIL001.00, which was mistakenly called 2-GIL000.42 from 2001 to 2005).

During the 2010 cycle, the pH exceedance rate was 3/25 at 2-GIL001.00, although the other stations within the segment have acceptable pH exceedance rates.

Continued monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_GIL01A04 / Gillies Creek / Headwaters to mainstem	5A	pH	2004	L	5.88

Gillies Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			5.88

Sources: Source Unknown

James River Basin

Cause Group Code: G01R-07-DO Redwater Creek

Cause Location: Redwater Creek from its headwaters to its mouth at Proctors Creek.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: Redwater Creek was assessed as impaired of the Aquatic Life Use in the 2010 cycle due to dissolved oxygen exceedances at 2-RDW000.50 (Route 615 / Coxendale Road.)

The exceedance rate was 3/13 in the 2012 cycle. Two values were extremely low.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_RDW01A06 / Redwater Creek / Headwaters to mouth at Proctors Creek	5C	Dissolved Oxygen	2010	L	2.97

Redwater Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.97

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

James River Basin

Cause Group Code: G01R-08-BAC XSZ - James River, UT (aka No Name Creek)

Cause Location: UT to James River (a.k.a. No Name Creek) mainstem and tributaries

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: No Name Creek was assessed as not supporting the Recreation Use during the 2004 cycle based on the following fecal coliform exceedance rates:

2/2 at 2-XTC000.08 1/1 at 2-XUH000.01 2/2 at 2-XUI000.01

Additional monitoring was recommended. During the 2008 cycle, E. coli monitoring was conducted at station 2-XSZ001.58, which is located at the Route 1 bridge. The station had an E.coli exceedance rate of 7/13; therefore, the impairment was converted to E.coli.

The exceedance rate was 5/11 during the 2014 cycle.

The stream was addressed in the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. The impairment is considered Category 4A.

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XSZ01A04 / XSZ - James River, UT (aka No Name Creek) / Headwaters to mouth including multiple unnamed tributaries to XSZ	4A	Escherichia coli (E. coli)	2008	L	2.22

XSZ - James River, UT (aka No Name Creek)

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

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-09-DO XPF - James River, UT

Cause Location: Ditch to James River through National Battlefield Park

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: The ditch was considered impaired of the Aquatic Life use due to dissolved oxygen monitoring by the USGS:

2/4 at 0203853010 (James River Trib 5 at West Boundary at Bellwood, VA 2/4 at 0203853030 (James River Trib 5 Below Landfill at Bellwood, VA)

The downstream station 020853050 (James River Trib 5 at East Boundary) was acceptable.

Additional monitoring was conducted by the DEQ during the 2014 cycle. The dissolved oxygen impairment was confirmed (3/10 at 2CXBD000.15). The exceedance rate at 2CXBD000.38 was insufficient (1/5).

Monitoring at station 2-XPF-RICH-08-NPS, which is co-located with 2CXBD000.15 and 020853050, was acceptable during the 2020 cycle.

The segment was previously considered Category 5C. Information provided by DEQ monitoring staff in the 2024 cycle indicates significant anthropogenic influence along this stream, including an upstream industrial area, defunct lagoon, and a closed landfill that is designated CERCLA site. The site visit indicated iron oxidation on the downstream side of the landfill. Early 2000s monitoring by NPS/USGS indicated elevated ammonia, TN, and metals. The impairment is changed to Category 5A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XBD01B04 / XBD - James River, UT / Headwaters to mouth at James River Richmond National Battlefield Park	5A	Dissolved Oxygen	2004	L	0.39

XPF - James River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.39

Sources: Landfills; Source Unknown

James River Basin

Cause Group Code: G01R-09-PH XPF - James River, UT

Cause Location: Ditch to James River through National Battlefield Park

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: The ditch was considered impaired of the Aquatic Life use due to pH monitoring by the USGS:

2/4 at 0203853010 (James River Trib 5 at West Boundary at Bellwood, VA 2/4 at 0203853030 (James River Trib 5 Below Landfill at Bellwood, VA)

The downstream station 020853050 (James River Trib 5 at East Boundary) was acceptable.

Additional monitoring was conducted by the DEQ during the 2014 cycle. The dissolved oxygen impairment was confirmed (3/10 at 2CXBD000.15). The exceedance rate at 2CXBD000.38 was insufficient (1/5).

Monitoring at station 2-XPF-RICH-08-NPS, which is co-located with 2CXBD000.15 and 020853050, was acceptable during the 2020 cycle.

The segment was previously considered Category 5C. Information provided by DEQ monitoring staff in the 2024 cycle indicates significant anthropogenic influence along this stream, including an upstream industrial area, defunct lagoon, and a closed landfill that is designated CERCLA site. The site visit indicated iron oxidation on the downstream side of the landfill. Early 2000s monitoring by NPS/USGS indicated elevated ammonia, TN, and metals. The impairment is changed to Category 5A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XBD01B04 / XBD - James River, UT / Headwaters to mouth at James River Richmond National Battlefield Park	5A	pH	2004	L	0.39

XPF - James River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.39

Sources: Landfills; Source Unknown

James River Basin

Cause Group Code: G01R-10-BAC Pocoshock Creek

Cause Location: Pocoshock Creek from its headwaters to its mouth at Falling Creek Reservoir

Cause City/County: Chesterfield County; Richmond

Use(s): Recreation

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

Cause Description: During the 2006 cycle, Pocoshock Creek was considered impaired because of a fecal coliform violation rate of 2/12 at station 2-PSK000.23, which is located at a private road off Bemiss. Additional monitoring was conducted in the 2008 cycle and the impairment converted to E. coli. The violation rates were:

2-PSK000.23 - 3/12 2-PSK003.07 - 3/11 2-PSK006.53 - 3/12

Additional monitoring was conducted at 2-PSK-POC01-ACB, a level III citizen monitoring station, in the 2020 cycle. The exceedance rate was 5/8.

New bacteria criteria were implemented in the 2022 cycle. No new bacteria data were collected, however re-evaluation of the 2020 citizen data indicates that the segment would remain impaired due to two or more STV exceedances within the same 90-day period with <10 samples.

The E. coli impairment on Falling Creek from the Falling Creek Reservoir Dam to the tidal limit was addressed in the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. As Pocoshock Creek is within the watershed, it is considered nested (Category 4A) and will be addressed during implementation.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_PSK01A04 / Pocoshock Creek / Headwaters to mouth at Falling Creek Reservoir	4A	Escherichia coli (E. coli)	2008	L	8.7

Pocoshock Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.7

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-10-BEN Pocoshock Creek

Cause Location: Pocoshock Creek from its headwaters to its mouth at Falling Creek Reservoir

Cause City/County: Chesterfield County; Richmond

Use(s): Aquatic Life

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

Cause Description: In the 2020 cycle, Pocoshock Creek was impaired of the Aquatic Life Use due to benthic alteration at 2017 freshwater probabilistic monitoring station 2-PSK006.68.

2021 monitoring confirmed the impairment.

The impairment was attributed to heavy sedimentation and scour.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_PSK01A04 / Pocoshock Creek / Headwaters to mouth at Falling Creek Reservoir	5A	Benthic Macroinvertebrates Bioassessments	2020	H	8.7

Pocoshock Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.7

Sources: Source Unknown

James River Basin

Cause Group Code: G01R-11-BAC Broad Rock Creek

Cause Location: Broad Rock Creek from its headwaters to its mouth at Goode Creek.

Cause City/County: Richmond

Use(s): Recreation

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

Cause Description: During the 2006 cycle, Broad Rock Creek was assessed as not supporting the Recreation Use based on E. coli exceedances at 2-BDO000.38 (Columbia Street). During the 2008 cycle, the segment remained impaired due to an E. coli violation rate of 2/11 at 2-BDO000.38 and a violation rate of 3/11 at TMDL station 2-BDO000.46, which is located at Route 1.

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected at 2-BDO000.38. During the 2024 cycle, there was insufficient information to assess station 2-BDO00.46 (one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean.) The impairment is carried over.

Broad Rock Creek is a tributary of Goode Creek, which was included in the James River and Tributaries - City of Richmond Bacterial TMDL. The TMDL was approved by the EPA on 11/4/2010. The impairment will be addressed during the implementation phase of the TMDL 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-G01R_BDO01A06 / Broad Rock Creek / Headwaters to Goode Creek	4A	Escherichia coli (E. coli)	2006	L	3.12

Broad Rock Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.12

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Municipal Point Source Discharges; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-12-PH XYI - Coles Run, UT

Cause Location: The unnamed tributary XYI from its headwaters to its mouth

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: The tributary has been assessed as impaired of the Aquatic Life Use based on a pH exceedance rate of 4/4 at USGS station 0203854210, which is located in the breastworks on the National Battlefield.

Additional data was collected during the 2016 cycle at station 2CXBX001.08. The exceedance rate was 4/4; therefore, the tributary will continue to be listed.

Natural sources are suspected; however, there were some past total phosphorus screening value exceedances.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XYI01A06 / XYI - Coles Run, UT / Headwaters at breastworks to mouth at Coles Run	5C	pH	2006	L	0.94

XYI - Coles Run, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.94

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

James River Basin

Cause Group Code: G01R-13-BAC XYA - Almond Creek, UT

Cause Location: UT XYA from its headwaters to its mouth at Almond Creek.

Cause City/County: Henrico County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, the segment was assessed as impaired of the Recreation Use due to an E. coli violation rate of 3/11 at TMDL station 2-XYA000.06, which is located at Bickerstaff Road.

New bacteria criteria were adopted in the 2022 cycle. No additional data has been collected, so the impairment is carried over.

The stream is a tributary of Almond Creek, which was included in the James River and Tributaries - City of Richmond Bacterial TMDL. The TMDL was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. Although the tributary was not specifically addressed, it will be included in the implementation phase of the TMDL and is therefore considered a nested water (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XYA01A08 / XYA - Almond Creek, UT / Headwaters to mouth at Almond Creek	4A	Escherichia coli (E. coli)	2008	L	1.14

XYA - Almond Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.14

Sources: Agriculture; Combined Sewer Overflows; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-14-BAC Cornelius Creek

Cause Location: The nontidal portion of Cornelius Creek.

Cause City/County: Henrico County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Cornelius Creek was assessed as impaired of the Recreation Use due to an E. coli violation rate of 2/10 at TMDL station 2-CEL002.38, which is located at Old Osborne Turnpike.

No additional data has been collected at the original listing station. However, monitoring at 2-CEL001.56 in the 2014 cycle confirmed the impairment (4/12).

Cornelius Creek is within the study area for the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. Although not addressed in the report, the impairment will be addressed during the implementation phase and so is considered a nested water (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_CEL01A04 / Cornelius Creek / Headwaters to tidal limit near James River	4A	Escherichia coli (E. coli)	2008	L	7.23

Cornelius Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.23

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

James River Basin

Cause Group Code: G01R-15-BAC Proctors Creek

Cause Location: The nontidal mainstem of Proctors Creek.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: Proctors Creek was initially assessed as impaired of the Recreation Use in the 2008 cycle due to E. coli exceedances at the Route 1 bridge (2-PCT002.46). The violation rate was 4/24 during the 2014 cycle; however, continued monitoring is recommended because there were no recent exceedances.

The stream is within the study area for the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. The impairment will be addressed in the implementation phase; therefore, it is considered a nested water (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. The stream remained impaired due to two or more STV exceedances within the same 90-day period with <10 samples.

No additional data was collected during the 2024 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_PCT01A06 / Proctors Creek / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2008	L	8.27

Proctors Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.27

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-15-BEN Proctors Creek

Cause Location: The nontidal mainstem of Proctors Creek.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: Proctors Creek was assessed as impaired of the Aquatic Life Use in the 2010 cycle due to an impaired benthic community at the Route 1 bridge (2-PCT002.46).

Benthics have been collected in 2007, 2008, 2011, and 2019. The stream remains impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_PCT01A06 / Proctors Creek / Headwaters to tidal limit	5A	Benthic Macroinvertebrates Bioassessments	2010	H	8.27

Proctors Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.27

Sources: Source Unknown

James River Basin

Cause Group Code: G01R-16-BAC Horners Run

Cause Location: The mainstem of Horners Run.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Horners Run was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at the Lynchester Drive bridge (2-HAO001.15).

The E. coli impairment on Falling Creek from the Falling Creek Reservoir Dam to the tidal limit was addressed in the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. As this segment is within the watershed, it is considered nested (Category 4A) and will be addressed during implementation.

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected and the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_HAO01A08 / Horners Run / Headwaters to mouth at Falling Creek	4A	Escherichia coli (E. coli)	2008	L	2.43

Horners Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.43

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-17-BAC XXN - Falling Creek, UT

Cause Location: Headwaters to mouth at Falling Creek

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, the tributary was assessed as impaired of the Recreation Use due to an E. coli violation rate of 4/12 at 2-XXN000.42, which is located at Route 678, Providence Road West.

The E. coli impairment on Falling Creek from the Falling Creek Reservoir Dam to the tidal limit was addressed in the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. As the stream is within the Falling Creek watershed, it will be considered nested (Category 4A) and will be addressed during implementation.

The bacteria WQS changed in the 2022 cycle. No additional data has been collected and the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XXN01A08 / XXN - Falling Creek, UT / Headwaters to mouth at Falling Creek	4A	Escherichia coli (E. coli)	2008	L	2.32

XXN - Falling Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.32

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-18-BAC Licking Creek

Cause Location: Headwaters to mouth at Falling Creek

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Licking Creek was assessed as impaired of the Recreation Use due to an E. coli violation rate of 6/11 at 2-LIB000.12, which is located at Barkbridge Road.

The E. coli impairment on Falling Creek from the Falling Creek Reservoir Dam to the tidal limit was addressed in the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. As this stream is within the watershed, it is considered nested (Category 4A) and will be addressed during implementation.

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected and the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_LIB01A08 / Licking Creek / Headwaters to mouth at Falling Creek	4A	Escherichia coli (E. coli)	2008	L	3.25

Licking Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.25

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-19-BAC Stony Run

Cause Location: Headwaters to mouth at Gillies Creek

Cause City/County: Henrico County; Richmond

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Stony Run was assessed as impaired of the Recreation Use due to an E. coli violation rate of 6/12 at East Richmond Road (2-SNH000.19) and 4/12 at the Route 33 bridge (2-SNH001.31).

Stony Run is a tributary of Gillies Creek, which was included in the James River and Tributaries - City of Richmond Bacterial TMDL. The TMDL was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. The stream is considered a nested water (Category 4A) and will be addressed during the implementation phase of the TMDL.

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected, so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_SNH01A08 / Stony Run / Headwaters to mouth at Gillies Creek	4A	Escherichia coli (E. coli)	2008	L	3.17

Stony Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.17

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-20-BAC Reedy Creek

Cause Location: Reedy Creek from its headwaters downstream to its mouth at Kingsland Creek.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Reedy Creek was assessed as not supporting of the Recreation Use based on an E. coli exceedance rate of 4/11 at the Route 642 bridge (2-RDK000.77).

Reedy Creek is within the study area for the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. It is considered nested (Category 4A) and will be addressed during implementation.

New bacteria criteria were implemented in the 2022 cycle. No additional monitoring has been conducted; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_RDK01A12 / Reedy Creek / Headwaters to mouth at Kingsland Creek	4A	Escherichia coli (E. coli)	2012	L	3.42

Reedy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.42

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-21-BAC Great Branch

Cause Location: Great Branch from its headwaters to its mouth at Proctors Creek.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, Great Branch was impaired of the Recreation Use due to an E. coli exceedance rate of 2/10 at 2-GTB000.46 (Centralia Road). The exceedance rate at 2-GTB000.65 (Rt. 144) was acceptable (1/12); therefore, continued monitoring is recommended.

Great Branch is within the study area for the James River and Tributaries - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. As this segment is within the watershed, it is considered nested (Category 4A) and will be addressed during implementation.

New bacteria criteria were implemented in the 2022 cycle. No additional monitoring has been conducted; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_GTB01A12 / Great Branch / Headwaters to mouth at Proctors Creek	4A	Escherichia coli (E. coli)	2016	L	4.38

Great Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.38

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G01R-21-DO Great Branch

Cause Location: Great Branch from its headwaters to its mouth at Proctors Creek.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: Great Branch was impaired of the Aquatic Life Use during the 2014 cycle based on a dissolved oxygen exceedance rate of 2/12 at 2-GTB000.65, which is located at Route 144.

The exceedance rate is currently acceptable (2018 cycle: 0/2); however, additional monitoring was conducted at 2-GTB000.46 (2/10) in the 2016 cycle. Monitoring at Chesterfield Water Trends stations 2-GTB-25-CWT and 2-GTB-62-CWT is insufficient for assessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_GTB01A12 / Great Branch / Headwaters to mouth at Proctors Creek	5A	Dissolved Oxygen	2014	L	4.38

Great Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.38

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

James River Basin

Cause Group Code: G01R-22-CU XVP - Almond Creek, UT

Cause Location: Unnamed tributary of Almond Creek.

Cause City/County: Henrico County

Use(s): Aquatic Life; Wildlife

Causes(s)/VA Category: Copper/5A

Cause Description: During the 2012 cycle, the tributary was impaired of the Aquatic Life and Wildlife Uses due to exceedances of the acute water quality criteria for dissolved copper in 2008 and 2009 at station 2-XVP000.04.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XVP01A08 / XVP - Almond Creek, UT / Headwaters to mouth at Almond Creek	5A	Copper	2012	L	0.36

XVP - Almond Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Copper - Total Impaired Size by Water Type:			0.36

XVP - Almond Creek, UT

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Copper - Total Impaired Size by Water Type:			0.36

Sources: Landfills; Source Unknown

James River Basin

Cause Group Code: G01R-22-ZN XVP - Almond Creek, UT

Cause Location: Unnamed tributary of Almond Creek.

Cause City/County: Henrico County

Use(s): Aquatic Life; Wildlife

Causes(s)/VA Category: Zinc/5A

Cause Description: During the 2012 cycle, the tributary was impaired of the Aquatic Life and Wildlife Uses due to exceedances of the acute water quality criteria for dissolved zinc in 2008 and 2009 at station 2-XVP000.04.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01R_XVP01A08 / XVP - Almond Creek, UT / Headwaters to mouth at Almond Creek	5A	Zinc	2012	L	0.36

XVP - Almond Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Zinc - Total Impaired Size by Water Type:			0.36

XVP - Almond Creek, UT

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Zinc - Total Impaired Size by Water Type:			0.36

Sources: Landfills; Source Unknown

James River Basin

Cause Group Code: G02E-02-CHLA James River

Cause Location: The mainstem of the James River within the Lower Tidal Freshwater Estuary.

Cause City/County: Charles City County; Chesterfield County; Hopewell; Prince George County; Surry County

Use(s): Aquatic Life; Open-Water Aquatic Life

Causes(s)/VA Category: Chlorophyll-a/4A

Cause Description: The James River from the Appomattox River to the Chickahominy River was originally listed on the 1998 list as fully supporting but threatened of the Aquatic Life Use goal based on chlorophyll a exceedances. During the 1998 cycle, EPA extended the segment upstream to the fall line and downgraded the river to not supporting the Aquatic Life Use, citing nutrient concerns.

A special site-specific chlorophyll standard for the mainstem James River was adopted during the 2008 cycle. The lower tidal freshwater has been impaired of the Open Water Subuse and Aquatic Life Use since that cycle.

During the 2024 cycle, JMSTFl failed both the spring- and summer seasonal mean criteria. In addition, the short-duration criteria failed in both the upper and lower portions of JMSTFl.

The Chesapeake Bay TMDL was approved by the EPA on 12/29/2010; therefore, it is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02E_JMS03A06 / James River / The James River from the upstream extent of JMSTFl to the downstream extent of PWS. JMSTFl	4A	Chlorophyll-a	2008	L	0.633
VAP-G03E_JMS01A00 / James River / The mainstem of the James River from the confluence with the Appomattox River downstream to Powell Creek. JMSTFl	4A	Chlorophyll-a	2008	L	10.194
VAP-G03E_JMS01B10 / James River / The mainstem of the James River from the confluence with Powell Creek downstream to Queen Creek. JMSTFl	4A	Chlorophyll-a	2008	L	3.485
VAP-G04E_JMS01A02 / James River / The James River from the confluence with Queens Creek downstream to Buoy 74 at Brandon Point JMSTFl	4A	Chlorophyll-a	2008	L	7.756
VAP-G04E_JMS03A04 / James River / Buoy 74 at Brandon Point (rivermile 55.94) to 1/2 mile upstream of station 2CJMS055.04. JMSTFl	4A	Chlorophyll-a	2008	L	0.294
VAP-G04E_JMS03B24 / James River / James River 1/2 mile upstream and downstream of station 2CJMS055.04. JMSTFl	4A	Chlorophyll-a	2008	L	1.050
VAP-G04E_JMS03C24 / James River / James River from 1/2 mile downstream of station 2CJMS055.04 to the tidal freshwater/oligohaline boundary at approximately river mile 52.08. JMSTFl	4A	Chlorophyll-a	2008	L	2.412

James River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:	25.824		

James River

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:	25.824		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G02E-04-PCB James River

Cause Location: Mainstem James River from the previous limit of PWS near Dutch Gap downstream to the JMSTFu/JMSTFl boundary at the Appomattox River.

Cause City/County: Charles City County; Chesterfield County; Henrico County

Use(s): Fish Consumption; Public Water Supply

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2012 cycle, the segment was impaired of the Fish Consumption Use due to two exceedances of the Human Health Water Quality Criteria for PCBs in water samples collected at 2-JMS087.01. The station was sampled in 2009 and is located at buoy 137.

Additional sampling in 2013 was insufficient for assessment.

Note: the segment extent for the Public Water Supply Use was shortened in the 2018 cycle due to a change in the Virginia Water Quality Standards. It previously extended to 5 miles above the old American Tobacco water intake but now stops 5 miles above City Point in Hopewell. The PCB impairment for the Public Water Supply Use in the upper extent of this segment was partially delisted; however, the segment remains impaired for the Fish Consumption Use.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02E_JMS02A00 / James River / The James River from 5 miles above the old American Tobacco intake to 1/2 mile upstream of 2CJMS084.70. JMSTFu	5A	Polychlorinated biphenyls (PCBs)	2012	H	2.048
VAP-G02E_JMS02B18 / James River / The James River from 5 miles above City Point at Hopewell to the downstream extent of JMSTFu. JMSTFu	5A	Polychlorinated biphenyls (PCBs)	2012	H	1.182
VAP-G02E_JMS02C24 / James River / The James River 1/2 mile upstream and downstream of 2CJMS084.70. JMSTFu	5A	Polychlorinated biphenyls (PCBs)	2012	L	0.178
VAP-G02E_JMS02D24 / James River / The James River from 1/2 mile downstream of 2CJMS084.70 to 5 miles above City Point at Hopewell. JMSTFu	5A	Polychlorinated biphenyls (PCBs)	2012	H	0.564

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:	3.972		

James River

Public Water Supply	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:	1.182		

Sources: Source Unknown

James River Basin

Cause Group Code: G02E-05-EBTOX James River

Cause Location: James River 1/2 mile upstream and downstream of station 2CJMS084.70

Cause City/County: Chesterfield County; Henrico County

Use(s): Aquatic Life

Causes(s)/VA Category: Sediment Bioassay/5A

Cause Description: During the 2012-2016 cycles, the mainstem of the tidal freshwater James River was impaired of the Aquatic Life Use due to an inadequate benthic community based on the Chesapeake Bay Benthic Index of Biological Integrity.

In addition, there was benthic alteration at 2010 Coastal 2000 stations 2CJMS055.04 and 2CJMS084.70, which were considered Category 5A. The source is "possibly cumulative chronic effects of metals and PAHs in the sediment".

The JMSTFa B-IBI segment met the goal in the 2018 cycle. The impairment was shortened to those areas around the two Coastal 2000 stations. The remainder was partially delisted.

The segment failed again in the 2022 cycle and the extent was expanded to again include the entire tidal freshwater James River segment JMSTFa (see fact sheet G01E-02-EBEN).

In the 2024 cycle, the segment-wide benthic impairment is continued. The weight of evidence impairments are being split off into separate fact sheets due to the potential sediment local causes and are now included under G02E-05-EBTOX (2CJMS084.70) and G04E-06-EBTOX (2CJMS055.04).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02E_JMS02C24 / James River / The James River 1/2 mile upstream and downstream of 2CJMS084.70. JMSTFu	5A	Sediment Bioassay	2012	L	0.178

James River

Aquatic Life

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Sediment Bioassay - Total Impaired Size by Water Type:	0.178		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G02E-06-BAC Turkey Island Creek

Cause Location: Tidal Turkey Island Creek

Cause City/County: Charles City County; Henrico County

Use(s): Recreation

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

Cause Description: During the 2024 cycle, tidal Turkey Island Creek was impaired of the Recreation Use due to monitoring at station 2CTIC001.26 (geomean exceedance in any 90-day period.)

The tidal segment is within the study area for the Turkey Island Creek and James River Westover to Claremont Bacterial TMDL, which was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015. The Turkey Island Creek watershed included several upstream impairments; implementation of those segments will improve downstream water quality on tidal Turkey Island Creek. In addition, the impairment is upstream of the James River impairment, so this area will be further addressed during implementation. The impairment is proposed for nesting (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02E_TIC01A24 / Turkey Island Creek / Tidal Turkey Island Creek Renamed in 2024 cycle. JMSTFu	4A	Escherichia coli (E. coli)	2024	L	0.066

Turkey Island Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	0.066		

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: G02R-01-BAC Fourmile Creek

Cause Location: Fourmile Creek watershed from its headwaters to the mouth at the James River.

Cause City/County: Henrico County

Use(s): Recreation

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

Cause Description: Fourmile Creek from Deerlick Branch to Griggs Pond was initially considered threatened in 1998 and downgraded to impaired in 2002 due to fecal coliform exceedances. However, the creek was mistakenly included on Attachment A Part 1 " Waters listed on Part 1 of Virginia's October 14, 1998 303(d) Report". The impairment has since expanded.

The watershed was assessed as not supporting of the Recreation Use support goal in the 2008 cycle based on an E. coli standard exceedance rate of 5/22 at the Route 5 bridge (2-FOM003.60). The bacteria impairment converted to E. coli. The bacteria TMDL for the Fourmile Creek watershed was completed and approved by the EPA on 9/20/2004. The segment is assessed as Cat. 4A.

The exceedance rate was 8/12 during the 2016 cycle.

New bacteria criteria were implemented in the 2022 cycle. No additional monitoring has been conducted so the impairment is being carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_FOM01A02 / Fourmile Creek / The Fourmile Creek watershed below rivermile 5.57.	4A	Escherichia coli (E. coli)	2006	L	37.00
VAP-G02R_FOM02A06 / Upper Fourmile Creek / Fourmile Creek and tribs upstream of rivermile 5.57	4A	Escherichia coli (E. coli)	2006	L	9.91

Fourmile Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			46.91

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

James River Basin

Cause Group Code: G02R-03-DO Johnson Creek Watershed

Cause Location: Johnson Creek and tributaries from its headwaters to the mouth at the James River

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: Johnson Creek was initially assessed as not supporting the Aquatic Life Use goal during the 2004 cycle based on dissolved oxygen exceedances at Route 827 / Allied Road (2-JOD001.19).

The segment was extended during the 2006 cycle based on monitoring by Chesterfield County.

Extensive monitoring was conducted by the DEQ in the 2016 cycle. Dissolved oxygen was only low at two stations.

0/12 at 2CXBR000.10 1/12 at 2CXBR000.68 0/12 at 2CXBR001.15 4/11 at 2CXBS000.62 (IM) 1/10 at 2CXBS002.85 2/12 at 2-JOD001.19 (IM) 0/15 at 2-JOD001.96 0/12 at 2-JOD002.69 0/12 at 2-JOD003.05 1/12 at 2-JOD004.15 0/12 at 2-JOD005.04

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_JOD01A04 / Johnson Creek / Johnson Creek and tribs from its headwaters to tidal limit	5C	Dissolved Oxygen	2004	L	16.27

Johnson Creek Watershed

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			16.27

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

James River Basin

Cause Group Code: G02R-03-PH Johnson Creek Watershed

Cause Location: Johnson Creek and tributaries from its headwaters to the mouth at the James River

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: Johnson Creek was initially assessed as not supporting the Aquatic Life Use goal during the 2004 cycle based on pH exceedances at Route 827 / Allied Road (2-JOD001.19).

The segment was extended during the 2006 cycle based on monitoring by Chesterfield County.

Extensive monitoring was conducted by the DEQ in the 2016 cycle. pH exceedances were widespread: 3/12 at 2CXBR000.10 4/12 at 2CXBR000.68 4/12 at 2CXBR001.15 6/11 at 2CXBS000.62 7/10 at 2CXBS002.85 5/15 at 2-JOD001.19 4/15 at 2-JOD001.96 1/12 at 2-JOD002.69 4/12 at 2-JOD003.05 6/12 at 2-JOD004.15 2/12 at 2-JOD005.04

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_JOD01A04 / Johnson Creek / Johnson Creek and tribs from its headwaters to tidal limit	5C	pH	2004	L	16.27

Johnson Creek Watershed

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			16.27

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

James River Basin

Cause Group Code: G02R-05-BAC Crewes Channel

Cause Location: Crewes Channel from its headwaters to its tidal limit

Cause City/County: Henrico County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Crewes Channel was assessed as not supporting the Recreation Use due to an E. coli violation rate of 2/16 at DEQ station 2-CCH000.54, which is located at the Route 5 bridge.

The bacterial TMDL for Crewes Channel was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015; the impairment is considered Category 4A.

New bacteria criteria were implemented in the 2022 cycle. No additional monitoring has been conducted so the impairment is being carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_CCH01A00 / Crewes Channel / Crewes Channel from the headwaters to the tidal limit.	4A	Escherichia coli (E. coli)	2008	L	3.24

Crewes Channel

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

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

James River Basin

Cause Group Code: G02R-07-BAC Western Run

Cause Location: Western Run from its headwaters to its mouth at the confluence with Turkey Island Creek

Cause City/County: Henrico County

Use(s): Recreation

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

Cause Description: Western Run was initially assessed as not supporting the Recreation use goals in the 2006 cycle based on bacteria sampling at the Route 156 bridge:

Fecal coliform exceedance rate of 2/3 at USGS station 0203874275
E. coli exceedance rate of 2/4 at DEQ station 2-WSN000.85

During the 2008 cycle, the bacteria impairment converted solely to E. coli based on an E. coli exceedance rate of 6/16 at 2-WSN000.85.

The bacterial TMDL for Western Run was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015. The impairment is considered Category 4A.

New bacteria criteria were implemented in the 2022 cycle. No additional monitoring has been conducted so the impairment is being carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_WSN01A00 / Western Run / Western Run from its headwaters to the confluence with Turkey Island Creek.	4A	Escherichia coli (E. coli)	2006	L	1.85

Western Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.85

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

James River Basin

Cause Group Code: G02R-08-BAC Turkey Island Creek

Cause Location: Turkey Island Creek from its headwaters to the tidal limit.

Cause City/County: Charles City County; Henrico County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Turkey Island Creek was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 2-TIC002.69, which is located at Carters Mill Road.

The bacterial TMDL for the Turkey Island Creek watershed was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015. The impairment is considered nested (Category 4A).

The exceedance rate was 2/12 during the 2020 cycle.

New bacteria criteria were implemented in the 2022 cycle. No additional monitoring has been conducted so the impairment was carried over.

The segment remained impaired in the 2024 cycle due to two or more STV exceedances in the same 90-day period represented by 10+ samples; the geometric mean criterion was met.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_TIC01A00 / Turkey Island Creek / Turkey Island Creek from Shirley Millpond to the tidal limit.	4A	Escherichia coli (E. coli)	2014	L	1.82
VAP-G02R_TIC01B16 / Turkey Island Creek / Turkey Island Creek from its headwaters to Shirley Millpond.	4A	Escherichia coli (E. coli)	2014	L	7.04

Turkey Island Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.86

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

James River Basin

Cause Group Code: G02R-09-DO Roundabout Creek

Cause Location: Mainstem of Roundabout Creek from its headwaters downstream to the confluence with the tributary at approximately river mile 2.04

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, upper Roundabout Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/12 at 2-ROT003.15, which is located at Kingsland Road.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_ROT01A00 / Roundabout Creek / Roundabout Creek from its headwaters to the tributary at river mile 2.04	5C	Dissolved Oxygen	2014	L	3.96

Roundabout Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.96

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

James River Basin

Cause Group Code: G02R-09-PH Roundabout Creek

Cause Location: Mainstem of Roundabout Creek from its headwaters downstream to the confluence with the tributary at approximately river mile 2.04

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, upper Roundabout Creek was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 2-ROT003.15, which is located at Kingsland Road.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_ROT01A00 / Roundabout Creek / Roundabout Creek from its headwaters to the tributary at river mile 2.04	5C	pH	2014	L	3.96

Roundabout Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.96

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

James River Basin

Cause Group Code: G02R-10-PH XBE - Roundabout Creek, UT

Cause Location: Headwaters to mouth at Roundabout Creek

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, the tributary was impaired of the Aquatic Life Use due to a pH exceedance rate of 4/10 at 2CXBE000.69, which is located at Wallo Road.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_XBE01A14 / XBE - Roundabout Creek, UT / Headwaters to mouth at Roundabout Creek	5C	pH	2014	L	1.43

XBE - Roundabout Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.43

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

James River Basin

Cause Group Code: G02R-11-PH Turkey Island Creek

Cause Location: Turkey Island Creek from its headwaters to Shirley Millpond.

Cause City/County: Charles City County; Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, the upper portion of Turkey Island Creek was assessed as not supporting of the Aquatic Life Use due to a pH violation rate of 5/12 at 2-TIC009.23 (Warriner Road).

Additional monitoring at downstream station 2-TIC002.69 (Carters Mill Road) is acceptable.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_TIC01B16 / Turkey Island Creek / Turkey Island Creek from its headwaters to Shirley Millpond.	5C	pH	2016	L	7.04

Turkey Island Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			7.04

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

James River Basin

Cause Group Code: G02R-12-DO Roundabout Creek

Cause Location: Roundabout Creek from the tributary at river mile 2.04 to the James River.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2024 cycle, Roundabout Creek below rivermile 2.04 was assessed as not supporting of the Aquatic Life Use based on a dissolved oxygen exceedance rate of 3/12 at station 2-ROT001.15, which is located at WRVA Road.

Natural conditions are suspected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_ROT02A00 / Roundabout Creek / Roundabout Creek from the tributary at river mile 2.04 to the James River.	5C	Dissolved Oxygen	2024	L	2.05

Roundabout Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.05

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

James River Basin

Cause Group Code: G02R-12-PH Roundabout Creek

Cause Location: Roundabout Creek from rivermile 2.04 to its mouth at the James River

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2024 cycle, Roundabout Creek below rivermile 2.04 was assessed as not supporting of the Aquatic Life Use based on a pH exceedance rate of 2/12 at station 2-ROT001.15, which is located at WRVA Road.

Natural conditions are suspected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_ROT02A00 / Roundabout Creek / Roundabout Creek from the tributary at river mile 2.04 to the James River.	5C	pH	2024	L	2.05

Roundabout Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			2.05

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

James River Basin

Cause Group Code: G02R-13-DO Turkey Island Creek

Cause Location: Turkey Island Creek from Shirley Millpond to the tidal limit.

Cause City/County: Charles City County; Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2024 cycle, the segment was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 9/34 at 2-TIC002.69, which is located at Carters Mill Road.

Natural conditions are suspected, however the station is downstream of Shirley Millpond so that should also be considered.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02R_TIC01A00 / Turkey Island Creek / Turkey Island Creek from Shirley Millpond to the tidal limit.	5C	Dissolved Oxygen	2024	L	1.82

Turkey Island Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.82

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

James River Basin

Cause Group Code: G03E-01-BAC Bailey Creek (tidal), Cattail Creek (tidal)

Cause Location: Segment begins at Bailey Creek fall line and extends downstream to its mouth at the confluence with the James River. The segment includes the tidal portion of Cattail Creek.

Cause City/County: Hopewell; Prince George County

Use(s): Recreation

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

Cause Description: Tidal Bailey Creek was initially listed as impaired of the Recreation Use on the 1994 cycle 303(d) list because of excessive exceedances of the fecal coliform standards.

New bacteria criteria were implemented in the 2022 cycle. Tidal Bailey Creek remained impaired due to two or more E. coli exceedances within the same 90-day period with <10 samples at station 2-BLY000.65.

Monitoring in the 2024 cycle was insufficient for assessment (one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean.) The impairment will be carried over.

The TMDL was approved by the EPA on 7/10/2008 and by the SWCB on 4/28/2009. The segment is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03E_BLY01A98 / Bailey Creek/Cattail Creek / The tidal portions of Bailey Creek and Cattail Creek. JMSTFl	4A	Escherichia coli (E. coli)	1994	L	0.114

Bailey Creek (tidal), Cattail Creek (tidal)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	0.114		

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Sanitary Sewer Overflows (Collection System Failures); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G03E-01-PCB Bailey Creek (tidal), Cattail Creek (tidal)

Cause Location: Segment begins at Bailey Creek fall line and extends downstream to its mouth at the confluence with the James River. The segment includes the tidal portion of Cattail Creek.

Cause City/County: Hopewell; Prince George County

Use(s): Fish Consumption

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2012 cycle, tidal Bailey Creek was impaired of the Fish Consumption Use due to two exceedances of the Human Health - Other Surface Waters WQS for water column PCBs. The samples were collected at 2-BLY000.65 as part of a 2009 source identification study for the VDH PCB advisory in the James River.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03E_BLY01A98 / Bailey Creek/Cattail Creek / The tidal portions of Bailey Creek and Cattail Creek. JMSTFl	5A	Polychlorinated biphenyls (PCBs)	2012	H	0.114

Bailey Creek (tidal), Cattail Creek (tidal)

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:	0.114		

Sources: Contaminated Sediments; Source Unknown

James River Basin

Cause Group Code: G03E-03-PH James River

Cause Location: The mainstem tidal James River from the confluence of the Appomattox River downstream to Powell Creek

Cause City/County: Charles City County; Hopewell; Prince George County

Use(s): Aquatic Life

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

Cause Description: The James River from the Appomattox River downstream to Powells Creek was impaired of the Aquatic Life Use in the 2014 cycle due to elevated pH exceedances at VIMS' continuous monitoring station JMS073.37.

pH exceedance rates are acceptable at other stations within the segment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03E_JMS01A00 / James River / The mainstem of the James River from the confluence with the Appomattox River downstream to Powell Creek. JMSTF1	5A	pH	2014	L	10.194

James River

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:	10.194		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G03E-04-BAC James River

Cause Location: The mainstem tidal James River from the confluence of the Appomattox River downstream to Powells Creek.

Cause City/County: Charles City County; Hopewell; Prince George County

Use(s): Recreation

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

Cause Description: The James River from the Appomattox River downstream to Powells Creek was initially listed as fully supporting but threatened of the Recreation Use during the 1998 cycle and was downgraded to impaired in the 2002 cycle. In 2006, the segment was extended downstream to Queens Creek and E. coli was added as an impairing cause. The impairment converted solely to E. coli in 2008.

The TMDL was approved by the EPA on 7/10/2008 and by the SWCB on 4/28/2009. Because the downstream-most station (2-JMS069.08) had an acceptable rate, the segment was shortened to end at Powell Creek and the TMDL was done for this portion only.

During the 2020 cycle, the violation rates were 7/65 at 2-JMS075.04 & 3/60 (S) at 2-JMS074.44.

New bacteria criteria were implemented in the 2022 cycle. The data were insufficient for assessment; therefore, the impairment was carried over.

In the 2024 cycle, the impairment was continued at citizen monitoring station 2CJMS-A01-JRA (2 or more STV exceedances in the same 90-day period represented by 10+ samples, no geomean exceedances.) The remaining stations were insufficient for assessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03E_JMS01A00 / James River / The mainstem of the James River from the confluence with the Appomattox River downstream to Powell Creek. JMSTF1	4A	Escherichia coli (E. coli)	2006	L	10.194

James River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	10.194		

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G03L-01-DO Harrison Lake

Cause Location: Harrison Lake in its entirety.

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: In 2006 the lake is also considered impaired Cat. 5A because the dissolved oxygen violation rate was unacceptable in the epilimnion/nonstratified periods. This was primarily due to DO violations during the September 2004 monitoring when the lake was not stratified.

In 2008 cycle no additional monitoring was collected, the lake nutrient criteria was developed, lake Harrison does not have a true lacustrine zone. The regional biologist recommended that this lake should be removed from the table of lakes to which the nutrient criteria standards apply during the next triennial review.

During the 2010 cycle the segment remained impaired aquatic life with a DO violation rate of 9/36 at station 2-WER000.02.

During the 2012 cycle the segment remained impaired for DO since there has been no new data since the 2010 cycle.

During the 2014 cycle the segment remained impaired for Aquatic life with a DO violation rate of 9/55 at station 2-WER000.02.

During the 2016 cycle the segment remained impaired for DO with a violation rate of 24/67 at station 2-WER000.02.

No new data since 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03L_WER04A06 / Harrison Lake / Harrison Lake located on West Run	5A	Dissolved Oxygen	2006	L	60.16

Harrison Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		60.16	

Sources: Changes in Ordinary Stratification and Bottom Water Hypoxia/Anoxia; Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Source Unknown

James River Basin

Cause Group Code: G03L-01-HGFT Harrison Lake

Cause Location: Harrison Lake in its entirety.

Cause City/County: Charles City County

Use(s): Fish Consumption

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

Cause Description: 2-HEC006.22 (C)- 2005 fish tissue had As in 3 species as an observed effect and Hg in 4 species.

VDH Fish Consumption Advisory for kepone

The VDH issued a Fish Consumption Advisory for Harrison Lake on 7/20/2006. No more than 2 meals per month of Redear Sunfish, Largemouth Bass, Chain Pickerel, and Bowfin are recommended due to mercury in fish tissue.

No new data for the 2014, 2016, and 2018 cycle

During the 2020 cycle only Fish Tissue data was collected in 2018 at station 2-HEC006.22 with Hg in 1sp(Chain Pickerel)(1/8)(OE); 2018 FT PCB ok.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03L_WER04A06 / Harrison Lake / Harrison Lake located on West Run	5A	Mercury in Fish Tissue	2008	L	60.16

Harrison Lake

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		60.16	

Sources: Atmospheric Deposition - Toxics; Source Unknown

James River Basin

Cause Group Code: G03L-01-PH Harrison Lake

Cause Location: Harrison Lake in its entirety.

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: In 2006 Harrison Lake was assessed as not supporting of the Aquatic Life Use based on a pH violation rate of 12/25 at 2-WER000.02.

In 2008 cycle no additional monitoring was collected, the lake nutrient criteria was developed, lake Harrison does not have a true lacustrine zone. The regional biologist recommended that this lake should be removed from the table of lakes to which the nutrient criteria standards apply during the next triennial review.

During the 2010 cycle the segment remained impaired for pH with a violation rate of 33/60 at station 2-WER000.02.

no new data during the 2010 cycle.

During the 2014 cycle the segment remained impaired aquatic life with a pH violation rate of 30/68 at station 2-WER000.02.

During the 2016 cycle the segment remained impaired for pH with a violation rate of 18/67 at station 2-WER000.02.

No new data since 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03L_WER04A06 / Harrison Lake / Harrison Lake located on West Run	5A	pH	2006	L	60.16

Harrison Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		60.16	

Sources: Changes in Ordinary Stratification and Bottom Water Hypoxia/Anoxia; Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Source Unknown

James River Basin

Cause Group Code: G03R-02-BAC Bailey Creek

Cause Location: Segment begins at the headwaters of Bailey Creek and extends downstream to the tidal limit.

Cause City/County: Hopewell; Prince George County

Use(s): Recreation

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

Cause Description: Bailey Creek was initially included on the 303(d) list in 1994 based on water quality monitoring performed at the Route 10 bridge (2-BLY000.65) and historical water quality problems in Bailey Bay. The causes of impairment were excessive DO and fecal coliform standard exceedances recorded at 2-BLY000.65.

A special study was performed in 1997 and 1998 to delineate the area of impact. Riverine Bailey Creek continued to show fecal coliform impairment.

During the 2008 cycle, the bacteria impairment converted to E. coli due to exceedances at 2-BLY003.42 and 2-BLY005.73. The TMDL was adopted by the EPA on 7/10/2008 and by the SWCB on 4/28/2009. The segment is considered Category 4A.

The violation rates during the 2014 cycle were 5/12 (2012 cycle) and 2/12, respectively.

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_BLY01A98 / Bailey Creek / Bailey Creek from its headwaters to the Route 630 bridge.	4A	Escherichia coli (E. coli)	2008	L	2.84
VAP-G03R_BLY01B22 / Bailey Creek / Bailey Creek from the Route 630 bridge to Manchester Run.	4A	Escherichia coli (E. coli)	2008	L	2.28
VAP-G03R_BLY02A08 / Bailey Creek / Bailey Creek from Manchester Run to the tidal limit.	4A	Escherichia coli (E. coli)	2008	L	1.35

Bailey Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.47

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

James River Basin

Cause Group Code: G03R-02-BEN Bailey Creek

Cause Location: Segment begins at the headwaters of Bailey Creek and extends downstream to the tidal limit.

Cause City/County: Hopewell; Prince George County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, Bailey Creek was impaired of the Aquatic Life Use due to an altered benthic community at 2-BLY005.73, which is located at Route 630.

The station was re-sampled in 2019 and remained impaired. Significant sedimentation was noted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_BLY01A98 / Bailey Creek / Bailey Creek from its headwaters to the Route 630 bridge.	5A	Benthic Macroinvertebrates Bioassessments	2014	H	2.84
VAP-G03R_BLY01B22 / Bailey Creek / Bailey Creek from the Route 630 bridge to Manchester Run.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	2.28
VAP-G03R_BLY02A08 / Bailey Creek / Bailey Creek from Manchester Run to the tidal limit.	5A	Benthic Macroinvertebrates Bioassessments	2014	H	1.35

Bailey Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.47

Sources: Source Unknown

James River Basin

Cause Group Code: G03R-02-PCBFT Bailey Creek

Cause Location: Segment begins at the headwaters of Bailey Creek and extends downstream to the tidal limit.

Cause City/County: Hopewell; Prince George County

Use(s): Fish Consumption

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

Cause Description: The non-tidal portion of Bailey Creek was assessed in the 2002 cycle as impaired of the Fish Consumption Use because of exceedances of the human health screening levels for PCBs in fish samples at station 2-BLY005.72 in 1997.

In addition, the VDH has issued a Fish Consumption Advisory for PCBs in Bailey Creek upstream to the Route 630 bridge.

Note: the CGC was changed from G03R-02-PCB to G03R-02-PCBFT in the 2022 cycle to differentiate it from the water column impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_BLY01A98 / Bailey Creek / Bailey Creek from its headwaters to the Route 630 bridge.	5A	PCBs in Fish Tissue	2002	H	2.84
VAP-G03R_BLY01B22 / Bailey Creek / Bailey Creek from the Route 630 bridge to Manchester Run.	5A	PCBs in Fish Tissue	2002	H	2.28
VAP-G03R_BLY02A08 / Bailey Creek / Bailey Creek from Manchester Run to the tidal limit.	5A	PCBs in Fish Tissue	2002	H	1.35

Bailey Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			6.47

Sources: Source Unknown

James River Basin

Cause Group Code: G03R-03-PCB Poythress Run

Cause Location: Poythress Run from its headwaters to its tidal limit

Cause City/County: Hopewell

Use(s): Aquatic Life; Fish Consumption; Wildlife

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2012 cycle, Poythress Run was impaired of the Fish Consumption Use, Aquatic Life Use, and Wildlife Use due to two water column PCB exceedances of the Human Health - Other Surface Waters WQS and the Aquatic Life/Wildlife WQS. The samples were collected at 2-PTH000.42 as part of a 2009 source identification study for the PCB advisory in the James River. The station is located at Poythress Run at Station Street.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_PTH01A10 / Poythress Run / Headwaters to tidal limit	5A	Polychlorinated biphenyls (PCBs)	2012	H	0.7

Poythress Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			0.7

Poythress Run

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			0.7

Poythress Run

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			0.7

Sources: Source Unknown

James River Basin

Cause Group Code: G03R-04-BAC West Run

Cause Location: West Run from the confluence with East Run downstream to the backwater of Harrison Lake.

Cause City/County: Charles City County

Use(s): Recreation

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

Cause Description: During the 2010 cycle, West Run was assessed as not supporting the Recreation Use based on an E. coli exceedance rate of 2/12 at the Route 625 bridge (2-WER001.93.)

The West Run impairment was addressed in the Turkey Island Creek Bacterial TMDL, which was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015; therefore, the impairment is considered Category 4A.

New bacteria criteria were implemented in the 2022 cycle.

No additional data have been collected at 2-WER001.93 and there is insufficient information to assess the Recreation Use at 2-WER001.58 during the 2024 cycle. Therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_WER03A00 / West Run / West Run from the confluence with East Run downstream to the upstream limits of Harrison Lake.	4A	Escherichia coli (E. coli)	2010	L	1.86

West Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.86

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

James River Basin

Cause Group Code: G03R-04-PH West Run

Cause Location: West Run from the confluence with East Run downstream to the backwater of Harrison Lake.

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: West Run was initially assessed as not supporting the Aquatic Life Use in 2004 based on pH exceedances at the Route 625 bridge (2-WER001.93).

During the 2024 cycle, the segment remained impaired (8/24).

Natural conditions are suspected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_WER03A00 / West Run / West Run from the confluence with East Run downstream to the upstream limits of Harrison Lake.	5C	pH	2004	L	1.86

West Run

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

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

James River Basin

Cause Group Code: G03R-05-PCB XYO - Cattail Creek, UT

Cause Location: The tributary in its entirety.

Cause City/County: Hopewell

Use(s): Fish Consumption

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2012 cycle, the tributary was impaired of the Fish Consumption Use due to two water column PCB exceedances of the Human Health - Other Surface Waters WQS. The samples were collected at 2-XYO000.03 as part of a 2009 source identification study for the PCB advisory in the James River. The station is located off South 1st Street.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_XYO01A06 / XYO - Cattail Creek, UT / Headwaters to mouth at Cattail Creek	5A	Polychlorinated biphenyls (PCBs)	2012	H	0.34

XYO - Cattail Creek, UT

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			0.34

Sources: Source Unknown

James River Basin

Cause Group Code: G03R-06-DO Upper West Run / East Run Watershed

Cause Location: West Run above the confluence with East Run, East Run, and all tributaries.

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: Monitoring was conducted in the West Run watershed during the 2016 cycle. The upper portion of the watershed is impaired of the Aquatic Life Use due to widespread dissolved oxygen violations. Exceedance rates were as follows:

0/12 (FS) at 2-ETR000.50

4/12 at 2-ETR003.00

3/12 at 2-SLM001.23

3/12 at 2-WER006.35

2/12 at 2-WER002.89

7/12 at 2-WER004.42

4/12 at 2-WER005.35

5/12 at 2-XUD000.35

0/3 (FS) at 2CSLM002.56

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_WER01A00 / Upper West Run Watershed / West Run from its headwaters to the confluence with East Run and all tributaries within the segment, excluding XUD.	5C	Dissolved Oxygen	2016	L	43.71
VAP-G03R_XUD01A06 / XUD - West Run, UT / Headwaters to mouth at West Run.	5C	Dissolved Oxygen	2016	L	1.57

Upper West Run / East Run Watershed

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			45.28

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

James River Basin

Cause Group Code: G03R-06-PH Upper West Run / East Run Watershed

Cause Location: West Run above the confluence with East Run, East Run, and all tributaries.

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: Stream XUD, an unnamed tributary to West Run, was assessed in 2006 as not supporting the Aquatic Life Use based on a pH exceedance rate of 2/2 at 2-XUD000.15, a freshwater probabilistic monitoring station.

Additional monitoring was conducted in the West Run watershed during the 2016 cycle. Due to widespread pH violations, the impairment was extended to the upper portion of the watershed. Exceedance rates in the 2018 cycle were as follows:

5/12 at 2-ETR000.50

5/12 at 2-ETR003.00

6/12 at 2-SLM001.23

0/3 (FS) at 2CSLM002.56

1/12 (FS) at 2-WER006.35

8/12 at 2-WER002.89

7/12 at 2-WER004.42

7/12 at 2-WER005.35

12/12 at 2-XUD000.35

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_WER01A00 / Upper West Run Watershed / West Run from its headwaters to the confluence with East Run and all tributaries within the segment, excluding XUD.	5C	pH	2016	L	43.71
VAP-G03R_XUD01A06 / XUD - West Run, UT / Headwaters to mouth at West Run.	5C	pH	2006	L	1.57

Upper West Run / East Run Watershed

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			45.28

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

James River Basin

Cause Group Code: G03R-07-BAC Walls Run

Cause Location: Walls Run from its headwaters to its mouth at Powells Creek.

Cause City/County: Prince George County

Use(s): Recreation

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

Cause Description: Walls Run was initially assessed as not supporting the Recreation Use in 2006 based on E. coli exceedances at 2-WLR000.42, which is located at the Route 10 bridge. During the 2012 cycle, the segment remained impaired due to the following violation rates:

6/25 at 2-WLR000.42 2/12 at 2-WLR002.19 (Route 635) 6/12 at 2-WLR004.46 (Route 646)

However, Walls Run drains to Powell Creek, which was addressed in the James River - Hopewell to Westover Bacterial TMDL. The TMDL was approved by the EPA on 7/10/2008 and by the SWCB on 4/28/2009. Because Powell Creek requires an 86.1% reduction in bacterial loads, Walls Run is considered to be nested (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. Walls Run remained impaired due to two or more STV exceedances in the same 90 day period with < 10 samples at 2-WLR000.42.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_WLR01A06 / Walls Run / Headwaters to mouth at Powell Creek	4A	Escherichia coli (E. coli)	2006	L	5.85

Walls Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.85

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

James River Basin

Cause Group Code: G03R-08-BAC Cattail Creek

Cause Location: The nontidal portion of Cattail Creek.

Cause City/County: Hopewell

Use(s): Recreation

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

Cause Description: During the 2008 cycle, nontidal Cattail Creek was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 5/12 at the Route 36 bridge (2-CTC001.42).

The James River - Hopewell to Westover bacterial TMDL was developed and addressed the Bailey Bay/tidal Bailey Creek/tidal Cattail Creek E. coli impairment. The watershed requires a 91.1% percent reduction of E. coli; therefore, the nontidal Cattail Creek impairment is considered nested (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected so the impairment has been carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_CTC01A00 / Cattail Creek / Cattail Creek from its headwaters to the fall line.	4A	Escherichia coli (E. coli)	2008	L	1.67

Cattail Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.67

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Sanitary Sewer Overflows (Collection System Failures); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G03R-09-BAC Southerly Run

Cause Location: The mainstem of Southerly Run from its headwaters to its mouth at Bailey Creek.

Cause City/County: Prince George County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Southerly Run was assessed as not supporting of the Recreation Use based on an E. coli violation rate of 3/12 at TMDL station 2-SOU000.77, which is located at the Route 646 bridge.

Southerly Run drains to Bailey Creek, which was addressed in the James River - Hopewell to Westover Bacterial TMDL. The TMDL was approved by the EPA on 7/10/2008 and by the SWCB on 4/28/2009. Therefore, Southerly Run is considered to be nested (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. No additional data has been collected so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_SOU01A08 / Southerly Run / Headwaters to mouth at Bailey Creek	4A	Escherichia coli (E. coli)	2008	L	2.84

Southerly Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.84

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

James River Basin

Cause Group Code: G03R-10-BAC XXO - Powell Creek, UT

Cause Location: Headwaters to mouth at Powell Creek.

Cause City/County: Prince George County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, the tributary was assessed as not supporting of the Recreation Use based on an E. coli exceedance rate of 3/12 at TMDL station 2-XXO000.38, which is located at the Route 666 bridge.

The tributary drains to Powell Creek, which was addressed in the James River - Hopewell to Westover Bacterial TMDL. The TMDL was approved by the EPA on 7/10/2008 and by the SWCB on 4/28/2009. Because Powell Creek requires an 86.1% reduction in bacterial loads, the tributary is considered to be nested (Category 4A.)

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_XXO01A08 / XXO - Powell Creek, UT / Headwaters to mouth at Powell Creek	4A	Escherichia coli (E. coli)	2008	L	1.72

XXO - Powell Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.72

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

James River Basin

Cause Group Code: G03R-11-BAC Courthouse Creek

Cause Location: Courthouse Creek from its headwaters to the confluence with Glebe Creek.

Cause City/County: Charles City County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Courthouse Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 2-CRT001.00, which is located at the Route 155 bridge.

Courthouse Creek is located within the study area for the Turkey Island Creek and James River Westover Bacterial TMDL, which was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015. The impairment will be addressed during implementation, so the impairment is considered nested (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_CRT01B00 / Courthouse Creek / Courthouse Creek from its headwaters to the confluence with Glebe Creek.	4A	Escherichia coli (E. coli)	2014	L	4.39

Courthouse Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.39

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

James River Basin

Cause Group Code: G03R-12-PCB Bailey Creek

Cause Location: Nontidal Bailey Creek from its headwaters downstream to the tidal limit.

Cause City/County: Hopewell; Prince George County

Use(s): Fish Consumption

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2022 cycle, nontidal Bailey Creek was impaired of the Fish Consumption Use due to two exceedances of the water column human health criteria for PCBs at station 2-BLY005.73.

Three additional samples were acceptable.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03R_BLY01A98 / Bailey Creek / Bailey Creek from its headwaters to the Route 630 bridge.	5A	Polychlorinated biphenyls (PCBs)	2022	H	2.84
VAP-G03R_BLY01B22 / Bailey Creek / Bailey Creek from the Route 630 bridge to Manchester Run.	5A	Polychlorinated biphenyls (PCBs)	2022	H	2.28
VAP-G03R_BLY02A08 / Bailey Creek / Bailey Creek from Manchester Run to the tidal limit.	5A	Polychlorinated biphenyls (PCBs)	2022	H	1.35

Bailey Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			6.47

Sources: Source Unknown

James River Basin

Cause Group Code: G04E-05-CHLA James River

Cause Location: The mainstem of the James River within segment JMSOHa.

Cause City/County: James City County; Surry County

Use(s): Aquatic Life; Open-Water Aquatic Life

Causes(s)/VA Category: Chlorophyll-a/4A

Cause Description: DELIST 2024 -

During the 2022 cycle, JMSOHa failed the summer seasonal chlorophyll a special standard. The spring criteria was met.

In the 2024 cycle, the segment met both the spring and summer seasonal criteria. JMSOH does not have a short-term chlorophyll a criterion. The segment will be delisted.

The Chesapeake Bay TMDL was approved by the EPA on 12/31/2010; therefore, the segment is considered Category 2C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10E_JMS01A06 / James River Mainstem - Chickahominy R. to Hog Point / From confluence with Chickahominy R. coincident with watershed line (RM 48.40) downstream to line between Hog Pt. and mouth College Cr. N shore James R. CBP segment JMSOH. DSS (ADMIN) shellfish condemn # 059-069 A (effective 20141219).	4A	Chlorophyll-a	2022	L	17.843

James River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:	17.843		

James River

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:	17.843		

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

James River Basin

Cause Group Code: G04E-06-EBTOX James River

Cause Location: James River 1/2 mile upstream and downstream of station 2CJMS055.04

Cause City/County: Charles City County; Prince George County

Use(s): Aquatic Life

Causes(s)/VA Category: Sediment Bioassay/5A

Cause Description: During the 2012-2016 cycles, the mainstem of the tidal freshwater James River was impaired of the Aquatic Life Use due to an inadequate benthic community based on the Chesapeake Bay Benthic Index of Biological Integrity.

In addition, there was benthic alteration at 2010 Coastal 2000 stations 2CJMS055.04 and 2CJMS084.70, which were considered Category 5A. The source is "possibly cumulative chronic effects of metals and PAHs in the sediment".

The JMSTFa B-IBI segment met the goal in the 2018 cycle. The impairment was shortened to those areas around the two Coastal 2000 stations. The remainder was partially delisted.

The segment failed again in the 2022 cycle and the extent was expanded to again include the entire tidal freshwater James River segment JMSTFa (see fact sheet G01E-02-EBEN).

In the 2024 cycle, the segment-wide benthic impairment is continued. The weight of evidence impairments are being split off into separate fact sheets due to the potential sediment local causes and are now included under G02E-05-EBTOX (2CJMS084.70) and G04E-06-EBTOX (2CJMS055.04).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G04E_JMS03B24 / James River / James River 1/2 mile upstream and downstream of station 2CJMS055.04. JMSTF1	5A	Sediment Bioassay	2012	L	1.05

James River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Sediment Bioassay - Total Impaired Size by Water Type:	1.05		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G04L-01-BAC Sunken Meadow Pond

Cause Location: Sunken Meadow Pond in its entirety.

Cause City/County: Surry County

Use(s): Recreation

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

Cause Description: Sunken Meadow Pond was impaired of the Recreation Use during the 2016 cycle due to an E. coli exceedance rate of 2/12 at 2-SKC001.17, which is located at Rt. 626.

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G04L_SKC01A08 / Sunken Meadow Pond / The pond in its entirety.	5A	Escherichia coli (E. coli)	2016	L	172.86

Sunken Meadow Pond

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:		172.86	

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Source Unknown

James River Basin

Cause Group Code: G04L-01-DO Sunken Meadow Pond

Cause Location: Sunken Meadow Pond in its entirety.

Cause City/County: Surry County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, Sunken Meadow Pond was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 2-SKC001.17, which is located at Rt. 626. The exceedance rate was 3/12 during the 2016 cycle.

Although the segment is a non-significant/non-187 lake, the TSI was not used because guidance states that only nutrient data collected in the lacustrine zone of the lake should be used. The station is located near the backwater of the pond. In previous cycles, the TSIs would have been 50 for chlorophyll a, 61 for total phosphorus, and secchi depth information was not collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G04L_SKC01A08 / Sunken Meadow Pond / The pond in its entirety.	5A	Dissolved Oxygen	2010	L	172.86

Sunken Meadow Pond

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		172.86	

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

James River Basin

Cause Group Code: G04R-01-BAC Wards Creek

Cause Location: Wards Creek from the headwaters to its tidal limit.

Cause City/County: Prince George County

Use(s): Recreation

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

Cause Description: Wards Creek was impaired of the Recreation Use in the 2018 cycle due to an exceedance rate of 4/34 at 2-WRD005.40.

The exceedance rate was 7/34 in the 2020 cycle.

New bacteria criteria were implemented in the 2022 cycle; the station remained impaired due to two or more STV exceedances in the same 90-day period with <10 samples.

There was insufficient information to assess E. coli in the 2024 cycle (one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean); therefore, the impairment will be carried over.

It was previously addressed in the Turkey Island Creek and James River Westover Bacterial TMDL, which was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015 (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G04R_WRD01A00 / Wards Creek / Wards Creek from its headwaters to the tidal limit.	4A	Escherichia coli (E. coli)	2018	L	8.1

Wards Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.1

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

James River Basin

Cause Group Code: G04R-04-BAC XBB - Upper Chippokes Creek, UT

Cause Location: An unnamed tributary of Upper Chippokes Creek from the headwaters to its tidal limit.

Cause City/County: Surry County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, the tributary was assessed as not supporting of the Recreation Use based on an E. coli exceedance rate of 2/12 at monitoring station 2CXBB000.62, which is located at the Route 10 bridge.

The tributary is located in the Upper Chippokes Creek watershed, which was addressed in the Turkey Island Creek and James River Westover Bacterial TMDL. The TMDL was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015. The impairment is considered nested (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G04R_XBB01A14 / XBB - Upper Chippokes Creek, UT / Headwaters to mouth	4A	Escherichia coli (E. coli)	2014	L	7.09

XBB - Upper Chippokes Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.09

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

James River Basin

Cause Group Code: G04R-05-BAC Flowerdew Hundred Creek

Cause Location: The nontidal portion of Flowerdew Hundred Creek.

Cause City/County: Prince George County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the nontidal portion of Flowerdew Hundred Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 3/7 at 2-FDH004.54, which is located at Route 614 (Wards Creek Road.)

Flowerdew Hundred Creek is located within the study area for the Turkey Island Creek and James River Westover Bacterial TMDL, which was approved by the SWCB on 10/1/2015 and by the EPA on 12/22/2015. The impairment will be addressed during implementation; therefore, the impairment is considered nested (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected, so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G04R_FDH01A16 / Flowerdew Hundred Creek / Headwaters to tidal limit.	4A	Escherichia coli (E. coli)	2016	L	3.68

Flowerdew Hundred Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.68

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

James River Basin

Cause Group Code: G05R-01-BEN Chickahominy River, UT - Unnamed Tributary

Cause Location: Segment consists of the unnamed tributary of the Chickahominy River to which the Tyson Plant discharges.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: Biological monitoring of the receiving stream identified a moderately impaired benthic community downstream of the Tyson Plant (VPDES Permit No. VA0004031) discharge when compared to the benthic community immediately upstream of the discharge. This resulted in this segment being assessed as impaired of the Clean Water Act's Aquatic Life Use Support Goal for the 1994 305(b) report.

The TMDL study for the watershed was completed during the 2006 cycle. Extensive biological and nutrient monitoring was conducted. The benthic impairment continued and a pH impairment was noted at stations 2-XDD000.32 and 2-XDD000.40. The past phosphorus screening value was exceeded at multiple stations. The past chlorophyll A screening value was exceeded at 2-XDD000.40 and 2-XDD000.32 as well.

The TMDL was approved by the EPA on 8/05/2004 and by the SWCB on 3/15/05. The study attributed the benthic impairment to excess phosphorus and high pH. The allocation was 432.69 lbs./year of phosphorus, divided between Tysons Foods (409.35 lbs./yr) and nonpoint sources (23.34 lbs./year).

The segment remained impaired for benthics as well as pH during the 2016 cycle due to exceedances at 2-XDD000.40 and at 2-XDD000.32. Additional pH sampling in the 2018 cycle at 2-XDD000.40 continued the pH impairment (26/57).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XDD01A98 / XDD - Chickahominy River, UT / An unnamed tributary of the Chickahominy River from the Tysons Plant discharge to the confluence with the Chickahominy.	4A	Benthic Macroinvertebrates Bioassessments	1996	L	1.17

Chickahominy River, UT - Unnamed Tributary

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.17

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XDD01A98 / XDD - Chickahominy River, UT / An unnamed tributary of the Chickahominy River from the Tysons Plant discharge to the confluence with the Chickahominy.	4A	pH	2006	L	1.17

Chickahominy River, UT - Unnamed Tributary

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.17

Sources: Industrial Point Source Discharge; Non-Point Source

James River Basin

Cause Group Code: G05R-01-NH3 XDD - Chickahominy River, UT

Cause Location: Tyson Plant discharge to mouth

Cause City/County: Hanover County

Use(s): Aquatic Life; Wildlife

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

Cause Description: Multiple exceedances of the chronic ammonia criteria had been noted in grab samples throughout the stream; therefore, a special study was conducted in July 2005 to investigate the ammonia levels in the stream. Based on the results of the study, the segment was impaired for ammonia because of six acute ammonia exceedances each at 2-XDD000.84 and at 2-XDD000.91. A fish kill was noted in the pond.

Although there were no acute ammonia exceedances in the 2014 cycle, there were multiple chronic exceedances at 2-XDD000.32, 2-XDD000.40, 2-XDD000.84, and 2-XDD000.91.

Additional monitoring was conducted in 2006 at 2-XDD000.84 (no exceedances) and 2-XDD000.40 (one chronic exceedance.)

The impairment will be carried over, but continued monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XDD01A98 / XDD - Chickahominy River, UT / An unnamed tributary of the Chickahominy River from the Tysons Plant discharge to the confluence with the Chickahominy.	5A	Ammonia, Total	2008	L	1.17

XDD - Chickahominy River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Ammonia, Total - Total Impaired Size by Water Type:			1.17

XDD - Chickahominy River, UT

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Ammonia, Total - Total Impaired Size by Water Type:			1.17

Sources: Industrial Point Source Discharge; Non-Point Source

James River Basin

Cause Group Code: G05R-02-BAC Upham Brook Watershed

Cause Location: Segment begins at the headwaters of Upham Brook and extends downstream to the confluence with the Chickahominy River, including all tributaries.

Cause City/County: Henrico County; Richmond

Use(s): Recreation

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

Cause Description: Upham Brook has been impaired of the Recreation Use since the 1996 cycle based on violations at DEQ's Ambient Monitoring Station 2-UPM003.53, located at the Brook Road (Rt. 1) bridge over Upham Brook, as well as excessive fecal coliform violation rates at the Richmond Regional PDC special study stations.

The segment was extended in the year 2002 cycle to include the entire watershed and the bacteria impairment was converted to E. coli in the 2006 cycle.

The Upham Brook and Tributaries bacterial TMDL was completed in the 2010 cycle. The report was approved by the EPA on 7/24/2008 and by the SWCB on 4/28/2009. The watershed is considered Category 4A.

The watershed remained impaired during the 2020 cycle (6/12 at 2-UPM001.35, 3/9 at ACB station 2CUPM-UB1-ALL, 3/3 at 2CXXQ-PRC03-CB, 6/16 at 2CJOP-JOR1-ACB, and 10/15 at 2CXXQ-PRC01-ACB). In addition, the violation rate was 3/4 at 2CPRI-PC-ACB in the 2018 cycle.

New bacteria criteria were implemented in the 2022 cycle. Stations 2-UPM001.35, 2CXXQ-PRC01-ACB, 2CXXQ-PRC03-ACB, 2CJOP-JOR1-ACB, and 2CJOP-JB1-HAWQS were impaired due to two or more STV exceedances in a 90 day period.

There was insufficient information to assess bacteria in the 2024 cycle and the impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_JOP01A14 / Jordans Branch / Headwaters to mouth at Upham Brook	4A	Escherichia coli (E. coli)	2006	L	2.19
VAP-G05R_NTR01A00 / North Run / North Run from Hungary Creek to its mouth at Upham Brook.	4A	Escherichia coli (E. coli)	2006	L	4.24
VAP-G05R_NTR02A06 / North Run / North Run from its headwaters to Hungary Creek.	4A	Escherichia coli (E. coli)	2006	L	3.66
VAP-G05R_UPM01A02 / Upham Brook / Upham Brook from its headwaters to the mouth at the Chickahominy River, excluding Upham Brook from Flippen Creek to the UT above Wilkinson Rd.	4A	Escherichia coli (E. coli)	2006	L	10.99
VAP-G05R_UPM01B08 / Upham Brook / Flippen Creek downstream to UT above Wilkinson Road	4A	Escherichia coli (E. coli)	2006	L	1.16
VAP-G05R_XAR03A06 / XAR - Upham Brook, UT / Headwaters to mouth at Upham Brook.	4A	Escherichia coli (E. coli)	2006	L	1.20
VAP-G05R_XCJ01A16 / XCJ - North Run, UT / Ditch from headwaters to North Run	4A	Escherichia coli (E. coli)	2006	L	0.42
VAP-G05R_XXP01A08 / XXP - Upham Brook, UT / Headwaters to mouth at Upham Brook	4A	Escherichia coli (E. coli)	2006	L	1.46
VAP-G05R_ZZZ01B02 / Upham Brook Tributaries / Upham Brook Watershed	4A	Escherichia coli (E. coli)	2006	L	39.98

Upham Brook Watershed

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			65.3

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Sanitary Sewer Overflows (Collection System Failures); Urban Development in Riparian Buffer; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G05R-03-BAC Chickahominy River

Cause Location: The Chickahominy River from the confluence with UT XDD to the Route 360 bridge.

Cause City/County: Hanover County; Henrico County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, the segment of the Chickahominy from the unnamed tributary at approximately rivermile 76 downstream to the Route 360 bridge was assessed as not supporting of the Recreation Use due to the following E. coli exceedance rates:

2/12 at 2CCHK071.66 3/12 at 2-CHK067.30

The impairment was extended upstream to the confluence with XDD during the 2014 cycle due to an exceedance rate of 7/37 at 2-CHK076.59, which is located at Route 625. The segment is located within the study area for the Chickahominy River and Tributaries Bacterial TMDL report, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013. The upstream bacterial impairment is considered nested.

Subsequent monitoring has indicated impairment at 2-CHK071.75 as well.

New bacteria criteria were implemented in the 2022 cycle.

In the 2024 cycle, there is insufficient information to assess the Recreation Use at 2-CHK076.59 in the 2024 cycle (one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean) and no additional data has been collected at 2-CHK067.30, 2CCHK071.66 or 2-CHK071.75. The impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_CHK01B10 / Chickahominy River / The Chickahominy River from the confluence with the unnamed tributary XDD to the unnamed tributary at approximately rivermile 76	4A	Escherichia coli (E. coli)	2014	L	2.31
VAP-G05R_CHK01C12 / Chickahominy River / The Chickahominy River from the confluence with the unnamed tributary at rivermile 76 to the confluence with Stony Run.	4A	Escherichia coli (E. coli)	2012	L	5.98
VAP-G05R_CHK02A04 / Chickahominy River / Confluence with Stony Run to Route 360 bridge	4A	Escherichia coli (E. coli)	2012	L	8.27

Chickahominy River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			16.56

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Industrial Point Source Discharge; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G05R-04-BEN Chickahominy River

Cause Location: The Chickahominy River from its headwaters to the confluence with unnamed tributary XDD.

Cause City/County: Hanover County; Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, the segment was assessed as not supporting of the Aquatic Life Use due to an impaired benthic community at station 2-CHK079.23, which is located at the Route 33 bridge.

Additional sampling in 2010, 2012, and 2013 confirmed the impairment at 2-CHK079.23 as well as at station 2-CHK081.80.

The Benthic TMDL was approved by the EPA on 11/7/2013 and by the EPA on 3/28/2014. The segment is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_CHK01A00 / Chickahominy River / The Chickahominy River from its headwaters to the confluence with the unnamed tributary XDD.	4A	Benthic Macroinvertebrates Bioassessments	2010	L	7.08

Chickahominy River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.08

Sources: Discharges from Municipal Separate Storm Sewer Systems (MS4); Industrial Point Source Discharge; Non-Point Source; Sediment Resuspension (Clean Sediment)

James River Basin

Cause Group Code: G05R-05-BAC Stony Run

Cause Location: Stony Run from the confluence with Lickinghole Creek downstream to its mouth at the Chickahominy River.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: The segment of Stony Run was initially assessed as impaired of the Recreation Use in 2004 because of fecal coliform exceedances at the Route 656 bridge (2-SNF000.04). E. coli monitoring was conducted during the 2010 cycle; the impairment converted to E. coli. The exceedance rate was 5/23 during the 2012 cycle.

The impairment was addressed in the Chickahominy River and Tributaries TMDL report, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013. The impairment is considered Category 4A.

New bacteria criteria have been implemented. In the 2024 cycle, there is insufficient information to assess 2-SNF000.04 (one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean); therefore, the impairment will be carried over. Additional level II monitoring was conducted at co-located citizen monitoring station 2-SNF-STORUN0.04-ACB.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_SNF01A02 / Stony Run / Stony Run from the confluence with Lickinghole Creek downstream to its mouth at the Chickahominy River.	4A	Escherichia coli (E. coli)	2010	L	0.21

Stony Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.21

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

James River Basin

Cause Group Code: G05R-06-DO Grassy Swamp Creek

Cause Location: Grassy Swamp Creek from the pond at rivermile 0.99 to its mouth.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: Grassy Swamp Creek was assessed as impaired of the Aquatic Life Use in the 2008 cycle due to dissolved oxygen exceedances at 2-GRC000.96, which is located at the Route 660 bridge.

The exceedance rate was 19/61 in the 2014 cycle. No additional data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_GRC01A04 / Grassy Swamp Creek / Pond downstream to mouth at Chickahominy River	5C	Dissolved Oxygen	2008	L	1.02

Grassy Swamp Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.02

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

James River Basin

Cause Group Code: G05R-07-DO XDD - Chickahominy River, UT

Cause Location: The unnamed tributary XDD from its headwaters to the Tysons Foods discharge.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: The segment was initially assessed as not supporting of the Aquatic Life Use in the 2006 cycle due to dissolved oxygen exceedances at 2-XDD001.23. The impairment is suspected to be caused by low flow conditions potentially exacerbated by the excess phosphorus in the watershed. During the 2014 cycle, the segment had a DO violation rate of 14/38 at 2-XDD001.23.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XDD02A06 / XDD - Chickahominy River, UT / Headwaters to Tysons Foods discharge	5C	Dissolved Oxygen	2006	L	0.56

XDD - Chickahominy River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.56

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

James River Basin

Cause Group Code: G05R-07-PH XDD - Chickahominy River, UT

Cause Location: The unnamed tributary XDD from its headwaters to the Tysons Foods discharge.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: The segment was initially considered impaired during the 2006 cycle due to pH exceedances at 2-XDD001.23. It was categorized as Category 4A because of the benthic/pH TMDL for the lower portion of the tributary. Since the pH at this station is low, not elevated as at the downstream stations, this impairment should not be considered addressed. Because it was initially impaired in 2006, a TMDL due date of 2018 was assigned.

The violation rate was 29/38 during the 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XDD02A06 / XDD - Chickahominy River, UT / Headwaters to Tysons Foods discharge	5C	pH	2006	L	0.56

XDD - Chickahominy River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.56

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

James River Basin

Cause Group Code: G05R-09-BEN North Run

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

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: North Run from its headwaters to the confluence with Hungary Creek was assessed as not supporting the Aquatic Life Use during the 2008 cycle based on an impaired benthic community at freshwater probabilistic monitoring station 2-NTR005.53, located above Mountain Road.

Additional monitoring occurred at another freshwater probabilistic monitoring station (2-NTR000.23) in 2011. That station also shows benthic impairment; therefore, the impairment was extended to the mouth of North Run.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_NTR01A00 / North Run / North Run from Hungary Creek to its mouth at Upham Brook.	5A	Benthic Macroinvertebrates Bioassessments	2014	H	4.24
VAP-G05R_NTR02A06 / North Run / North Run from its headwaters to Hungary Creek.	5A	Benthic Macroinvertebrates Bioassessments	2008	H	3.66

North Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.9

Sources: Source Unknown

James River Basin

Cause Group Code: G05R-09-PH North Run

Cause Location: North Run from its headwaters to the confluence with Hungary Creek.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: North Run from its headwaters to the confluence with Hungary Creek was assessed as not supporting the Aquatic Life Use during the 2006 cycle based on a pH exceedance rate of 3/6 at station 2-NTR005.53, located above Mountain Road.

No additional data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_NTR02A06 / North Run / North Run from its headwaters to Hungary Creek.	5A	pH	2006	L	3.66

North Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.66

Sources: Source Unknown

James River Basin

Cause Group Code: G05R-10-DO Upham Brook

Cause Location: Upham Brook from Flippen Creek downstream to the confluence with the UT entering above Wilkinson Road

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: The segment was assessed as not supporting the Aquatic Life Use in the 2008 cycle based on a dissolved oxygen exceedance rate of 2/12 at Route 301 (2-UPM002.41).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_UPM01B08 / Upham Brook / Flippen Creek downstream to UT above Wilkinson Road	5A	Dissolved Oxygen	2008	L	1.16

Upham Brook

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.16

Sources: Source Unknown

James River Basin

Cause Group Code: G05R-11-DO XXP - Upham Brook, UT

Cause Location: The unnamed tributary XXP from its headwaters to its mouth at Upham Brook.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, the tributary was assessed as not supporting of the Aquatic Life Use based on a dissolved oxygen violation rate of 3/12 at TMDL station 2-XXP000.23, which is located at Wilkinson Road.

The exceedance rate was 5/12 during the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XXP01A08 / XXP - Upham Brook, UT / Headwaters to mouth at Upham Brook	5C	Dissolved Oxygen	2008	L	1.46

XXP - Upham Brook, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.46

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

James River Basin

Cause Group Code: G05R-12-BAC Upper Stony Run and Tributaries

Cause Location: Stony Run and its tributaries upstream of the confluence with Lickinghole Creek

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: The watershed was monitored during the 2012 cycle due to a downstream bacterial impairment on Stony Run. The watershed shows extensive exceedances throughout and is impaired for the Recreation Use.

3/12 at 2CXAG000.50 2/12 at 2-LKH000.04 1/12 at 2-LKH001.00 (fully supporting) 2/12 at 2-LKH001.46 4/12 at 2-LKH002.42 2/12 at 2-LKH003.42 3/12 at 2-SNF000.23 1/12 at 2-SNF000.87 (fully supporting) 3/12 at 2-SNF001.27 5/11 at 2-SNF001.58 3/12 at 2-SNF003.70 6/10 at 2-SNF005.59 1/10 at 2-SNF006.44 (fully supporting) 2/12 at 2-XOI000.65

The streams are located within the study area for the Chickahominy River and Tributaries Bacterial TMDL report, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013. The E. coli impairment is considered nested (Category 4A.)

New bacteria criteria have been implemented. No additional bacteria data have been collected on the tributaries, so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_SNF02A12 / Stony Run and Tributaries / Upper portion of watershed above confluence of Stony Run and Lickinghole Creek	4A	Escherichia coli (E. coli)	2012	L	39.87

Upper Stony Run and Tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			39.87

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

James River Basin

Cause Group Code: G05R-13-BEN Allens Branch

Cause Location: Allens Branch from its headwaters to its mouth.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, Allens Branch was impaired of the Aquatic Life Use due to benthic alteration at 2-ALL000.19, which was a 2013 probabilistic monitoring station.

The stream is within the study area for the Chickahominy River Benthic TMDL which was approved by the EPA on 11/7/2013 and by the SWCB on 3/28/2014. 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-G05R_ALL01A14 / Allens Branch / Headwaters to mouth at the Chickahominy River	4A	Benthic Macroinvertebrates Bioassessments	2016	L	3.33

Allens Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.33

Sources: Discharges from Municipal Separate Storm Sewer Systems (MS4); Industrial Point Source Discharge; Non-Point Source

James River Basin

Cause Group Code: G05R-14-BEN Jordans Branch

Cause Location: The mainstem of Jordans Branch.

Cause City/County: Henrico County; Richmond

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, Jordans Branch was impaired of the Aquatic Life Use due to an altered benthic community at freshwater probabilistic monitoring station 2CJOP000.34. Additional monitoring in 2019/2020 confirmed the impairment.

Level II citizen monitoring at 2CJOP-JB1-HAWQS also indicated possible impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_JOP01A14 / Jordans Branch / Headwaters to mouth at Upham Brook	5A	Benthic Macroinvertebrates Bioassessments	2016	H	2.19

Jordans Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.19

Sources: Source Unknown

James River Basin

Cause Group Code: G05R-15-DO XCJ - North Run, UT

Cause Location: Ditch from Lewis Ginter Botanical Garden to North Run.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2020 cycle, the ditch was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 5/46 at citizen monitoring station 2CXCJ-LSE-LSBG, which is located at the Lewis Ginter Botanical Garden driveway.

Monitoring at 2CXCJ-LSM-LSBG was acceptable.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XCJ01A16 / XCJ - North Run, UT / Ditch from headwaters to North Run	5A	Dissolved Oxygen	2020	L	0.42

XCJ - North Run, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.42

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

James River Basin

Cause Group Code: G05R-15-PH XCJ - North Run, UT

Cause Location: Ditch from Lewis Ginter Botanical Garden to North Run.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, the ditch was impaired of the Aquatic Life Use due to pH exceedances at citizen monitoring station 2CXCJ-LSE-LSBG, which is located at the Lewis Ginter Botanical Garden driveway.

The exceedance rate was 3/17 during the 2020 cycle.

Monitoring at 2CXCJ-LSM-LSBG was acceptable.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XCJ01A16 / XCJ - North Run, UT / Ditch from headwaters to North Run	5A	pH	2016	L	0.42

XCJ - North Run, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.42

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

James River Basin

Cause Group Code: G05R-16-BEN Upham Brook

Cause Location: The mainstem of Upham Brook.

Cause City/County: Henrico County; Richmond

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, Upham Brook was impaired of the Aquatic Life Use due to an altered benthic community at station 2-UPM003.12. Additional monitoring at 2-UPM005.26 in 2020 was also impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_UPM01A02 / Upham Brook / Upham Brook from its headwaters to the mouth at the Chickahominy River, excluding Upham Brook from Flippen Creek to the UT above Wilkinson Rd.	5A	Benthic Macroinvertebrates Bioassessments	2016	H	10.99
VAP-G05R_UPM01B08 / Upham Brook / Flippen Creek downstream to UT above Wilkinson Road	5A	Benthic Macroinvertebrates Bioassessments	2016	H	1.16

Upham Brook

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			12.15

Sources: Source Unknown

James River Basin

Cause Group Code: G05R-17-HAB XBP - Chickahominy River, UT

Cause Location: Headwaters of tributary to the confluence with Wyndham Lake

Cause City/County: Henrico County

Use(s): Recreation

Causes(s)/VA Category: Harmful Algal Blooms/5A

Cause Description: During the 2022 cycle, the tributary was impaired of the Recreation Use due to a VDH harmful algal bloom advisory. The 2019 advisory lasted 35 days due to elevated microcystin and cylindrospermopsin.

There were no HAB advisories in the 2024 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_XBP01B22 / XBP - Chickahominy River, UT / Headwaters to the confluence with Wyndham Lake	5A	Harmful Algal Blooms	2022	L	0.8

XBP - Chickahominy River, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Harmful Algal Blooms - Total Impaired Size by Water Type:			0.8

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: G05R-18-DO North Run

Cause Location: North Run from its headwaters downstream to the confluence with Hungary Creek

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2022 cycle, the upper portion of North Run was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/16 at station 2-NTR004.77, which is located at Woodman Road.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G05R_NTR02A06 / North Run / North Run from its headwaters to Hungary Creek.	5A	Dissolved Oxygen	2022	L	3.66

North Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.66

Sources: Source Unknown

James River Basin

Cause Group Code: G06L-04-TEMP Westhaven Lake

Cause Location: The extent of Westhaven Lake

Cause City/County: Hanover County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: During the 2014 cycle, Westhaven Lake was impaired of the Aquatic Life Use due to a temperature exceedance rate of 3/8 at citizen monitoring station 2-BVR07.00-WH.

DEQ staff do not have access to the lake so cannot re-sample.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06L_XBT01A14 / Westhaven Lake / Extent of lake	5A	Temperature	2014	L	15.12

Westhaven Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:		15.12	

Sources: Dam or Impoundment

James River Basin

Cause Group Code: G06R-01-HG Chickahominy River

Cause Location: Segment begins at the Route 360 bridge over the Chickahominy River, and extends downstream to the Route 156 bridge.

Cause City/County: Hanover County; Henrico County

Use(s): Fish Consumption

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

Cause Description: During the 2010 cycle, the segment was assessed as not supporting of the Fish Consumption Use due to mercury exceedances in chain pickerel and yellow bullhead catfish during 2005 sampling.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_CHK01A98 / Chickahominy River / The Chickahominy River from the Route 360 bridge downstream to the Route 156 bridge.	5A	Mercury in Fish Tissue	2010	L	7.46

Chickahominy River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			7.46

Sources: Atmospheric Deposition - Toxics; Source Unknown

James River Basin

Cause Group Code: G06R-02-BAC Horse Swamp Creek

Cause Location: The mainstem of Horse Swamp Creek.

Cause City/County: Henrico County; Richmond

Use(s): Recreation

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

Cause Description: During the 2020 cycle, Horse Swamp Creek was impaired of the Aquatic Life Use due to an E. coli exceedance rate of 2/3 at citizen monitoring station 2-HRN-HC-ACB (now named 2-HRN-HSC01-ACB).

The stream is located within the study area for the Chickahominy River and Tributaries Bacteria TMDL, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/2/2013. The impairment will be addressed during implementation and is therefore considered nested (Category 4A.)

New bacteria criteria have been implemented. There is insufficient information to assess the criteria; therefore, the impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_HRN01A02 / Horse Swamp Creek / The mainstem of Horse Swamp Creek.	4A	Escherichia coli (E. coli)	2020	L	2.81

Horse Swamp Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.81

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G06R-03-BAC White Oak Swamp

Cause Location: White Oak Swamp from White Oak Swamp Creek downstream to its mouth at the Chickahominy River.

Cause City/County: Henrico County

Use(s): Recreation

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

Cause Description: White Oak Swamp is assessed not supporting of the Recreation use support goal based on E. coli standard exceedances recorded at 2-WOS002.69. The segment had initially been considered impaired for fecal coliform but converted to E. coli during the 2006 cycle.

During the 2010 cycle, the segment remained impaired with an E. coli exceedance rate of 6/18 at 2-WOS002.69.

The Bacteria TMDL for White Oak Swamp was approved by the EPA on 9/20/2004 and by the SWCB on 7/31/2008; therefore, White Oak is considered a Category 4A water for bacteria.

New bacteria criteria have been adopted. There is insufficient information to assess the Recreation Use, so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_WOS01A98 / White Oak Swamp / White Oak Swamp from White Oak Swamp Creek to its mouth at the Chickahominy River.	4A	Escherichia coli (E. coli)	2006	L	6.69

White Oak Swamp

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

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G06R-05-DO Powhite Creek

Cause Location: Powhite Creek below Gaines Millpond.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, Powhite Creek below Gaines Millpond was impaired of the Aquatic Life Use due to dissolved oxygen exceedances at 2-PWH002.12, which is located at Route 156. Natural conditions are suspected, however the dam should be investigated.

The exceedance rate was 2/14 in the 2016 cycle. Other stations within the segment had insufficient data for assessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_PWH01A02 / Powhite Creek / Powhite Creek from Gaines Millpond dam downstream to its mouth at the Chickahominy River.	5C	Dissolved Oxygen	2014	L	2.14

Powhite Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.14

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

James River Basin

Cause Group Code: G06R-06-PH Beaverdam Creek

Cause Location: Beaverdam Creek from its headwaters to the confluence with tributary XBT.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: Beaverdam Creek was assessed as not supporting of the Aquatic Life Use based on a pH standard exceedance rate of 3/4 at USGS station 02042433.

During the 2008 cycle, monitoring at DEQ station 2-BEV002.00 at the Route 156 bridge, only slightly upstream of the USGS station, had an acceptable exceedance rate of 0/11; therefore continued monitoring was recommended.

During the 2014 cycle, monitoring was conducted at 2-BEV002.00 as well as 2-BEV-RICH01-NPS, which is a National Park Service station. The NPS station had an acceptable violation rate (0/31), however the DEQ station was 3/26; therefore, the segment remained impaired.

During the 2016 cycle, widespread monitoring was conducted by the DEQ and the National Park Service. Although the majority of stations had acceptable pH, the upstream-most station, 2-BEV006.75 continued to have pH exceedances (7/13). The segment was shortened to end at tributary XBT and the downstream portion was partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_BEV01B16 / Beaverdam Creek / Beaverdam Creek from its headwaters to the confluence with tributary XBT.	5C	pH	2004	L	2.68

Beaverdam Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			2.68

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

James River Basin

Cause Group Code: G06R-07-PH Boatswain Creek

Cause Location: Boatswain Creek from its headwaters to its mouth at the Chickahominy River.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: Boatswain Creek was assessed as not supporting of the Aquatic Life Use during the 2008 cycle based on pH standard exceedance rates of 3/4 at USGS station 0204243830, 2/4 at USGS station 0204243790, and 7/15 at DEQ station 2-BTS002.62.

During the 2012 cycle, the exceedance rate at 2-BTS002.62 was 4/11. Monitoring at new National Park Service station 2-BTS-RICH-03-NPS was inconclusive (1/8).

During the 2014 cycle, the pH exceedance rate was acceptable (2/31) at 2-BTS-RICH-03-NPS; however, there was no additional monitoring at any of the other stations. Boatswain Creek remained impaired in the 2014 cycle until further monitoring could be conducted.

In the 2020 cycle, the creek remained impaired due to an exceedance rate of 5/12 at 2-BTS002.62 (2016 cycle) and 5/41 at 2-BTS-RICH-03-NPS.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_BTS01A02 / Boatswain Creek / Boatswain Creek from its headwaters to its mouth at the Chickahominy River.	5C	pH	2004	L	3.76

Boatswain Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.76

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

James River Basin

Cause Group Code: G06R-11-PH Bloody Run

Cause Location: Bloody Run from its headwaters to the its mouth at Gaines Millpond.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: Bloody Run was assessed as not supporting of the Aquatic Life Use during the 2004 cycle based on pH exceedance rates of 4/4 at USGS stations 0204243610 and 0204243650.

Additional monitoring was conducted during the 2016 cycle. Monitoring at National Park Service station 2-BDY-RICH-04-NPS, which is co-located with the previous USGS station 0204243650, had a pH violation rate of 33/51. DEQ station 2-BDY000.58 had an exceedance rate of 12/12.

During the 2020 cycle, the exceedance rate at 2-BDY-RICH-04-NPS was 28/42.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_BDY01A04 / Bloody Run / Headwaters to mouth at Gaines Millpond.	5C	pH	2004	L	1.16

Bloody Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.16

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

James River Basin

Cause Group Code: G06R-12-BAC Beaverdam Creek

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

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: Beaverdam Creek was initially assessed as not supporting the Recreation Use in the 2006 cycle based on E. coli exceedances at the Route 156 bridge (2-BEV002.00). During the 2012 cycle, the exceedance rate was 3/14.

The impairment was addressed in the Chickahominy River and Tributaries Bacterial TMDL report, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013.

Monitoring by citizen monitoring groups in the 2018 cycle confirmed the impairments (3/13 at 2-BEV-BDC1-HCSWCD, and 4/13 at 2-BEV-BDC2-HCSWCD).

New bacteria criteria have been implemented. No additional sampling has been conducted by the DEQ; however, level II citizen monitoring indicates probable impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_BEV01A00 / Beaverdam Creek / Beaverdam Creek from XBT to its mouth at the Chickahominy River.	4A	Escherichia coli (E. coli)	2006	L	4.97
VAP-G06R_BEV01B16 / Beaverdam Creek / Beaverdam Creek from its headwaters to the confluence with tributary XBT.	4A	Escherichia coli (E. coli)	2006	L	2.68

Beaverdam Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.65

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

James River Basin

Cause Group Code: G06R-13-BAC Boatswain Creek

Cause Location: Boatswain Creek from its headwaters to its mouth at the Chickahominy River.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: Boatswain Creek was initially assessed as not supporting of the Recreation Use during the 2006 cycle based on E. coli exceedances at 2-BTS002.62, located at the Watt House driveway.

The exceedance rate was 3/12 during the 2012 cycle.

The impairment was addressed in the Chickahominy River and Tributaries Bacterial TMDL report, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013.

New bacteria criteria have been implemented. No additional data has been collected, so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_BTS01A02 / Boatswain Creek / Boatswain Creek from its headwaters to its mouth at the Chickahominy River.	4A	Escherichia coli (E. coli)	2006	L	3.76

Boatswain Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.76

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

James River Basin

Cause Group Code: G06R-14-BAC Chickahominy River

Cause Location: Segment begins at the Route 360 bridge over the Chickahominy River, and extends downstream to the Route 156 bridge.

Cause City/County: Hanover County; Henrico County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, the segment was considered not supporting of the Recreation Use due to E. coli exceedances at 2-CHK062.57, which is located at the Route 360 bridge.

The impairment was addressed in the Chickahominy River and Tributaries Bacterial TMDL, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013.

The exceedance rates were 9/36 at 2-CHK062.57 and 5/12 at 2-CHK055.04 during the 2020 cycle.

New bacteria criteria were implemented in the 2022 cycle. The segment remained impaired due to two or more exceedances within a 90 day period at DEQ stations 2-CHK055.04 and 2-CHK062.57 and citizen monitoring station 2-CHK-C05-JRA as well as geometric mean exceedances at 2-CHK-C05-JRA.

In the 2024 cycle, there is insufficient information to assess the DEQ stations, however citizen monitoring station 2-CHK-C05-JRA remains impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_CHK01A98 / Chickahominy River / The Chickahominy River from the Route 360 bridge downstream to the Route 156 bridge.	4A	Escherichia coli (E. coli)	2008	L	7.46

Chickahominy River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.46

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G06R-15-BAC Chickahominy River

Cause Location: The Chickahominy River from the Route 156 bridge downstream to the confluence with Toe Ink Swamp at river mile 43.07.

Cause City/County: Charles City County; Hanover County; Henrico County; New Kent County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the Chickahominy River from the Route 156 bridge downstream to the confluence with Toe Ink Swamp at river mile 43.07 was impaired of the Recreation Use due to an E.coli exceedance rate of 3/11 at 2-CHK049.59, which is located at the Route 60 bridge.

The segment is within the study area for the Chickahominy River and Tributaries Bacterial TMDL, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013. The impairment is considered nested (Category 4A.)

New bacteria criteria have been adopted. No additional sampling has been conducted so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G06R_CHK02A14 / Chickahominy River / The Chickahominy River from the Route 156 bridge downstream to the confluence with Toe Ink Swamp at river mile 43.07.	4A	Escherichia coli (E. coli)	2016	L	11.78

Chickahominy River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.78

Sources: Agriculture; 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)

James River Basin

Cause Group Code: G07L-01-DO Chickahominy Lake

Cause Location: Chickahominy Lake in its entirety.

Cause City/County: Charles City County; New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle the segment became impaired for aquatic life with a DO pooled violation rate of 29/166 at stations 2-CHK025.15, 2-CHK026.94, 2-CHK029.54.

During the 2020 cycle the Lake remained impaired for DO with exceedances at stations 2-CHK025.15 (9/69) and 2-CHK026.94 (7/58). During the 2024 cycle the lake remained impaired for DO with exceedances at stations 2-CHK025.15 (10/90) and 2-CHK026.94 (9/86).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07L_CHK01A00 / Chickahominy Lake / Chickahominy Lake from Walkers Dam to the extent of backwater	5A	Dissolved Oxygen	2002	L	1050.47

Chickahominy Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		1050.47	

Sources: Natural Sources

James River Basin

Cause Group Code: G07L-01-HGFT Chickahominy Lake

Cause Location: Chickahominy Lake in its entirety.

Cause City/County: Charles City County; New Kent County

Use(s): Fish Consumption

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

Cause Description: The VDH issued a Fish Consumption Advisory for Chickahominy Lake on 7/20/2006. No more than 2 meals per month of Largemouth Bass, Chain Pickerel, and Bowfin are recommended due to mercury in fish tissue.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07L_CHK01A00 / Chickahominy Lake / Chickahominy Lake from Walkers Dam to the extent of backwater	5A	Mercury in Fish Tissue	2008	L	1050.47

Chickahominy Lake

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		1050.47	

Sources: Atmospheric Deposition - Toxics; Source Unknown

James River Basin

Cause Group Code: G07R-01-BAC Collins Run

Cause Location: Collins Run from the headwaters downstream to rivermile 0.99

Cause City/County: Charles City County

Use(s): Recreation

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

Cause Description: Collins Run from its headwaters downstream to rivermile 0.99 was assessed as not supporting of the Recreation Use in 2002 because of fecal coliform exceedances at two confined animal feeding operation special study locations, 2-CNR001.16 and 2-CNR001.54 (Route 614 bridge).

The impairment converted to E. coli in the 2010 cycle.

During the 2012 cycle, the exceedance rates were as follows: 1/12 at 2-CNR001.54 (fully supporting) 2/12 at 2-CNR001.58 4/12 at 2-CNR002.69

Collins Run was addressed in the Chickahominy River and Tributaries Bacterial TMDL report, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013; therefore, it is considered Category 4A.

Monitoring in the 2020 cycle at 2-CNR001.54 showed impairment (7/12). New bacteria criteria were implemented in the 2022 cycle. A review of the previous cycle's data at 2-CNR001.54 indicates that the monitoring would have been insufficient for assessment; however, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_CNR01A00 / Collins Run / Collins Run from the headwaters downstream to rivermile 0.99	4A	Escherichia coli (E. coli)	2010	L	4.5

Collins Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.5

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

James River Basin

Cause Group Code: G07R-01-DO Collins Run

Cause Location: Collins Run from the headwaters downstream to rivermile 0.99

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: Collins Run from its headwaters downstream to rivermile 0.99 was assessed as not supporting of the Aquatic Life Use in the 2010 cycle because of a dissolved oxygen violation rate of 4/6 at 2-CNR002.69, which is located at the Route 155 bridge.

The exceedance rate was 4/12 during the 2012 cycle. Downstream stations 2-CNR001.54 and 2-CNR001.58 were acceptable (0/12.)

Additional monitoring was conducted during the 2016 cycle at 2-CNR002.69. The segment remained impaired for dissolved oxygen (2/18).

Station 2-CNR001.54 remained acceptable in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_CNR01A00 / Collins Run / Collins Run from the headwaters downstream to rivermile 0.99	5C	Dissolved Oxygen	2010	L	4.5

Collins Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.5

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

James River Basin

Cause Group Code: G07R-01-PH Collins Run

Cause Location: Collins Run from the headwaters downstream to rivermile 0.99

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: Collins Run from its headwaters downstream to rivermile 0.99 was assessed as not supporting of the Aquatic Life Use in the 2012 cycle because of pH violation rates of 3/12 at 2-CNR002.69 (Route 155) and 2/12 at 2-CNR001.58.

Additional monitoring was conducted during the 2016 cycle at 2-CNR002.69. The segment remained impaired for pH (4/18).

Station 2-CNR001.54 is acceptable.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_CNR01A00 / Collins Run / Collins Run from the headwaters downstream to rivermile 0.99	5C	pH	2012	L	4.5

Collins Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.5

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

James River Basin

Cause Group Code: G07R-02-DO Rumley Marsh

Cause Location: Rumley Marsh from XWS to Old Forge Pond. Below Old Forge Pond, the stream name is Jones Run.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: Special studies conducted in Rumley Marsh and Jones Run in 1994 identified summertime DO exceedances in Rumley Marsh at station 2-RUM002.46.

Rumley Marsh downstream to Old Forge Pond was threatened in 1998 and downgraded in 2002. During the 2008 cycle, additional monitoring was conducted at 2-RUM004.38, which is located at the Route 617 bridge. The monitoring confirmed the impairment. In addition, station 2-RUM002.46 had a violation rate of 5/6 and station 2-RUM005.54 was 1/6 (IN).

During the 2014 cycle, the dissolved oxygen exceedance rates were as follows:

18/30 at 2-RUM002.46

11/27 at 2-RUM004.38 (2012)

3/12 at 2-RUM005.54

The Natural Conditions Assessment for Low pH and Low Dissolved Oxygen in Rumley Marsh, Pelham Swamp, and Tributaries was completed in January 2012. The report recommended that Rumley Marsh from its headwaters to its confluence with tributary XWS be reclassified as Class VII swampwater; until the WQS could be revised the upper portion was assessed as Category 4C. However, it indicates that the nutrients in lower Rumley Marsh are too high. It is believed that the Chesapeake Bay TMDL will reduce nutrients in nonpoint source runoff.

The upper watershed was reclassified as Class VII swampwaters during the 2018 cycle. 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 dissolved oxygen impairment was removed (partial delist) in the upper portion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_RUM01B14 / Rumley Marsh / Rumley Marsh from XWS downstream to Old Forge Pond.	5A	Dissolved Oxygen	2002	L	1.32

Rumley Marsh

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.32

Sources: Non-Point Source

James River Basin

Cause Group Code: G07R-02-PH Rumley Marsh

Cause Location: Rumley Marsh from XWS to Old Forge Pond. Below Old Forge Pond, the stream name is Jones Run.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, the segment was assessed as not supporting of the Aquatic Life Use due to pH violations at 2-RUM002.46 and 2-RUM005.54. During the 2014 cycle, the pH exceedance rates were as follows:

6/30 at 2-RUM002.46

4/28 at 2-RUM004.38 (2012)

9/12 at 2-RUM005.54

The Natural Conditions Assessment for Low pH and Low Dissolved Oxygen in Rumley Marsh, Pelham Swamp, and Tributaries was completed in January 2012. The report recommends that Rumley Marsh from its headwaters to its confluence with tributary XWS be reclassified as Class VII swampwater; until the WQS could be revised the upper portion was assessed as Category 4C. However, it indicates that the nutrients in lower Rumley Marsh are too high for the current swampwater protocol. It is believed that the Chesapeake Bay TMDL will reduce nutrients in nonpoint source runoff.

The upper Rumley Marsh watershed was reclassified as Class VII swampwaters during the 2018 cycle. Although no additional pH data has been collected, a review of the previous pH data indicates that the upper watershed meets the newly designated Class VII watershed pH criteria of 3.7-8.0 SU. The Class VII portion of the pH impairment was partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_RUM01B14 / Rumley Marsh / Rumley Marsh from XWS downstream to Old Forge Pond.	5A	pH	2010	L	1.32

Rumley Marsh

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.32

Sources: Non-Point Source

James River Basin

Cause Group Code: G07R-04-BAC Schiminoe Creek

Cause Location: Schiminoe Creek from its headwaters to its mouth at the Chickahominy River.

Cause City/County: New Kent County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Schiminoe Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/12 at 2-SMN001.42, which is located at Route 60.

Schiminoe Creek is located within the study watershed for the Chickahominy River and Tributaries Bacterial TMDL, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013. The E. coli impairment is considered nested (Category 4A).

New bacteria criteria have been adopted. No additional data has been collected, so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_SMN01A00 / Schiminoe Creek / Schiminoe Creek from its headwaters to the mouth at the Chickahominy River.	4A	Escherichia coli (E. coli)	2012	L	6.23

Schiminoe Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.23

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

James River Basin

Cause Group Code: G07R-04-DO Schiminoe Creek

Cause Location: Schiminoe Creek from its headwaters to its mouth at the Chickahominy River.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Schiminoe Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/12 at 2-SMN001.42, which is located at Route 60.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_SMN01A00 / Schiminoe Creek / Schiminoe Creek from its headwaters to the mouth at the Chickahominy River.	5C	Dissolved Oxygen	2012	L	6.23

Schiminoe Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.23

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

James River Basin

Cause Group Code: G07R-04-PH Schiminoe Creek

Cause Location: Schiminoe Creek from its headwaters to its mouth at the Chickahominy River.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Schiminoe Creek was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 4/12 at 2-SMN001.42, which is located at Route 60.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_SMN01A00 / Schiminoe Creek / Schiminoe Creek from its headwaters to the mouth at the Chickahominy River.	5C	pH	2012	L	6.23

Schiminoe Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			6.23

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

James River Basin

Cause Group Code: G07R-06-DO XWS - Rumley Marsh, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Rumley Marsh.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XWS was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/18 at 2-XWS000.85, which is located at the Route 155 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_XWS01A10 / XWS - Rumley Marsh, UT / Headwaters to mouth at Rumley Marsh	5A	Dissolved Oxygen	2012	L	2.17

XWS - Rumley Marsh, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.17

Sources: Non-Point Source

James River Basin

Cause Group Code: G07R-06-PH XWS - Rumley Marsh, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Rumley Marsh.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XWS was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 4/18 at 2-XWS000.85, which is located at the Route 155 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_XWS01A10 / XWS - Rumley Marsh, UT / Headwaters to mouth at Rumley Marsh	5A	pH	2012	L	2.17

XWS - Rumley Marsh, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			2.17

Sources: Non-Point Source

James River Basin

Cause Group Code: G07R-07-PH XAB - Collins Run, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Collins Run.

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XAB was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 2-XAB000.15, which is located off of Route 155.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_XAB01A10 / XAB - Collins Run, UT / Headwaters to mouth at Collins Run	5C	pH	2012	L	1.72

XAB - Collins Run, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.72

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

James River Basin

Cause Group Code: G07R-08-BAC Chickahominy River

Cause Location: The Chickahominy River from the confluence with Possum Run downstream to the limit of backwater for Lake Chickahominy.

Cause City/County: Charles City County; New Kent County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the Chickahominy River from Possum Run to Chickahominy Lake was impaired of the Recreation Use due to E.coli exceedances at 2-CHK035.26, which is located at Route 618.

The segment is within the study area for the Chickahominy River and Tributaries Bacterial TMDL, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013. The impairment is considered nested (Category 4A.)

The exceedance rate was 12/74 in the 2020 cycle.

New bacteria criteria were implemented in the 2022 cycle. The segment remained impaired due to two or more hits in the same 90-day period with <10 samples.

E. coli data at 2-CHK035.26 was insufficient for assessment in the 2024 cycle (one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean); however, the impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_CHK01A00 / Chickahominy River / The Chickahominy River from the confluence with Possum Run at rivermile 41.66 downstream to the upstream limit of Chickahominy Lake.	4A	Escherichia coli (E. coli)	2016	L	11.03

Chickahominy River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.03

Sources: Agriculture; 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); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G07R-09-BAC XTH - Chickahominy River, UT

Cause Location: The unnamed tributary XTH in its entirety.

Cause City/County: New Kent County

Use(s): Recreation

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

Cause Description: During the 2018 cycle, XTH (UT to the Chickahominy River) was impaired of the Recreation Use due to an E. coli exceedance rate of 7/11 at 2CXTH000.86.

The stream is located within the study area for the Chickahominy River and Tributaries Bacterial TMDL, which was approved by the EPA on 9/19/2012 and by the SWCB on 3/25/2013. The impairment is considered nested (Category 4A.)

New bacteria criteria were implemented in the 2022 cycle. A review of the data indicates that the station would remain impaired under the new criteria due to two or more STV exceedances in a 90-day period with <10 samples.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G07R_XTH01A02 / XTH - Chickahominy River, UT / An unnamed tributary of Chickahominy River in its entirety.	4A	Escherichia coli (E. coli)	2018	L	2.26

XTH - Chickahominy River, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.26

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

James River Basin

Cause Group Code: G08E-01-BAC Morris Creek

Cause Location: Morris Creek from its tidal limit at river mile 6.67 to its mouth.

Cause City/County: Charles City County

Use(s): Recreation

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

Cause Description: Nontidal Morris Creek was previously assessed as not supporting of the Recreation use support goal based on fecal coliform exceedances recorded at 2-MOC005.97. The segment was listed as threatened in 1998, and then downgraded to impaired during the 2002 cycle. However, EPA mistakenly included it as impaired on the 1998 Consent Decree.

During the 2008 cycle, additional E. coli monitoring was conducted at stations 2-MOC005.97 and 2-MOC010.97. Although the upstream E. coli exceedance rate was acceptable (1/12), the segment remained impaired due to an exceedance rate of 4/17 at 2-MOC005.97. The impairment converted to E. coli.

However, in the 2010 cycle, it was determined that the tidal limit had been incorrectly determined and that the listing station 2-MOC005.97 was tidally influenced. That station was reassessed against the enterococci standard and remained impaired. The segment extent was corrected.

The TMDL for the tidal enterococci impairment was approved by the EPA on 12/3/2009 and by the SWCB on 9/30/2010.

New bacteria criteria have been implemented. No additional data have been collected so the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_MOC01A02 / Morris Creek / The tidal portion of Morris Creek. CHKOH	4A	Enterococcus	2010	L	0.394

Morris Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.394		

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

James River Basin

Cause Group Code: G08E-01-PH Morris Creek

Cause Location: Morris Creek from its tidal limit at river mile 6.67 to its mouth.

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: Morris Creek was assessed as not supporting of the Aquatic Life use support (ALUS) goal based on water quality monitoring performed at the Route 623 bridge (2-MOC005.97).

During the 2008 cycle, additional monitoring was conducted. The impairment was confirmed with the following violation rates:

3/24 at 2-MOC005.97

pH 3/10 at 2-MOC010.97

However, based on analysis of station 2-MOC005.97 a Natural Conditions Assessment recommends that Morris Creek and its tributaries from the head of tide at river mile 5.97 upstream to its headwaters be reclassified as Class VII swampwaters.

The nontidal watershed above rivermile 5.97 was reclassified during the 2010 cycle and the segment was reassessed against the Class VII pH standard. However, it was determined that the tidal limit is actually located at rivermile 6.67; therefore, the original listing station, 2-MOC005.97, is located in the tidal Morris Creek segment. The violation rate was 7/33 in the 2010 cycle. Since the Natural Condition Report confirmed that the impairment at the station was a natural condition, the tidal portion of Morris Creek is considered Category 4C.

Monitoring at station 2CMOC001.95 was acceptable; therefore, further monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_MOC01A02 / Morris Creek / The tidal portion of Morris Creek. CHKOH	4C	pH	NA	NA	0.394

Morris Creek

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:	0.394		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Natural Sources; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G08E-02-EBEN Chickahominy River

Cause Location: Approximately 0.5 mile upstream and downstream of station 2CCHK002.40

Cause City/County: Charles City County; James City County

Use(s): Aquatic Life

Causes(s)/VA Category: Sediment Bioassay/5A

Cause Description: Station 2CCHK002.40 is a Coastal 2000 probabilistic monitoring station. During the 2018 cycle, a 2016 Weight of Evidence assessment performed by DEQ's Central Office indicated benthic alteration which was probably caused by the acute and chronic effects of sediment metals (scenario 1, category 5A).

The impairment parameter was corrected from estuarine bioassessments to sediment bioassays in the 2024 cycle. The fact sheet name was not changed for tracking purposes.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_CHK02B18 / Chickahominy River / Approximately 0.5 mile upstream and downstream of station 2CCHK002.40 CHKOH	5A	Sediment Bioassay	2018	L	0.452

Chickahominy River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Sediment Bioassay - Total Impaired Size by Water Type:	0.452		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G08E-03-BAC Diascund Creek

Cause Location: The tidal Diascund Creek.

Cause City/County: James City County; New Kent County

Use(s): Recreation

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

Cause Description: Diascund Creek from the dam to its mouth was assessed as not supporting of the Recreation Use during the 2010 cycle due to an enterococci exceedance rate of 4/23 at 2-DSC003.19.

Additional monitoring in the 2016 cycle confirmed the impairment (2/11 at 2-DSC003.19 and 5/12 at 2-DSC005.38.)

The impairment was addressed in the Lower Chickahominy River Bacterial TMDL, which was approved by the EPA on 8/11/2017 and the SWCB on 7/19/2017. It is therefore considered a Category 4A water.

New bacteria criteria have been implemented. There has been no additional monitoring so the impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_DSC01A00 / Diascund Creek / Diascund Creek from the Diascund Reservoir dam downstream to the mouth at the Chickahominy River. CHKOH	4A	Enterococcus	2010	L	0.271

Diascund Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.271		

Sources: Municipal Point Source Discharges; Non-Point Source

James River Basin

Cause Group Code: G08E-07-EBEN XAC - Chickahominy River, UT

Cause Location: The tidal portion of tributary XAC.

Cause City/County: James City County

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Station 2CXAC000.20 is a Coastal 2000 probabilistic monitoring station. During the 2010 cycle, Weight of Evidence assessment performed by DEQ's Central Office indicated benthic alteration which was probably caused by the acute and chronic effects of sediment PAHs and possibly metals (scenario 1, category 5A).

It was resampled in 2018 and was considered Category 3B (insufficient info for assessment), so the segment will remain listed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_XAC01A10 / XAC - Chickahominy River, UT / XAC in its entirety CHKOH	5A	Estuarine Bioassessments	2010	L	0.017

XAC - Chickahominy River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.017		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G08E-08-PCBFT XAC - Chickahominy River, UT

Cause Location: Tributary XAC in its entirety

Cause City/County: James City County

Use(s): Fish Consumption

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

Cause Description: During the 2024 cycle, PCBs exceeded fish tissue values in American eel and blue catfish during 2021 monitoring at 2CXAC000.20.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_XAC01A10 / XAC - Chickahominy River, UT / XAC in its entirety CHKOH	5A	PCBs in Fish Tissue	2024	L	0.017

XAC - Chickahominy River, UT

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	0.017		

Sources: Source Unknown

James River Basin

Cause Group Code: G08E-09-PCBFT Gordon Creek

Cause Location: Tidal limit to mouth

Cause City/County: James City County

Use(s): Fish Consumption

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

Cause Description: During the 2024 cycle, tidal Gordon Creek was impaired of the Fish Consumption Use due to PCB fish tissue value exceedances in American eel, carp, and blue catfish during 2021 monitoring at station 2-GOR002.58.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_GOR01A06 / Gordon Creek / Tidal limit to mouth CHKOH	5A	PCBs in Fish Tissue	2024	L	0.33

Gordon Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	0.33		

Sources: Source Unknown

James River Basin

Cause Group Code: G08E-10-PCBFT Morris Creek

Cause Location: Tidal Morris Creek

Cause City/County: Charles City County

Use(s): Fish Consumption

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

Cause Description: During the 2024 cycle, tidal Morris Creek was impaired of the Fish Consumption Use due to PCB fish tissue value exceedances in carp and channel catfish during 2021 monitoring at station 2-MOC002.50.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_MOC01A02 / Morris Creek / The tidal portion of Morris Creek. CHKOH	5A	PCBs in Fish Tissue	2024	L	0.394

Morris Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	0.394		

Sources: Source Unknown

James River Basin

Cause Group Code: G08E-11-BAC Chickahominy River

Cause Location: The tidal Chickahominy River from Diascund Creek to its mouth at the James River.

Cause City/County: Charles City County; James City County

Use(s): Recreation

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

Cause Description: During the 2024 cycle, the tidal Chickahominy River below Diascund Creek was impaired of the Recreation Use due to enterococci exceedances. Station 2-CHK006.14 was impaired due to 2 or more STV hits in the same 90-day period with < 10 samples.

Additional monitoring at station 2-CHK002.17 was inconsistent. DEQ sampling at that location was acceptable (no geomean exceedances and only 1 STV exceedance in one or multiple 90-day periods represented by < 10 samples). However, citizen monitoring at co-located station 2CCHK-C01-JRA was impaired due to geomean exceedances.

The segment was addressed in the Lower Chickahominy River Bacterial TMDL, which was approved by the EPA on 8/11/2017 and the SWCB on 7/19/2017. It is therefore considered a Category 4A water.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08E_CHK02A00 / Chickahominy River / The Chickahominy River from the confluence with Diascund Creek downstream to the James River, excluding 0.5 mile upstream and downstream of station 2CCHK002.40. CHKOH	4A	Enterococcus	2024	L	5.468
VAP-G08E_CHK02B18 / Chickahominy River / Approximately 0.5 mile upstream and downstream of station 2CCHK002.40 CHKOH	4A	Enterococcus	2024	L	0.452

Chickahominy River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	5.92		

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

James River Basin

Cause Group Code: G08R-02-BAC Mill Creek

Cause Location: Mill Creek from its headwaters downstream to its tidal limit

Cause City/County: James City County

Use(s): Recreation

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

Cause Description: Mill Creek was initially assessed as not supporting of the Recreation Use support goal in 2004 based on a fecal coliform violation rate of 3/13 recorded at 2-MCR002.38.

Additional monitoring was conducted during the 2012 cycle. The impairment converted to E. coli due to an exceedance rate of 2/12.

The impairment was addressed in the Lower Chickahominy River Bacterial TMDL, which was approved by the EPA on 8/11/2017 and the SWCB on 7/19/2017. It is therefore considered a Category 4A water.

The exceedance rate was 4/12 during the 2016 cycle.

New bacteria criteria were implemented in the 2022 cycle. The station was re-sampled once in 2019; however, that data was insufficient for assessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08R_MCR01A04 / Mill Creek / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2012	L	4.82

Mill Creek

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

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

James River Basin

Cause Group Code: G08R-04-BAC Yarmouth Creek

Cause Location: The nontidal portion of Yarmouth Creek.

Cause City/County: James City County

Use(s): Recreation

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

Cause Description: During the 2020 cycle, Yarmouth Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 5/24 at 2-YRM004.96, which is located at Rt. 632.

The creek is located within the study area for the Lower Chickahominy River Bacteria TMDL, which was approved by the SWCB on 7/19/2017 and by the EPA on 8/11/2017. The impairment is considered nested (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. No new data were collected but a review of the older data confirms the impairment due to two or more STV exceedances 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
VAP-G08R_YRM01A12 / Yarmouth Creek / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2020	L	4.09

Yarmouth Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.09

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

James River Basin

Cause Group Code: G08R-04-DO Yarmouth Creek

Cause Location: The nontidal portion of Yarmouth Creek.

Cause City/County: James City County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Yarmouth Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/12 at 2-YRM004.96, which is located at Rt. 632.

The exceedance rate was 8/24 during the 2024 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08R_YRM01A12 / Yarmouth Creek / Headwaters to tidal limit	5C	Dissolved Oxygen	2012	L	4.09

Yarmouth Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.09

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

James River Basin

Cause Group Code: G08R-05-BAC Barrows Creek

Cause Location: The nontidal portion of Barrows Creek.

Cause City/County: Charles City County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Barrows Creek was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 6/12 at 2-BRW002.50, which is located at Route 615.

The impairment was addressed in the Lower Chickahominy River Bacterial TMDL, which was approved by the EPA on 8/11/2017 and the SWCB on 7/19/2017. It is therefore considered a Category 4A water.

New bacteria criteria have been adopted; no additional data has been collected so the impairment is being carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08R_BRW01A14 / Barrows Creek / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2014	L	6.93

Barrows Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.93

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

James River Basin

Cause Group Code: G08R-05-DO Barrows Creek

Cause Location: The nontidal portion of Barrows Creek.

Cause City/County: Charles City County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, Barrows Creek was assessed as impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 5/12 at 2-BRW002.50, which is located at Route 615.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G08R_BRW01A14 / Barrows Creek / Headwaters to tidal limit	5A	Dissolved Oxygen	2014	L	6.93

Barrows Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.93

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

James River Basin

Cause Group Code: G09L-01-HGFT Diascund Creek Reservoir

Cause Location: Diascund Creek Reservoir entirety

Cause City/County: James City County; New Kent County

Use(s): Fish Consumption

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

Cause Description: The 2010 cycle the segment was impaired for fish consumption use due to Mercury in fish tissue of Bass and Bowfin. The 2012 cycle the segment was impaired for fish consumption use due to Mercury in fish tissue of Bass and Bowfin.

No new data for the 2014, 2016 and 2018 cycle.

During the 2020 cycle only Fish Tissue data was collected in 2018 with Hg in 2sp (Bowfin, Largemouth Bass). During the 2024 cycle 2021 fish tissue collection confirmed Hg in 1 species (Largemouth bass)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09L_DSC01A00 / Diascund Creek Reservoir / Diascund Creek Reservoir	5A	Mercury in Fish Tissue	2010	L	1056.13

Diascund Creek Reservoir

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		1056.13	

Sources: Atmospheric Deposition - Toxics; Source Unknown

James River Basin

Cause Group Code: G09R-01-BAC Beaverdam Creek

Cause Location: Beaverdam Creek, a tributary to Diascund Reservoir.

Cause City/County: New Kent County

Use(s): Recreation

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

Cause Description: In the 2012 cycle, Beaverdam Creek was impaired of the Recreation Use due to the following exceedance rates:

3/9 at 2-BDM003.16 4/20 at 2-BDM004.12 3/9 at 2-BDM004.60 5/9 at 2-BDM005.70

The impairment was addressed in the Lower Chickahominy River Bacterial TMDL, which was approved by the EPA on 8/11/2017 and the SWCB on 7/19/2017. It is therefore considered a Category 4A water.

New bacteria criteria have been adopted. Station 2-BDM04.12 was sampled once in the 2022 cycle under the new bacteria criteria; the data was insufficient for assessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_BDM01A98 / Beaverdam Creek / Beaverdam Creek from its headwaters to the upstream limit of Diascund Reservoir.	4A	Escherichia coli (E. coli)	2012	L	4.34

Beaverdam Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.34

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

James River Basin

Cause Group Code: G09R-01-DO Beaverdam Creek

Cause Location: Beaverdam Creek, a tributary to Diascund Reservoir.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: Beaverdam Creek has been assessed as not supporting of the Aquatic Life use because of dissolved oxygen standard exceedances at the Route 632 bridge (2-BDM004.12). The segment was initially considered fully supporting but threatened in the 1998 cycle, but was downgraded to impaired in the 2002 cycle with a TMDL due date of 2014.

A Natural Conditions Assessment was completed for the Beaverdam Creek watershed on January 2012. The report indicates that the stream is not appropriate for Class VII designation because of excess nutrients. It is believed that the Chesapeake Bay TMDL will reduce nutrients in the watershed.

Additional monitoring has been conducted throughout the creek. The exceedance rates in the 2016 cycle were as follows: 2/11 at 2-BDM003.16 13/37 at 2-BDM004.12 (2014 cycle) 14/23 at 2-BDM004.60 0/23 at 2-BDM005.70 (fully supporting)

Although the upstream station was fully supporting and is upstream of a swampy area, dark water was seen at this station, so it will remain incorporated with the downstream stations.

In the 2020 cycle, the exceedance rate was 7/12 at 2-BDM004.60.

Additional monitoring was conducted in the 2022 cycle. Dissolved oxygen exceedances rates were 4/10 at 2-BDM004.12 and 0/1 at 2-BDM004.65.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_BDM01A98 / Beaverdam Creek / Beaverdam Creek from its headwaters to the upstream limit of Diascund Reservoir.	5A	Dissolved Oxygen	2002	L	4.34

Beaverdam Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.34

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

James River Basin

Cause Group Code: G09R-01-PH Beaverdam Creek

Cause Location: Beaverdam Creek, a tributary to Diascund Reservoir.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Beaverdam Creek was assessed as not supporting of the Aquatic Life use because of pH exceedances.

The exceedance rates in the 2016 cycle were as follows: 2/11 at 2-BDM003.16 2/37 at 2-BDM004.12 (2014 cycle - fully supporting) 5/23 at 2-BDM004.60 2/23 at 2-BDM005.70 (fully supporting)

Although the upstream station was fully supporting and is upstream of a swampy area, dark water was seen at this station, so it will remain incorporated with the downstream stations.

In the 2020 cycle, the exceedance rate was 2/12 at 2-BDM004.60.

Additional monitoring was conducted during the 2022 cycle. pH exceedance rates were 0/10 at 2-BDM004.12 and 0/1 at 2-BDM004.65. Although this is acceptable, the stream will remain impaired due to the previous exceedance rates at other stations within the segment. Continued monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_BDM01A98 / Beaverdam Creek / Beaverdam Creek from its headwaters to the upstream limit of Diascund Reservoir.	5A	pH	2012	L	4.34

Beaverdam Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.34

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

James River Basin

Cause Group Code: G09R-02-DO Diascund Creek

Cause Location: Diascund Creek from its headwaters to the Diascund Reservoir.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, Diascund Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen violation rate of 4/25 at the Route 628 bridge (2-DSC012.68).

During the 2014 cycle, the exceedance rates were as follows:

5/11 at 2-DSC011.33

1/24 at 2-DSC012.67 (fully supporting)

5/11 at 2-DSC014.53

4/11 at 2-DSC015.32

Additional monitoring was conducted at 2-DSC012.67 during the 2016 cycle. The exceedance rate was acceptable (1/35). The segment will remain impaired due to the previous exceedances at the remaining stations in the stream; however, continued monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_DSC01A00 / Diascund Creek / Diascund Creek from its headwaters to the upstream limit of Diascund Creek Reservoir.	5C	Dissolved Oxygen	2008	L	6.89

Diascund Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.89

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

James River Basin

Cause Group Code: G09R-02-PH Diascund Creek

Cause Location: Diascund Creek from its headwaters to the Diascund Reservoir.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Diascund Creek was assessed as not supporting of the Aquatic Life Use due to pH exceedances. The exceedance rates during the 2014 cycle were as follows:

2/11 at 2-DSC011.33

1/24 at 2-DSC012.67 (fully supporting)

1/11 at 2-DSC014.53 (fully supporting)

2/11 at 2-DSC015.32

Additional monitoring was conducted at 2-DSC012.67 during the 2016 cycle. The exceedance rate was acceptable (1/35). The segment will remain impaired due to the previous exceedances at the remaining stations in the stream; however, continued monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_DSC01A00 / Diascund Creek / Diascund Creek from its headwaters to the upstream limit of Diascund Creek Reservoir.	5C	pH	2012	L	6.89

Diascund Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			6.89

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

James River Basin

Cause Group Code: G09R-03-DO XAL - Diascund Creek, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Diascund Creek

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XAL was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/11 at 2CXAL000.15.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_XAL01A12 / XAL - Diascund Creek, UT / Headwaters to mouth at Diascund Creek	5C	Dissolved Oxygen	2012	L	1.22

XAL - Diascund Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.22

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

James River Basin

Cause Group Code: G09R-03-PH XAL - Diascund Creek, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Diascund Creek

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XAL was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 2/11 at 2CXAL000.15.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_XAL01A12 / XAL - Diascund Creek, UT / Headwaters to mouth at Diascund Creek	5C	pH	2012	L	1.22

XAL - Diascund Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.22

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

James River Basin

Cause Group Code: G09R-04-DO XAK - Diascund Creek, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Diascund Creek

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XAK was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 2CXAK000.08.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_XAK01A12 / XAK - Diascund Creek, UT / Headwaters to mouth at Diascund Creek	5C	Dissolved Oxygen	2012	L	2.91

XAK - Diascund 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

James River Basin

Cause Group Code: G09R-05-DO XAJ - Diascund Creek, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Diascund Creek

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XAJ was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 2CXAJ000.69.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_XAJ01A12 / XAJ - Diascund Creek, UT / Headwaters to mouth at Diascund Creek	5C	Dissolved Oxygen	2012	L	2.93

XAJ - Diascund Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.93

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

James River Basin

Cause Group Code: G09R-06-BAC XAH - Beaverdam Creek, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Beaverdam Creek

Cause City/County: New Kent County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, XAH was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/6 at 2CXAH000.35.

The impairment was addressed in the Lower Chickahominy River Bacterial TMDL, which was approved by the EPA on 8/11/2017 and the SWCB on 7/19/2017. It is therefore considered a Category 4A water.

New bacteria criteria have been adopted. No additional data has been collected, but the impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_XAH01A12 / XAH - Beaverdam Creek, UT / Headwaters to mouth at Beaverdam Creek	4A	Escherichia coli (E. coli)	2012	L	2.23

XAH - Beaverdam Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.23

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

James River Basin

Cause Group Code: G09R-06-DO XAH - Beaverdam Creek, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Beaverdam Creek

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XAH was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances at 2CXAH000.35. The exceedance rate was 4/9 during the 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_XAH01A12 / XAH - Beaverdam Creek, UT / Headwaters to mouth at Beaverdam Creek	5A	Dissolved Oxygen	2012	L	2.23

XAH - Beaverdam Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.23

Sources: Non-Point Source

James River Basin

Cause Group Code: G09R-07-DO Wahrani Swamp

Cause Location: Wahrani Swamp from its headwaters to the upstream limit of Diascund Creek Reservoir.

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, Wahrani Swamp was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/12 at 2-WAS002.69, which is located at Route 632.

The exceedance rate was 10/20 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_WAS01A00 / Wahrani Swamp / Wahrani Swamp from its headwaters to the upstream limit of Diascund Creek Reservoir.	5C	Dissolved Oxygen	2014	L	3.66

Wahrani Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.66

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

James River Basin

Cause Group Code: G09R-08-DO XBY - Beaverdam Creek, UT

Cause Location: Unnamed tributary from its headwaters to its mouth at Beaverdam Creek

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, tributary XBY was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/12 at 2CXBY000.19.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G09R_XBY01A16 / XBY - Beaverdam Creek, UT / Headwaters to mouth at Beaverdam Creek.	5A	Dissolved Oxygen	2016	L	1.08

XBY - Beaverdam Creek, UT

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

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

James River Basin

Cause Group Code: G10E-01-BAC Powhatan Creek/Sandy Bay

Cause Location: This cause encompasses Powhatan Creek/Sandy Bay, from end of tidal waters downstream to the mouth of Sandy Bay. Located North of Jamestown Island area, tributary to the Thorofare embayment. CBP segment JMSOH.

Cause City/County: James City County

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on Enterococcus bacteria data analyzed with 2 or more STV hits in the same 90-day period with < 10 samples. Previously impaired based on single sample maximum Enterococci standard at station 2-POW000.60 with 18 exc / 33 obs. Bacteria impairment covered under TMDL (36211) for Powhatan Creek/Sandy Bay, EPA approved 4/28/20.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10E_POW01A02 / Powhatan Creek/Sandy Bay / West of Jamestown Island, north shore tributary to the James R. From end of tidal waters downstream to the mouth of Sandy Bay. CBP segment JMSOH. DSS (ADMIN - Prohibited Nonproductive) shellfish condemn # 059-069 A (effective 20141219).	4A	Enterococcus	1998	L	0.204

Powhatan Creek/Sandy Bay

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.204		

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

James River Basin

Cause Group Code: G10E-03-BAC Mill Creek

Cause Location: This cause encompasses Mill Creek, from the end of tidal waters downstream to the mouth. Located North of Jamestown Island area, tributary to the Thorofare embayment. CBP segment JMSOH.

Cause City/County: James City County

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on Enterococcus bacteria data from stations 2-MIC000.03 with 2 or more STV hits in the same 90-day period with < 10 samples per 90-day period. Previously impaired with single sample maximum standard. Bacteria impairment covered under TMDL (36211) for Powhatan Creek/Sandy Bay, EPA approved 4/28/2009. TMDL ID = VAT-G10E-03. Related to Entero impairment in adjacent Powhatan Cr.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10E_MIC01A00 / Mill Creek / North of Jamestown Island area, tributary to the Thorofare embayment. From end of tidal waters downstream to the mouth. CBP segment JMSOH. DSS (ADMIN - Prohibited Nonproductive) shellfish condemn # 059-069 A (effective 20141219).	4A	Enterococcus	1998	L	0.075

Mill Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.075		

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

James River Basin

Cause Group Code: G10E-05-EBEN James River (Oligohaline)

Cause Location: This cause encompasses a portion of the James River Oligohaline segment from Sandy Bay to Hog Island Creek

Cause City/County: James City County; Surry County; Williamsburg

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: The Aquatic Life Use is not supporting based on the mainstem of the JMSOH segment does not meet the estuarine benthic assessment for the Chesapeake Bay Benthic Indices of Biological Integrity (B-IBI).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10E_CLG01A06 / College Creek / North shore trib to James R. Located NE of Jamestown Isl. and west of Kingsmill area, in James City Co. From end of tidal waters downstream to mouth. CBP segment JMSOH. DSS (ADMIN Non-Prod) shellfish condemn # 059-069 A (effective 20141219).	5A	Estuarine Bioassessments	2012	L	0.578
VAT-G10E_JMS01A06 / James River Mainstem - Chickahominy R. to Hog Point / From confluence with Chickahominy R. coincident with watershed line (RM 48.40) downstream to line between Hog Pt. and mouth College Cr. N shore James R. CBP segment JMSOH. DSS (ADMIN) shellfish condemn # 059-069 A (effective 20141219).	5A	Estuarine Bioassessments	2004	L	17.843
VAT-G10E_TFR01A24 / The Thorofare / Unsegmented estuaries in G10E where Shellfish Use absent due to DSS non-productive area designation. CBP segment JMSOH. Portion of DSS (ADMIN - Prohibited Nonproductive) shellfish condemn # 059-069 A (effective 20141219).	5A	Estuarine Bioassessments	2024	L	0.813

James River (Oligohaline)

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	19.235		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G10E-06-BAC College Creek

Cause Location: This cause encompasses College Creek, from end of tidal waters downstream to mouth (confluence with James River). CB segment JMSOH, located in James City County.

Cause City/County: James City County; Williamsburg

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/5A

Cause Description: The Recreation Use is impaired based on Enterococcus bacteria data from stations 2-CLG000.23 where 2 or more STV exceedances occur in the same 90-day period with less than 10 samples. Previously this station met water quality standards for Enterococci based on the single sample maximum standard with 2 exc / 32 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10E_CLG01A06 / College Creek / North shore trib to James R. Located NE of Jamestown Isl. and west of Kingsmill area, in James City Co. From end of tidal waters downstream to mouth. CBP segment JMSOH. DSS (ADMIN Non-Prod) shellfish condemn # 059-069 A (effective 20141219).	5A	Enterococcus	2022	L	0.578

College Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.578		

Sources: Source Unknown

James River Basin

Cause Group Code: G10E-09-PCBFT Grays Creek

Cause Location: Tidal Grays Creek

Cause City/County: Surry County

Use(s): Fish Consumption

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

Cause Description: During the 2024 cycle, tidal Grays Creek was impaired of the Fish Consumption Use. Sampling in 2021 indicated PCB tissue exceedances in white perch and blue catfish.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G10E_GRB01A22 / Grays Creek / Tidal limit to mouth at James River JMSOH	5A	PCBs in Fish Tissue	2024	L	0.419

Grays Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	0.419		

Sources: Source Unknown

James River Basin

Cause Group Code: G10E-10-BAC James River Mainstem (Oligohaline)

Cause Location: The James River from the tidal freshwater/oligohaline boundary at approx. river mile 51.94 to the limit of the PRO watershed

Cause City/County: James City County; Surry County

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/5A

Cause Description: The Recreation Use is not supporting based on station data from 2JMS-CP01-JRA with a geomean exceedance in any 90 day period.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10E_JMS01A06 / James River Mainstem - Chickahominy R. to Hog Point / From confluence with Chickahominy R. coincident with watershed line (RM 48.40) downstream to line between Hog Pt. and mouth College Cr. N shore James R. CBP segment JMSOH. DSS (ADMIN) shellfish condemn # 059-069 A (effective 20141219).	5A	Enterococcus	2024	L	17.843

James River Mainstem (Oligohaline)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	17.843		

Sources: Agriculture; Source Unknown

James River Basin

Cause Group Code: G10R-01-BAC College Run

Cause Location: This cause encompasses College Run, from the convergence of the two upstream branches downstream to the confluence with the James River at Cobham Bay. Located north of Chippokes Plantation State Park, tributary to Cobham Bay (Surry County, PRO station).

Cause City/County: Surry County

Use(s): Recreation

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

Cause Description: The Recreation Use impairment is retained from previous assessments '02-'08 (2 violates / 8 obs. collected for 2006 IR at station 2-CGE001.41) due to exceedance of the criteria for Fecal Coliform bacteria. No further bacteria data has been collected. Need E.coli data to confirm previous FC impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10R_CGE01A02 / College Run / North of Chippokes Plantation State Park, tributary to Cobham Bay (Surry County, PRO station). Mainstem College Run from convergence of two upstream branches downstream to the confluence with the James River at Cobham Bay. Not including tributaries.	5A	Fecal Coliform	2002	L	2.61

College Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			2.61

Sources: Source Unknown

James River Basin

Cause Group Code: G10R-02-BEN Powhatan Creek

Cause Location: This cause encompasses Powhatan Creek, from the confluence with Long Hill Swamp and Chisel Run downstream to the beginning of tidal waters. Located west of the Five Forks area. North of Jamestown Island, north shore tributary to the James River.

Cause City/County: James City County

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use impairment is retained for the stream's benthic population as measured by DEQ's Benthic-Macroinvertebrate Bioassessments program at station 2-POW006.77. Benthic data assessment (Spring - 2000 and Fall - 2000) resulted in a moderate impairment rating for this station.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10R_POW01A00 / Powhatan Creek / West of the Five Forks area. North of Jamestown Island, north shore tributary to the James R. Powhatan Creek from the confluence with Long Hill Swamp and Chisel Run downstream to the beginning of tidal waters.	5A	Benthic Macroinvertebrates Bioassessments	2002	H	5.36

Powhatan Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.36

Sources: Source Unknown

James River Basin

Cause Group Code: G10R-03-BAC XHC - Dark Swamp, UT

Cause Location: The unnamed tributary XHC in its entirety.

Cause City/County: Surry County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, the unnamed tributary to Dark Swamp was impaired of the Recreation Use due to an E. coli exceedance rate of 4/17 at 2-XHC000.12, which is located approx. 0.6 miles downstream of the Surry WWTF.

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G10R_XHC01A08 / XHC - Dark Swamp, UT / Headwaters to mouth at Dark Swamp	5A	Escherichia coli (E. coli)	2012	L	1.3

XHC - Dark Swamp, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.3

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

James River Basin

Cause Group Code: G10R-03-DO XHC - Dark Swamp, UT

Cause Location: The unnamed tributary XHC in its entirety.

Cause City/County: Surry County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, the unnamed tributary to Dark Swamp was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances at 2-XHC000.12, which is located approx. 0.6 miles downstream of the Surry WWTF.

The exceedance rate was 5/22 during the 2012 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G10R_XHC01A08 / XHC - Dark Swamp, UT / Headwaters to mouth at Dark Swamp	5A	Dissolved Oxygen	2010	L	1.3

XHC - Dark Swamp, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.3

Sources: Agriculture; Municipal Point Source Discharges; Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Source Unknown

James River Basin

Cause Group Code: G10R-04-BAC Unnamed tributary to Mill Creek

Cause Location: This cause encompasses the Unnamed tributary to Mill Creek. Located N of Lake Powell, between Jamestown Isl. and City of Williamsburg.

Cause City/County: James City County

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on E.coli data from Station 2-XZK000.06 that has 2 or more STV hits in the same 90-day period with < 10 samples. The impairment was nested within the Mill Creek tidal recreation impairment in the 2018 IR. EPA approved 4/28/2009.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G10R_XZK01A10 / Unnamed tributary to Mill Creek / Unnamed tributary to Mill Creek. Located N of Lake Powell, between Jamestown Isl. and City of Williamsburg. Northeast branch, at confluence of Lake Powell and Mill Creek.	4A	Escherichia coli (E. coli)	2012	L	1.22

Unnamed tributary to Mill Creek

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

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

James River Basin

Cause Group Code: G10R-05-BAC Dark Swamp

Cause Location: The nontidal portion of Dark Swamp

Cause City/County: Surry County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Dark Swamp was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 4/12 at 2-DRK000.31, which is located at the Route 626 bridge.

New bacteria criteria were implemented in the 2022 cycle. Only one additional data point has been collected and is insufficient for assessment. Therefore, the impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G10R_DRK01A14 / Dark Swamp / Headwaters to tidal limit	5A	Escherichia coli (E. coli)	2014	L	3.16

Dark Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.16

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

James River Basin

Cause Group Code: G11E-01-BAC Warwick River - Middle Tidal Portion

Cause Location: This cause encompasses the Warwick River - Middle Tidal Portion, from approximately Denbigh Landing area downstream to Denbigh Park area. Located in Menchville area of Newport News. CBP segment JMSMH.

Cause City/County: Newport News

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on Enterococcus having 2 or more STV hits in the same 90-day period with less than 10 samples. Previous impairment based on data exceeding the single sample max criteria (9 viol/ 32 obs) measured at DEQ (AQM) monitoring station @ 2-WWK003.98.
Considered NESTED under TMDL (35574) "Warwick River" EPA approved 2/29/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_WWK02A08 / Warwick River - Middle Tidal Portion / Located in Menchville area. From approx. Denbigh Landing area downstream to Denbigh Park area. CBP segment JMSMH. DSS (ADMINISTRATIVE) shellfish direct harvesting condemnation # 058-034 A (20090518).	4A	Enterococcus	2008	L	0.075

Warwick River - Middle Tidal Portion

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.075		

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

James River Basin

Cause Group Code: G11E-01-EBEN Jones Creek

Cause Location: South shore trib. to Pagan R. near confluence with James R. From headwaters to SR 669, including tidal tributaries. CBP segment JMSMH. Portion of DSS shellfish harvesting (Admin-PROHIBITED) 061-064 B, D, E, F (effective 20200715).

Cause City/County: Isle Of Wight County

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Benthics are impaired at station 2CJOG002.22 '21 - 5A

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JOG01A08 / Jones Creek - Tributary to Pagan River / South shore trib. to Pagan R. near confluence with James R. From headwaters to SR 669, including tidal tributaries. CBP segment JMSMH. Portion of DSS shellfish harvesting (Admin-PROHIBITED) # 061-064 B, D, E, F (effective 20220615).	5A	Estuarine Bioassessments	2024	L	0.229

Jones Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.229		

Sources: Agriculture; Source Unknown

James River Basin

Cause Group Code: G11E-01-SF Chuckatuck Creek System

Cause Location: Described in VDH Notice and Description of Shellfish Direct Harvesting Condemnation 062-080 A, 20201015.

Cause City/County: Isle Of Wight County; Suffolk

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A; Fecal Coliform/5A

Cause Description: The Shellfishing Use is impaired based on the DSS condemnation. EPA approved TMDL 7/9/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_CKT01A04 / Chuckatuck & Brewers Creeks / South shore trib to James R., confluence upstream of Nansemond R. From headwaters of Brewers and Chuckatuck Creeks downstream to end of SF condemnation at Route 17 Bridge, Carrollton Blvd. Portion of CBP segment JMSMH. DSS shellfish harvesting condemnation # 062-080 (effective 20221015).	4A	Fecal Coliform	1998	L	0.977
VAT-G11E_CKT02A12 / Chuckatuck Creek and Mouth in James / South shore trib to James R, confluence upstream of Nansemond River. Segment includes DSS OPEN shellfish area from Carrollton Bridge downstream to mouth. Portion of CBP segment JMSMH. DSS OPEN shellfish direct harvesting condemnation # 062-080 (effective 20221015).	5A	Fecal Coliform	2024	L	0.304

Chuckatuck Creek System

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	1.28		

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

James River Basin

Cause Group Code: G11E-02-EBEN Chuckatuck Creek

Cause Location: South shore trib to James R, confluence upstream of Nansemond River. Segment includes DSS OPEN shellfish area from Carrollton Bridge downstream to mouth.

Cause City/County: Isle Of Wight County; Suffolk

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: WoE: 2CCKT000.82 - 5A, Evidence for chemical contaminant-induced degradation.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_CKT02A12 / Chuckatuck Creek and Mouth in James / South shore trib to James R, confluence upstream of Nansemond River. Segment includes DSS OPEN shellfish area from Carrollton Bridge downstream to mouth. Portion of CBP segment JMSMH. DSS OPEN shellfish direct harvesting condemnation # 062-080 (effective 20221015).	5A	Estuarine Bioassessments	2024	L	0.304

Chuckatuck Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.304		

Sources: Agriculture; Source Unknown

James River Basin

Cause Group Code: G11E-03-BAC Deep Creek - Lower

Cause Location: This cause encompasses the area located in Menchville area. Tributary to Warwick River. From Warwick Yacht Club downstream to mouth. CBP segment JMSMH.

Cause City/County: Newport News

Use(s): Recreation

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

Cause Description: The Recreation Use is not supported based on 2 or more STV hits in the same 90-day period with < 10 samples at station 2-DEP000.26. Previously not supporting based on single sample maximum Enterococci criteria. Bacteria impairment covered under TMDL (34124) 'Deep Creek', EPA approved 2/29/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_DEP01A02 / Deep Creek - Lower / Located in Menchville area. Tributary to Warwick R. From Warwick Yacht Club downstream to mouth. CBP segment JMSMH. DSS (ADMIN) shellfish direct harvesting condemnation # 058-034 A (effective 20090518).	4A	Enterococcus	2006	L	0.1

Deep Creek - Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.1		

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

James River Basin

Cause Group Code: G11E-05-BAC Pagan River - Upper and Middle

Cause Location: This cause encompasses the Upper and Middle Pagan River - from upper tidal influence downstream past Route 10. South shore tributary to James River. Located in Smithfield area. CBP segment JMSMH.

Cause City/County: Isle Of Wight County

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on failure to meet the Enterococcus bacteria criteria at stations 2-PGN008.4(impaired with 2 or more STV hits in same 90-day period) and 2-PGN006.65 (retain impairment since station has insufficient data to analyze geomean and 1 STV hit in multiple 90-dayperiods) and 2-PGN005.46 (multiple geomean exceedances in any 90-day period).

1998 CD segment for FC (Attachment A, Category 1, Part 1) VAT-G11E-04 & 1998 CD segment for FC & DO (Attachment A, Category 1, Part 1 & Attachment B) VAT-G11E-05.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_PGN01A08 / Pagan River - Upstream of Chalmers Point / Located in Smithfield area. South shore tributary to James R. From end of tidal water downstream to approx. RM 7.00. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Enterococcus	1998	L	0.062
VAT-G11E_PGN01B18 / Pagan River - Upper Middle / Located in Smithfield area. South shore tributary to James R. From downstream of Crook Ln to Unnamed N Trib at Goose Hill Way. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Enterococcus	2020	L	0.065
VAT-G11E_PGN01C18 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. Middle Pagan segment that Includes Morris Cr ends before Battery Park. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Enterococcus	2022	L	0.058

Pagan River - Upper and Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.185		

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

James River Basin

Cause Group Code: G11E-05-EBEN Chesapeake Bay segment JMSMHa

Cause Location: This cause encompasses the complete CBP segment JMSMHa.

Cause City/County: Isle Of Wight County; James City County; Newport News; Portsmouth; Suffolk; Surry County

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: The Aquatic Life Use is impaired based on not meeting the Chesapeake Bay benthics associated with JMSMHa Chesapeake Bay segment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JMS01A06 / James River - Gravel Neck to Pagan River / From start of JMSMH salinity boundary (Hog Isl. Cr.) downstream to line between Jail Pt (Mulberry Isle) to Days Pt (mouth Pagan R). CBP segment JMSMH. DSS (OPEN) shellfish condemnation # 059-069 & 058-183(effective 20201113).	5A	Estuarine Bioassessments	2006	L	40.260
VAT-G11E_JMS01C08 / James River - Carter Grove Area / Mainstem along north shore, from near Carter Grove. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 059-067 A (effective 20100901).	5A	Estuarine Bioassessments	2010	L	0.404
VAT-G11E_JMS02A06 / James River - Jail Point to Hilton Village / Mainstem from line between Jail Pt (Mulberry Isle) to Days Pt (Mouth Pagan R) downstream to line Hilton Village (Newport News)/Kings Creek (Isle of Wight). CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 058-034 (effective 20201113) & 061-064 (effective 20220615).	5A	Estuarine Bioassessments	2006	L	24.697
VAT-G11E_JMS03A06 / James River - Along Lower North Shore / Mainstem along north shore, from Jail Point (Mulberry Isle) downstream to line following Rt. 664. CBP segment JMSMH. Portions of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518) & 056-007 A (effective 20120529).	5A	Estuarine Bioassessments	2006	L	3.943
VAT-G11E_JMS03B06 / James River - Hilton Beach Area / North shore James R. NW of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518).	5A	Estuarine Bioassessments	2006	L	0.110
VAT-G11E_JMS03C06 / James River - Huntington Beach Area / North shore James R. near foot of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518).	5A	Estuarine Bioassessments	2006	L	0.008

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JMS04A06 / James River - Hilton Village to Craney Island / Mainstem from a line between Hilton Village (Newport News)/Kings Creek (Isle of Wight) downstream to the end of DSS (OPEN) shellfish direct harvesting condemnation # 059-007 (effective 20210615) & Conditionally Approved 062-080 C8 (effective 20221015) CBP segment JMSMH.	5A	Estuarine Bioassessments	2006	L	24.105
VAT-G11E_JMS06A10 / James River - Outside Mouth Streeter & Hoffler Creeks / Mainstem area at Mouth of Streeter & Hoffler Creeks @ SW corner Craney Island. CBP segment JMSMH. DSS (ADMIN) shellfish condemnation # 064-018 A (effective 20210615).	5A	Estuarine Bioassessments	2010	L	0.156
VAT-G11E_SFF03A10 / Skiffes Creek - Mouth / Located west of Lee Hall area, flows across the James City Co./NN City boundary. From Goose Island to point on opposite shore. Portion of CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 059-069 (effective 20201113).	5A	Estuarine Bioassessments	2018	L	0.060
VAT-G11E_TYB01A00 / Tylers Beach Boat Basin / Located in the Bailey Beach area. Adjacent to the James River. Opposite Mulberry Island. NW corner of Burwell Bay. From end of tidal waters downstream to mouth. CBP segment JMSMH. DSS Admin shellfish direct harvesting condemnation # 060-206 B (20141231).	5A	Estuarine Bioassessments	2018	L	0.011
VAT-G11E_ZZZ01A00 / Unsegmented estuaries - James R. Tribs / Tributaries to James R., Mulberry Island area & NW Ragged Isl. From end of tidal water downstream to confluence. CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 059-069 (20141219) 58-183 (20201113).	5A	Estuarine Bioassessments	2024	L	0.358
VAT-G15E_JMS05A06 / James River - Newport News Point to NW Corner Craney Isl. / Line following the Rt. 664 crossing mid-river, SW to mid-mouth Nansemond R. to SW tip Craney Isl. Line. The NW line from NW tip Craney Isl. to Lincoln Pk. CBP segment JMSMH. DSS (ADMIN) cond # 056-007 A, B, C (effective 20210615).	5A	Estuarine Bioassessments	2010	L	4.509

Chesapeake Bay segment JMSMHa

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	98.618		

Sources: Agriculture; Source Unknown

James River Basin

Cause Group Code: G11E-06-BAC Lawnes Creek (Tributary to James River)

Cause Location: This cause encompasses the entire tidal portion of Lawnes Creek. South shore tributary to James River near Hog Island WMA. Hog Isl. Area, opposite Mulberry Point. From end of tidal waters downstream to mouth. CBP segment JMSMH.

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

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on two or more STV hits in the same 90-day period with less than 10 samples. Previously, the station failed to meet the Enterococcus bacteria instantaneous criteria (9 exc/ 23 obs) at station 2-LAW000.42. Nested in EPA approved SF TMDL 5/6/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_LAW01A00 / Lawnes Creek (Tributary to James River) / South shore tributary to James R. near Hog Island WMA. Hog Isl. area, opposite Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 060-206 A (effective 20141231).	4A	Enterococcus	2010	L	0.291

Lawnes Creek (Tributary to James River)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.291		

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

James River Basin

Cause Group Code: G11E-06-SF Lawnes Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 060-206 A,12/31/2014.

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

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired based on the DSS condemnation. EPA approved SF TMDL 5/6/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_LAW01A00 / Lawnes Creek (Tributary to James River) / South shore tributary to James R. near Hog Island WMA. Hog Isl. area, opposite Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 060-206 A (effective 20141231).	4A	Fecal Coliform	1998	L	0.291

Lawnes Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.291		

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: G11E-10-PCBFT Warwick River

Cause Location: Located in Menchville area. From approx. Denbigh Landing area downstream to Denbigh Park area.

Cause City/County: Newport News

Use(s): Fish Consumption

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

Cause Description: 2-WWK003.98 (Warwick River across from Denbigh Park) - 2021 FT - three species exceed the WQS TV of 18 ppb for PCB - Striped Bass (1 fish) at 36 ppb, Spot (2 fish composite) at 121 ppb, Gizzard Shad (15 fish composite) at 43 ppb.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_WWK02A08 / Warwick River - Middle Tidal Portion / Located in Menchville area. From approx. Denbigh Landing area downstream to Denbigh Park area. CBP segment JMSMH. DSS (ADMINISTRATIVE) shellfish direct harvesting condemnation # 058-034 A (20090518).	5A	PCBs in Fish Tissue	2024	L	0.075

Warwick River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	0.075		

Sources: Source Unknown

James River Basin

Cause Group Code: G11E-10-SF Pagan River - Middle Lower and Lower

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 061-064 A effective 20220615.

Cause City/County: Isle Of Wight County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired based on the DSS shellfish direct harvesting condemnation 061-064 A (20220615). Bacteria impairment covered under TMDL (35579) VAT-G11E-10-SF, 'Pagan River & Jones Creek', EPA approved 2/12/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_PGN02A08 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. North of Town of Smithfield downstream Azalea Dr. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Fecal Coliform	2008	L	1.030
VAT-G11E_PGN02B14 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. Lower portion from Moonefield Dr to Morris Cr. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Fecal Coliform	2008	L	0.162
VAT-G11E_PGN02C18 / Pagan River - Lower SF Open / Located in Smithfield area. South shore tributary to James R. From Morris Creek downstream to River Ave. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Fecal Coliform	2022	L	0.084
VAT-G11E_PGN02D16 / Pagan River - Middle / Located in Smithfield area. South shore tributary on the East shore to James R. Portion near Battery Park. Portion of CBP segment JMSMH. Portion of DSS shellfish Restricted-condemnation # 061-064 (20220615)	4A	Fecal Coliform	2024	L	0.020
VAT-G11E_PGN03A10 / Pagan River - Mouth Area / Located in Smithfield area. South shore tributary to James R. From the edge of shellfish condemnation #061-064A to. downstream to mouth. Portion of CBP segment JMSMH. DSS Restricted shellfish direct harvesting designations # 061-064 A 20220615	4A	Fecal Coliform	2024	L	0.889

Pagan River - Middle Lower and Lower

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	2.185		

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

James River Basin

Cause Group Code: G11E-11-PCBFT Lawnes Creek

Cause Location: South shore tributary to James R. near Hog Island WMA. Hog Isl. area, opposite Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation 060-206 A (effective 20141231).

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

Use(s): Fish Consumption

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

Cause Description: 2-LAW000.42 (Lawnes Creek near Hog Island boat ramp) - 2021 FT - three species exceed the WQS TV of 18 ppb for PCB - Striped Bass (2 fish composite) at 28ppb, Gizzard Shad (5 fish composite) at 19ppb, Blue Catfish (3 fish composite) at 46 ppb.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_LAW01A00 / Lawnes Creek (Tributary to James River) / South shore tributary to James R. near Hog Island WMA. Hog Isl. area, opposite Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 060-206 A (effective 20141231).	5A	PCBs in Fish Tissue	2024	L	0.291

Lawnes Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	0.291		

Sources: Source Unknown

James River Basin

Cause Group Code: G11E-16-SF Cypress Creeks

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 061-064, 5/30/2018.

Cause City/County: Isle Of Wight County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired based on the DSS condemnation. Bacteria impairment covered under TMDL (35579) approved by EPA 2/12/2008. 1998 CD segment for shellfish (Attachment A, Category 3) VAT-G11E-10.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_CYP01A06 / Cypress Creek / South shore tributary to Pagan R, confluence near Smithfield. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 061-064 (effective 20220615).	4A	Fecal Coliform	1998	L	0.263

Cypress Creeks

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.263		

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

James River Basin

Cause Group Code: G11E-16-SF2 Pagan River - Upper and Upper- Middle

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 061-064 A ,20220615.

Cause City/County: Isle Of Wight County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfish Use is not supported based on the DSS restricted condemnation 061-064 A (effective date 20220615). Not covered under TMDL for 'Pagan River & Jones Creek', (35579) EPA approved 2/12/2008. However nested since SF impairment is within tidal range of Pagan River & Jones Creek TMDL, newly impaired segments are comparable and all existing sources are accounted for in the TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_PGN01A08 / Pagan River - Upstream of Chalmers Point / Located in Smithfield area. South shore tributary to James R. From end of tidal water downstream to approx. RM 7.00. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Fecal Coliform	2008	L	0.062
VAT-G11E_PGN01B18 / Pagan River - Upper Middle / Located in Smithfield area. South shore tributary to James R. From downstream of Crook Ln to Unnamed N Trib at Goose Hill Way. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Fecal Coliform	2008	L	0.065
VAT-G11E_PGN01C18 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. Middle Pagan segment that Includes Morris Cr ends before Battery Park. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Fecal Coliform	2008	L	0.058

Pagan River - Upper and Upper- Middle

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.185		

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

James River Basin

Cause Group Code: G11E-20-BAC James River - Hilton Beach Area

Cause Location: This cause encompasses the area of north shore James R. NW of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH.

Cause City/County: Newport News

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/5A

Cause Description: The Recreation Use is impaired based on Enterococcus bacteria data from the VDH-Beach station VA747818 with multiple geomean exceedances in any 90-day period including multiple swimming advisories.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JMS03B06 / James River - Hilton Beach Area / North shore James R. NW of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518).	5A	Enterococcus	2012	L	0.11

James River - Hilton Beach Area

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.11		

Sources: Source Unknown

James River Basin

Cause Group Code: G11E-20-SF Jones Creek - Tributary to Pagan River

Cause Location: Described in VDH Notice and Description of Shellfish Direct Harvesting Condemnation 061-064 B & M1 5/30/2018.

Cause City/County: Isle Of Wight County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is not supported by the VDH DSS Shellfish Condemnation 061-064 B and M1 effective date 20180530. Bacteria impairment covered under TMDL (35579) 'Pagan River & Jones Creek', EPA approved 2/12/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JOG02A08 / Jones Creek - Tributary to Pagan River / South shore trib. to Pagan R. near confluence with James R. From SR 669 to mouth, including tidal tributaries. CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Fecal Coliform	2008	L	0.102

Jones Creek - Tributary to Pagan River

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.102		

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

James River Basin

Cause Group Code: G11E-21-BAC James River - Huntington Beach Area

Cause Location: This cause encompasses the area north shore James R. near foot of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH.

Cause City/County: Newport News

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/5A

Cause Description: The Recreation Use is impaired based on Enterococcus bacteria data from the VDH-Beach station VA747813 with 2 or more STV exceedances in the same 90-day period and multiple short term swimming advisories.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JMS03C06 / James River - Huntington Beach Area / North shore James R. near foot of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518).	5A	Enterococcus	2006	L	0.008

James River - Huntington Beach Area

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.008		

Sources: Source Unknown

James River Basin

Cause Group Code: G11E-22-BAC Pagan River - Middle

Cause Location: This cause encompasses the area from Morris Creek downstream to River Ave. Located in Smithfield area. South shore tributary to James R. Portion of CBP segment JMSMH.

Cause City/County: Isle Of Wight County

Use(s): Recreation

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

Cause Description: The Recreation Use is not supporting with multiple geomean exceedance in any 90-day period. Previously Enterococci data collected at 2-PGN001.19 assessed with the single sample maximum criteria had 1 exc / 29 obs. The Recreation impairment was delisted in the 2018 IR. G11E-22-BAC (2014)

Pagan River & Jones Creek', (35579) EPA approved 2/12/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_PGN02C18 / Pagan River - Lower SF Open / Located in Smithfield area. South shore tributary to James R. From Morris Creek downstream to River Ave. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Enterococcus	2022	L	0.084

Pagan River - Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.084		

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

James River Basin

Cause Group Code: G11E-23-EBEN Warwick River - Middle-Lower Tidal Portion

Cause Location: This cause encompasses the area located in Menchville area. Tributary to James R. From Denbigh Park to Approx Lucas Cr. Portion of CBP segment JMSMH.

Cause City/County: Newport News

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Aquatic Life Use is not supported based on benthic data assessment from the 2016 WoE station 2-WWk003.20 in 2016. WoE assessment ranked station as 5A with probable chronic effects of cumulative sediment metals. Possibly additional contaminants.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_WWK03B18 / Warwick River - Middle-Lower Tidal Portion / Located in Menchville area. Tributary to James R. From Denbigh Park to Approx. Lucas Cr. Portion of CBP segment JMSMH. DSS (ADMINISTRATIVE) shellfish direct harvesting condemnation # 058-034 A (20090518).	5A	Estuarine Bioassessments	2018	L	0.077

Warwick River - Middle-Lower Tidal Portion

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.077		

Sources: Agriculture; Source Unknown

James River Basin

Cause Group Code: G11E-24-BAC Cypress Creek

Cause Location: This cause encompasses the recreation impairment for Cypress Creek a tributary to the Pagan River.

Cause City/County: Isle Of Wight County

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on data collected at station 2-CYP000.47. Enterococci data does not meet the recreation criteria with multiple geomean exceedances and > 10% STV exceedance rate in 90-day period. The impairment is nested within the Pagan River tidal recreation impairment in 2022 IR. The bacteria impairment is covered under TMDL (35579) 'Pagan River & Jones Creek', EPA approved 2/12/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_CYP01A06 / Cypress Creek / South shore tributary to Pagan R, confluence near Smithfield. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 061-064 (effective 20220615).	4A	Enterococcus	2022	L	0.263

Cypress Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.263		

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

James River Basin

Cause Group Code: G11E-25-BAC Jones Creek - Tributary to Pagan River

Cause Location: This cause encompasses the area near confluence with James R. From SR 669 to mouth, including tidal tributaries. A South shore trib. to the Pagan R. CBP segment JMSMH.

Cause City/County: Isle Of Wight County

Use(s): Recreation

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

Cause Description: The Recreation Use is not supported based on Enterococcus bacteria data from station 2-JOG000.62 with geomean exceedances in any 90-day period and 1 STV exceedance. Previously assessed as supporting the use based on the single sample max criteria (0 exc/ 29 obs).

Bacteria impairment covered under TMDL (35579) 'Pagan River & Jones Creek', EPA approved 2/12/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JOG02A08 / Jones Creek - Tributary to Pagan River / South shore trib. to Pagan R. near confluence with James R. From SR 669 to mouth, including tidal tributaries. CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Enterococcus	2022	L	0.102

Jones Creek - Tributary to Pagan River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.102		

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

James River Basin

Cause Group Code: G11E-26-SF Ragged Island Creek

Cause Location: Described in VDH Notice and description of Shellfish Condemnation 062-080 (effective 20171011).

Cause City/County: Isle Of Wight County

Use(s): Shellfishing

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

Cause Description: The Shellfishing Use is not supporting based on the Restricted Condemnation 062-080 B effective 10/15/2020. This is a first listing of impairment for shellfish for Ragged Island Creek.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_RIC01A24 / Ragged Island Creek / North shore tributary to James R. on Mulberry Island. Downstream of Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS Restricted shellfish direct harvesting condemnation # 062-080 B (effective 20221015).	5B	Fecal Coliform	2022	L	0.173

Ragged Island Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.173		

Sources: Source Unknown

James River Basin

Cause Group Code: G11L-01-CU Lee Hall Reservoir

Cause Location: This cause encompasses the entirety of Lee Hall Reservoir. Located southeast of Lee Hall area. Northeast of Fort Eustis. Lee Hall is split by I-64. Newport News PWS.

Cause City/County: Newport News; York County

Use(s): Aquatic Life; Wildlife

Causes(s)/VA Category: Copper/5A

Cause Description: The Aquatic Life Use and Wildlife Uses are impaired based on exceedance of the DEQ copper (acute) criteria as reported from a USGS 2002 special study. Cu exceedances include 0204279210 (4 violates), 0204279224 (1 violates), 0204279230 (4 violates) and 0204279240 (4 violates).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11L_LHR01A08 / Lee Hall Reservoir / Located southeast of Lee Hall area. Northeast of Fort Eustis. Lee Hall lower basins south of CSX Railroad. Newport News PWS.	5A	Copper	2004	L	66.49
VAT-G11L_LHR02A20 / Lee Hall Reservoir-Upper, Middle / Located southeast of Lee Hall area. Northeast of Fort Eustis. Lee Hall middle and upper is split by I-64. Newport News PWS.	5A	Copper	2004	L	225.65

Lee Hall Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Copper - Total Impaired Size by Water Type:		292.14	

Lee Hall Reservoir

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Copper - Total Impaired Size by Water Type:		292.14	

Sources: Municipal (Urbanized High Density Area); Source Unknown

James River Basin

Cause Group Code: G11L-01-PCB Lee Hall Reservoir-Lower

Cause Location: This cause encompasses the lower basins of Lee Hall Reservoir. Located southeast of Lee Hall area. Northeast of Fort Eustis. Newport News PWS.

Cause City/County: Newport News

Use(s): Fish Consumption

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

Cause Description: The Fish Consumption Use is impaired based on fish tissue data collected from 2005. The PCB impairment was found in Carp and Largemouth Bass.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11L_LHR01A08 / Lee Hall Reservoir / Located southeast of Lee Hall area. Northeast of Fort Eustis. Lee Hall lower basins south of CSX Railroad. Newport News PWS.	5A	PCBs in Fish Tissue	2010	L	66.49

Lee Hall Reservoir-Lower

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:		66.49	

Sources: Source Unknown

James River Basin

Cause Group Code: G11L-06-DO Scotts Factory Pond

Cause Location: This cause encompasses the pond in its entirety.

Cause City/County: Isle Of Wight County

Use(s): Aquatic Life

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

Cause Description: Dissolved oxygen is impaired based on level III data at station 2ECL-1-IRC with 3 viol/ 8 obs.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11L_SFP01A16 / Scotts Factory Pond / Pond near Champion Swamp near Route 665	5A	Dissolved Oxygen	2016	L	14.83

Scotts Factory Pond

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

Sources: Source Unknown

James River Basin

Cause Group Code: G11L-07-DO Lone Star Lake G

Cause Location: This cause encompasses Lone Star Lake G " Crane Lake" in its entirety.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: Aquatic Life Use is not supported based on DO data collected at station 2-LSL000.04 at Crane Lake with 12 viol / 97 obs. Impairment first listed in 2006 then delisted in 2016 and relisted in 2020 IR.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11L_LSL01G06 / Lone Star Lake G (PWS) / Upstream impounded portions of Chuckatuck Creek. Pond north and adjacent to Chuckatuck Creek. Water supply system composed of flooded borrow pits. Suffolk PWS component. Crane Lake.	5A	Dissolved Oxygen	2006	L	89.65

Lone Star Lake G

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		89.65	

Sources: Source Unknown

James River Basin

Cause Group Code: G11R-01-BAC Baptist Run

Cause Location: This cause encompasses Baptist Run, this segment begins at outflow of pond upstream of station at Crawford Drive extending downstream to confluence with Great Run and Beaverdam Creek. Located south of Lackey.

Cause City/County: York County

Use(s): Recreation

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Recreation Use impairment is retained from 2006 Report. The Recreation Use is impaired (2 violates / 2 observations) based on exceedance of the DEQ Fecal Coliform bacteria instantaneous maximum criteria. Recreation bacteria impairment covered under TMDL (34126) VAT-G11R-01 " Fecal Bacteria Total Maximum Daily Load Development for Warwick River - Baptist Run", EPA approved 2/29/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11R_BAP01A04 / Baptist Run / Located S of Lackey and N of Newport News City Reservoir. Segment begins NW (upstream) of Rt 238 extending underneath and downstream to confluence with Great Run and Beaverdam Creek. Runs thru Colonial Natl. Historical Park.	4A	Fecal Coliform	2004	L	3.15

Baptist Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			3.15

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

James River Basin

Cause Group Code: G11R-02-BEN Chuckatuck Creek

Cause Location: This cause encompasses Chuckatuck Creek, from the confluence of unnamed tributary (downstream of Rt 600) downstream to confluence of unnamed tributary (downstream of Rt 602, below BIO station @ 2-CKT005.72).Riverine portion southwest of Longview.

Cause City/County: Isle Of Wight County; Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use impairment is retained from previous assessments (2004 - 2006) based on a moderately impaired rating for freshwater benthic bioassessment monitored at DEQ (BIO) benthic assessment monitoring station @ 2-CKT005.72 during Spring & Fall of 1998 - 2000. No more recent benthic monitoring has been conducted with which to revise assessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11R_CKT01A04 / Chuckatuck Creek / Riverine portion southwest of Longview and NW of Grave areas. Chuckatuck Creek, from confluence of unnamed trib. branches downstream underneath Rt 602 (below BIO station @ 2-CKT005.72) to junction of N trib. (outflow from pond) downstream of Rt 602	5A	Benthic Macroinvertebrates Bioassessments	2004	H	1.54

Chuckatuck Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.54

Sources: Source Unknown

James River Basin

Cause Group Code: G11R-03-BAC Champion Swamp

Cause Location: This cause encompasses a portion of Champion Swamp. Located southwest of Town of Smithfield. Western tributary to Cypress Creek. Portion of lower Champion Swamp, from split of stream upstream of State Hwy 620 downstream to the start of tidal waters in downstream Cypress Creek past pipeline marker on topo.

Cause City/County: Isle Of Wight County

Use(s): Recreation

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

Cause Description: The Recreation Use impairment is retained. The Recreation Use was listed as impaired based on single sample max E.coli standard (2 exc/ 4 samples) collected (10/16/2007 & 5/17/2007) at the DEQ station 2-CPN004.81.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11R_CPN01A00 / Champion Swamp / Located southwest of Town of Smithfield. Western tributary to Cypress Creek. Portion of lower Champion Swamp, from split of stream upstream of State Hwy 620 downstream to the start of tidal waters in downstream Cypress Creek past pipeline marker on topo.	5A	Escherichia coli (E. coli)	2010	L	3.17

Champion Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.17

Sources: Source Unknown

James River Basin

Cause Group Code: G11R-04-BAC Pagan River (including Wrenns Millpond)

Cause Location: This cause encompasses Riverine portion of Pagan River beginning at the confluence of Warren Creek and in eastern trib. Proceeding downstream (including Wrenns Millpond) and downstream of pond to confluence with tidal waters.

Cause City/County: Isle Of Wight County

Use(s): Recreation

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

Cause Description: E. coli data at station 2-PGN010.07 is impaired with 3 exceedances out of 8 samples - 2 or more STV hits in the same 90-day period with < 10 samples. Previously the impairment was based on the single sample max criteria with 20 exc / 35 obs. E.coli bacteria data not meeting the applicable criteria monitored at DEQ (AQM) monitoring station 2-PGN010.07. Impairment is nested in the 2018 IR within the Pagan River Bacteria TMDL. New impairment is located within the TMDL watershed boundary. Station 10.07 was used in the model. Land use is consistent with the TMDL watershed landuse. Reductions in the TMDL are adequate.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11R_PGN01A04 / Pagan River (including Wrenns Millpond) / Riverine portion of Pagan River beginning at the confluence of Warren Cr. and in eastern trib. proceeding downstream (including Wrenns Millpond) and downstream of pond to confluence with tidal waters.	4A	Escherichia coli (E. coli)	2012	L	1.35

Pagan River (including Wrenns Millpond)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.35

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

James River Basin

Cause Group Code: G12L-02-DO Lake Meade

Cause Location: This cause encompasses the entirety of Lake Meade. Northwest of City of Suffolk. Headwater impoundments of Nansemond River. Downstream receptor of Lakes Cohoon & Kilby. Portion of Portsmouth PWS system.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired based on dissolved oxygen data at stations 2-LMD000.02 (5 viol/ 44 obs) and 2-LMD001.41 (7 viol/ 48 obs).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G12L_LMD01A06 / Lake Meade (PWS) / Northwest of City of Suffolk. Headwater impoundments of Nansemond River. Downstream receptor of Lakes Cohoon & Kilby. Portion of Portsmouth PWS system.	5A	Dissolved Oxygen	2006	L	489.49

Lake Meade

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		489.49	

Sources: Source Unknown

James River Basin

Cause Group Code: G12L-03-CHLA Speights Run Lake

Cause Location: This cause encompasses the entirety of Speights Run Lake. Northwest of Suffolk Municipal Airport. Southwest of Lake Kilby. Most southwest branch and upstream of Lake Kilby/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired for nutrients, Chla. Speights Run pooled nutrients results are 2 viol / 2 obs for Chla in 2012 and 2015 (IM). There is no algaecide application during assessment years therefore only Chla is assessed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G12L_SPE01A06 / Speights Run - Lake (PWS) / Northwest of Suffolk Municipal Airport. Southwest of Lake Kilby. Most southwest branch and upstream of Lake Kilby/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system.	5A	Chlorophyll-a	2010	L	120.88

Speights Run Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		120.88	

Sources: Source Unknown

James River Basin

Cause Group Code: G12L-03-DO Speights Run Lake

Cause Location: This cause encompasses the entirety of Speights Run Lake. Northwest of Suffolk Municipal Airport. Southwest of Lake Kilby. Most southwest branch and upstream of Lake Kilby/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired based on dissolved oxygen (10 viol / 65 obs) data at stations 2-SPE000.17 (4 viol / 33 obs) and 2-SPE001.18 (6 viol / 32 obs).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G12L_SPE01A06 / Speights Run - Lake (PWS) / Northwest of Suffolk Municipal Airport. Southwest of Lake Kilby. Most southwest branch and upstream of Lake Kilby/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system.	5A	Dissolved Oxygen	2022	L	120.88

Speights Run Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		120.88	

Sources: Source Unknown

James River Basin

Cause Group Code: G12L-04-DO Lake Kilby

Cause Location: This cause encompasses the entirety of Lake Kilby. Northwest of Suffolk Municipal Airport. South of Pitchkettle Creek. Most southwest branch of Lake Kilby/Pitchkettle Creek/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. Pooled DO data violation rate is 32% (8 violates/ 25 obs.).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G12L_LKK01A06 / Lake Kilby (PWS) / Northwest of Suffolk Municipal Airport. South of Pitchkettle Creek. Most southwest branch of Lake Kilby/Pitchkettle Creek/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system.	5A	Dissolved Oxygen	2006	L	200.04

Lake Kilby

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		200.04	

Sources: Source Unknown

James River Basin

Cause Group Code: G12L-04-TP Lake Kilby

Cause Location: This cause encompasses the entirety of Lake Kilby. Northwest of Suffolk Municipal Airport. South of Pitchkettle Creek. Most southwest branch of Lake Kilby/Pitchkettle Creek/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: Aquatic Life Use impairment is maintained for nutrients - TP. Lake Kilby pooled TP results: 1 viol/ 2 obs 2015, 2018. TP median yearly values rotate between impairment and therefore not able to delist. TP from 2015 meets criteria however data collected in 2018 does not.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G12L_LKK01A06 / Lake Kilby (PWS) / Northwest of Suffolk Municipal Airport. South of Pitchkettle Creek. Most southwest branch of Lake Kilby/Pitchkettle Creek/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system.	5A	Phosphorus, Total	2014	L	200.04

Lake Kilby

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Phosphorus, Total - Total Impaired Size by Water Type:		200.04	

Sources: Source Unknown

James River Basin

Cause Group Code: G12R-01-PH Eley Swamp

Cause Location: This cause encompasses the area located northeast of Myrtle. Segment is south of Rt 460 and traverses the N&W RR line. Segment extends 2.40 mi. upstream and 2.20 mi. downstream from Rt. 607 crossing. Portion of Portsmouth water supply reservoirs.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use impairment, based on pH concentrations below the allowable DEQ minimum criteria (6.0 SU) from the 1998 303d listing is retained due to lack of more recent data. The Natural Conditions Report for pH was approved in Triennial Review.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G12R_ELE01A00 / Eley Swamp tributary to Lake Cohoon (PWS) / Located northeast of Myrtle. Segment is south of Rt 460 and traverses the N&W RR line. Segment extends 2.40 mi. upstream and 2.20 mi. downstream from Rt. 607 crossing. Portion of Portsmouth water supply reservoirs.	4C	pH	NA	NA	4.8

Eley Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.8

Sources: Natural Sources

James River Basin

Cause Group Code: G13E-07-PH Shingle Creek - Tributary to Nansemond R.

Cause Location: This cause encompasses the area NE of Suffolk, near Rt 642. From end of tidal waters (0.2 mi upstream of Portsmouth Blvd) downstream to confluence with Nansemond River. CBP segment JMSMH.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired (TMDL ID = VAT-G13E-07) based on a site specific failure to meet the minimum pH criteria.(4.0 SU) at station 2-SGL001.00 (11/32) and 8 / 75 obs at 2SGL-SSC000.24-SUF. Connection of upstream portions with canals associated with the Dismal Swamp may impart low pH waters into this segment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_SGL01A00 / Shingle Creek - Tributary to Nansemond R. / NE of Suffolk, near Rt 642. From end of tidal waters (0.2 mi upstream of Portsmouth Blvd) downstream to confluence with Nansemond River. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	5A	pH	2002	L	0.049

Shingle Creek - Tributary to Nansemond R.

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	0.049		

Sources: Agriculture; Natural Sources; Source Unknown

James River Basin

Cause Group Code: G13E-08-EBEN Nansemond River

Cause Location: In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt.

Cause City/County: Suffolk

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Estuarine Benthics are impaired for Chesapeake Bay segment JMSMHb.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_NAN03A06 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	5A	Estuarine Bioassessments	2024	L	2.636
VAT-G13E_NAN03A24 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS Shellfish Open Condemnation # 063-008 (20220915)	5A	Estuarine Bioassessments	2024	L	0.197

Nansemond River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.833		

Sources: Agriculture; Source Unknown

James River Basin

Cause Group Code: G13E-12-BAC Bennett Creek, Tributary to Nansemond River

Cause Location: This cause encompasses from the headwaters to the mouth, including tidal tributaries. Portion of CBP segment JMSMH.

Cause City/County: Suffolk

Use(s): Recreation

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

Cause Description: The Recreation Use impairment is retained. The impairment is based on exceedance of the instantaneous criteria for Enterococcus bacteria at stations 2-BEN001.42 (4 exc/ 26 obs) and Suffolk Station 2BEN-SBC000.35-SUF (18 exc / 84 obs). Current data at station 2- BEN001.42 evaluated with the revised bacteria criteria is assessed as insufficient based on one STV exceedance in one or multiple 90-day periods with insufficient data to analyze a geomean.

Nested in EPA approved TMDL for SF for Bennett, Bleakhorn and Knotts Creek 6/3/2010. TMDL ID (VAT-G13E-04) and due date (TMDL due date = 2016) same as original FC impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_BEN01A04 / Bennett Creek - Tributary to Nansemond R. [No TMDL] / Eastern shore trib. to Nansemond R., near confluence with James R. Bennett Harbor area. From headwaters to mouth, including tidal tributaries. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 063-046 A (20220915).	4A	Enterococcus	2004	L	0.542

Bennett Creek, Tributary to Nansemond River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.542		

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

James River Basin

Cause Group Code: G13E-12-SF Bennett, Bleakhorn and Knotts Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 063-046 A, 8/26/2014.

Cause City/County: Suffolk

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired based on the DSS shellfish direct harvesting condemnation 063-046 A (20220915). TMDL ID = VAT-G13E-12. EPA approved SF TMDL for Bleakhorn, Bennetts and Knotts Creek 6/3/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_BEN01A04 / Bennett Creek - Tributary to Nansemond R. [No TMDL] / Eastern shore trib. to Nansemond R., near confluence with James R. Bennett Harbor area. From headwaters to mouth, including tidal tributaries. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 063-046 A (20220915).	4A	Fecal Coliform	1998	L	0.542
VAT-G13E_BHN01A00 / Bleakhorn Creek - Tributary to Nansemond R. Mouth / Western shore trib. to Nansemond R., near confluence with James R. Eclipse area near Crittenden. From headwaters to mouth, including tidal tributaries. CBP segment JMSMH. DSS Restricted shellfish direct harvesting condemnation # 063-046 B (20220915).	4A	Fecal Coliform	1998	L	0.014
VAT-G13E_KNC01A00 / Knotts Creek - Tributary to E. shore Nansemond R. / Eastern shore trib. to Nansemond R., near confluence with James R. Belleville and Huntersville areas. From headwaters to mouth, including tidal tributaries. CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 063-046 A (20220915).	4A	Fecal Coliform	1998	L	0.122

Bennett, Bleakhorn and Knotts Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.677		

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

James River Basin

Cause Group Code: G13E-13-BAC Nansemond River - Upper and Shingle Cr

Cause Location: Upper Nansemond River, within city of Suffolk. Extends from most upstream point in river at Lake Meade Dam (RM 19.8) downstream to Rt. 58/460 crossing (RM 15.2). CBP segment JMSMH.

Cause City/County: Suffolk

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on Enterococcus data at station 2-NAN019.14, 2NAN-SNR0018.82-SUF, 2NAN-SNR0019.27-SUF, 2NAN-SNR0019.46-SUF, 2NAN-SNR0015.58-SUF, 2NAN-SNR0018.24-SUF, and 2-SGL001.00 with 2 or more STV hits in the same 90-day period with < 10 samples. The Recreation and Shellfishing Uses are covered under TMDL "Fecal Bacteria Total Maximum Daily Load Development for the Nansemond River Primary Contact Recreation Use and Shellfish Harvesting Use", April 26, 2006, EPA approved 12/4/06.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_NAN01A00 / Nansemond River - Upper / Upper Nansemond River, within city of Suffolk. Extends from most upstream point in river at Lake Meade Dam (RM 19.8) downstream to Rt. 58/460 crossing (RM 15.2). CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (effective 2020915).	4A	Enterococcus	1994	L	0.263
VAT-G13E_SGL01A00 / Shingle Creek - Tributary to Nansemond R. / NE of Suffolk, near Rt 642. From end of tidal waters (0.2 mi upstream of Portsmouth Blvd) downstream to confluence with Nansemond River. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	4A	Enterococcus	1994	L	0.049

Nansemond River - Upper and Shingle Cr

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.312		

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

James River Basin

Cause Group Code: G13E-13-SF Burnetts Mill Cr, Nansemond R., Shingle Cr, Star and Oyster, Unseg and WB Tribs to Upper Nansemond

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 063-008 A, B C2 (20220915). TMDL (32045)

Cause City/County: Suffolk

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired based on the DSS shellfish condemnation 063-008 A, B, C2(20220915). TMDL ID = VAT-G13E-13. 1998 CD segment for shellfish (Attachment A, Category 3) VAT-G13E-13.

The Recreation and Shellfish Uses are covered under TMDL "Fecal Bacteria Total Maximum Daily Load Development for the Nansemond River Primary Contact Recreational Use and Shellfish Harvesting Use," April 26, 2006, EPA approved 12/4/06.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_BML01A06 / Burnetts Mill Creek - Tributary to Upper Nansemond R. / Eastern shore trib. to upper Nansemond R., south of the Nansemond area. Drains the Beamon area. From headwaters to mouth. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (20220915).	4A	Fecal Coliform	1998	L	0.028
VAT-G13E_NAN01A00 / Nansemond River - Upper / Upper Nansemond River, within city of Suffolk. Extends from most upstream point in river at Lake Meade Dam (RM 19.8) downstream to Rt. 58/460 crossing (RM 15.2). CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (effective 2020915).	4A	Fecal Coliform	1994	L	0.263
VAT-G13E_NAN02A06 / Nansemond River - Upper Middle / Downstream of Suffolk. From Rt 58/460 (RM 15.1) crossing downstream to confluence with the Western Branch Reservoir (RM 11.9). CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	4A	Fecal Coliform	1994	L	0.209
VAT-G13E_NAN03A06 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	4A	Fecal Coliform	1994	L	2.636
VAT-G13E_SGL01A00 / Shingle Creek - Tributary to Nansemond R. / NE of Suffolk, near Rt 642. From end of tidal waters (0.2 mi upstream of Portsmouth Blvd) downstream to confluence with Nansemond River. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	4A	Fecal Coliform	1994	L	0.049

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_STR01A04 / Star & Oyster House Creeks - Tributary to Nansemond R. / Eastern shore tributary to Nansemond R. Adjacent to the Naval Communication station at Driver. From headwaters to confluence with Nansemond R. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	4A	Fecal Coliform	1998	L	0.046
VAT-G13E_WBN01A06 / Western Branch - Tributary to Nansemond R. / Western shore branch off the Nansemond River south of the Reids Ferry area. Downstream of the Western Branch Reservoir, prior to reaching the Nansemond River. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	4A	Fecal Coliform	1998	L	0.106
VAT-G13E_ZZZ01A00 / Unsegmented Estuaries - Upper Nansemond R. / Upper Nansemond River unsegmented tributaries with a DSS condemnation. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A, B (effective 20220915).	4A	Fecal Coliform	1998	L	0.097

Burnetts Mill Cr, Nansemond R., Shingle Cr, Star and Oyster, Unseg and WB Tribs to Upper Nansemond

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	3.435		

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

James River Basin

Cause Group Code: G13E-14-SF Nansemond River -Lower at Knotts Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 063-046 A 20140826.

Cause City/County: Suffolk

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired based on the DSS shellfish direct harvesting condemnation present within this segment as described in VDH Notice and Description of Shellfish Condemnation 063-046 A 20220915. Included in "TMDL Report for Chesapeake Bay Shellfish Waters: Bleakhorn Cr, Bennett Cr, and Knotts Cr Bacterial Impairments in City of Suffolk, VA" EPA approved 6/3/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_NAN04C10 / Nansemond River - Lower DSS Condemned at Knotts Cr / Nansemond R at confluence Knotts Cr. CBP segment JMSMH. DSS condemnation # 063-046 A (effective 20220915).	4A	Fecal Coliform	2010	L	0.467

Nansemond River -Lower at Knotts Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.467		

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

James River Basin

Cause Group Code: G13E-15-BAC Knotts Creek - Tributary to E. shore Nansemond R.

Cause Location: This area encompasses the Eastern shore trib. to Nansemond R., near confluence with James R. Belleville and Huntersville areas. From headwaters to mouth, including tidal tributaries. CBP segment JMSMH.

Cause City/County: Suffolk

Use(s): Recreation

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

Cause Description: The Recreation Use impairment is retained based on the data collected by the City of Suffolk at station 2KNC-SKC000.35-SUF assessed with single sample maximum criteria with 12 exc/ 51 obs.

NESTED within TMDL EPA approved for Shellfish at Knotts, Bleakhorn and Bennetts Creek 6/3/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_KNC01A00 / Knotts Creek - Tributary to E. shore Nansemond R. / Eastern shore trib. to Nansemond R., near confluence with James R. Belleville and Huntersville areas. From headwaters to mouth, including tidal tributaries. CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 063-046 A (20220915).	4A	Enterococcus	2014	L	0.122

Knotts Creek - Tributary to E. shore Nansemond R.

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.122		

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

James River Basin

Cause Group Code: G13E-16-BAC Nansemond River - Upper Middle

Cause Location: This cause encompasses the area downstream of Suffolk. From Rt 58/460 (RM 15.1) crossing downstream to confluence with the Western Branch Reservoir (RM 11.9). CBP segment JMSMH.

Cause City/County: Suffolk

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on NONA station data at 2NAN-SNR0013.50-SUF with 2 or more STV hits in the same 90-day period with < 10 samples for Enterococci.

Nested within EPA approved Shellfish TMDL for Bacteria Nansemond R, 12/4/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_NAN02A06 / Nansemond River - Upper Middle / Downstream of Suffolk. From Rt 58/460 (RM 15.1) crossing downstream to confluence with the Western Branch Reservoir (RM 11.9). CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	4A	Enterococcus	2014	L	0.209

Nansemond River - Upper Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.209		

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

James River Basin

Cause Group Code: G13E-17-BAC Nansemond River - Lower Middle

Cause Location: This cause encompasses the area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS shellfish condemnation 063-008 A (20120801). TMDL (32045)

Cause City/County: Suffolk

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired due to data from 2NAN-SNR0011.83-SUF (4 exc / 17 samples) - 2 or more STV hits in the same 90-day period with < 10 samples.

2NAN-SNR0011.83-SUF: 4 viol/ 17 obs - IM 2NAN-SNR007.88-SUF: 1 viol/ 17 obs - IN
2NAN-SNR008.82-SUF: 1 viol/ 17 obs - IN

The bacteria impairment is nested in EPA approved TMDL for Nansemond R Bacteria TMDL 12/4/2006. Proj ID 178

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_NAN03A06 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	4A	Enterococcus	2014	L	2.636
VAT-G13E_NAN03A24 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS Shellfish Open Condemnation # 063-008 (20220915)	4A	Enterococcus	2014	L	0.197

Nansemond River - Lower Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	2.833		

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

James River Basin

Cause Group Code: G13E-18-BAC Western Branch - Tributary to Nansemond R.

Cause Location: This cause encompasses the western shore branch off the Nansemond River south of the Reids Ferry area. Downstream of the Western Branch Reservoir, prior to reaching the Nansemond River. CBP segment JMSMH.

Cause City/County: Suffolk

Use(s): Recreation

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

Cause Description: The Recreation Use is impairment is based on data collected at Station 2WBN-SWB000.30-SUF with 2 or more STV hits in the same 90-day period with < 10 samples. Nested in EPA approved Shellfish TMDL Nansemond River 12/4/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_WBN01A06 / Western Branch - Tributary to Nansemond R. / Western shore branch off the Nansemond River south of the Reids Ferry area. Downstream of the Western Branch Reservoir, prior to reaching the Nansemond River. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	4A	Enterococcus	2014	L	0.106

Western Branch - Tributary to Nansemond R.

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.106		

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

James River Basin

Cause Group Code: G14L-01-DO Lake Burnt Mills

Cause Location: This cause encompasses the entirety of Lake Burnt Mills. West of Chuckatuck. Upper northwest portion of Western Branch Reservoir system. Upstream of Rt 603. Impounded headwaters tributary of the Nansemond River. Portion of Norfolk water supply reservoirs.

Cause City/County: Isle Of Wight County; Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. Pooled DO exceedance rate 20% (8 violates/ 40 obs).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G14L_NWB01A08 / Lake Burnt Mills / West of Chuckatuck. Upper northwest portion of Western Branch Reservoir system. Upstream of Rt 603. Impounded headwaters tributary of the Nansemond River. Portion of Norfolk water supply reservoirs.	5A	Dissolved Oxygen	2006	L	637.99

Lake Burnt Mills

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		637.99	

Sources: Source Unknown

James River Basin

Cause Group Code: G14L-02-DO Western Branch Reservoir

Cause Location: This cause encompasses the entirety of Western Branch Reservoir. West of Chuckatuck. Impounded headwaters tributary of the Nansemond River. Portion of Norfolk water supply reservoirs.

Cause City/County: Suffolk

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired based on dissolved oxygen concentration below the DEQ minimum allowable instantaneous criteria. Pooled DO violation is 15.2% (35 exceedances/ 230 obs). Individual station exceedances are 2-NWB002.93 (12 exc/ 93 obs); 2-NWB004.67 (10 exc/ 70 obs); and 2-NWB006.06 (13 exc/ 67 obs).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G14L_NWB02A08 / Western Branch Reservoir / West of Chuckatuck. Impounded headwaters tributary of the Nansemond River. Portion of Norfolk water supply reservoirs.	5A	Dissolved Oxygen	2024	L	1209.67

Western Branch Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		1209.67	

Sources: Source Unknown

James River Basin

Cause Group Code: G14R-02-BAC Carbell Swamp - Lower

Cause Location: This cause encompasses the lower portion of Carbell Swamp. Upstream tributary to the northwest branch of Lake Prince (near Holly Grove Church), including confluent trib. at station originating from the NW. Begins at Branch & Joyner Millpond downstream to

Cause City/County: Isle Of Wight County

Use(s): Recreation

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

Cause Description: The Recreation Use impairment is retained based on exceedance of the E.coli bacteria instantaneous criteria (5 viol/ 23 obs) as monitored at the DEQ monitoring station 2-CRL001.83 in previous assessment. Their is insufficient data to assess the E.coli data in the current assessment with one STV exceedance in one a 90-day period with insufficient data to analyze geomean. Nested impairment is within existing Bacteria TMDL boundary with comparable sources and similar land use with reductions adequate for entire watershed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G14R_CRL02A08 / Carbell Swamp - Lower / Upstream tributary to the northwest branch of Lake Prince (near Holly Grove Church), including confluent trib. at station originating from the NW. Begins at Branch & Joyner Millpond downstream to joining Lake Prince. Within PWS for City of Norfolk.	4A	Escherichia coli (E. coli)	2010	L	2.88

Carbell Swamp - Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.88

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

James River Basin

Cause Group Code: G14R-02-DO Carbell Swamp - Lower

Cause Location: This cause encompasses the lower portion of Carbell Swamp. Upstream tributary to the northwest branch of Lake Prince (near Holly Grove Church). Lower segment of swamp. Entire watershed is portion of PWS for City of Norfolk.

Cause City/County: Isle Of Wight County

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired based on DO concentrations below the DEQ minimum criteria (5 violates /12 obs.) at station 2-CRL001.83.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G14R_CRL01A08 / Carbell Swamp - Upper / Upper portion of swamp. Upstream tributary to the northwest branch of Lake Prince (near Holly Grove Church). Entire watershed is portion of PWS for City of Norfolk.	5A	Dissolved Oxygen	2024	L	2.95
VAT-G14R_CRL02A08 / Carbell Swamp - Lower / Upstream tributary to the northwest branch of Lake Prince (near Holly Grove Church), including confluent trib. at station originating from the NW. Begins at Branch & Joyner Millpond downstream to joining Lake Prince. Within PWS for City of Norfolk.	5A	Dissolved Oxygen	2008	L	2.88

Carbell Swamp - Lower

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			5.83

Sources: Source Unknown

James River Basin

Cause Group Code: G15E-01-01-EBEN Deep Creek, Southern Br. Elizabeth R.- Mouth

Cause Location: This cause encompasses the area South of I-64 crossing of Southern Br. E shore trib to Southern Br. Mouth of Creek North of Interstate 64. CBP segment SBEMH. BIBI segment SBEMHa.

Cause City/County: Chesapeake

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Segment listed as impaired in the 2018 IR based on 2016 WoE assessment at station 2-DEC000.58. The WoE analysis collected in 2016 is 5A: IM with high probability of cumulative chronic and acute effects of sediment PAHs and metals. Deep Creek was listed as impaired for benthics in the 2006 IR with CGC G15E-01-01-EBEN and later delisted in the 2012 IR. Station has Cat 5A assessment for both the 2006 and 2016 WoE.

DEQ (C2-2006, 2016) station @ 2-DEC000.58 indicates severe benthic impairment with data collected in 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_DEC02A18 / Deep Creek, Southern Br. Elizabeth R.- Mouth / South of I-64 crossing of Southern Br. E shore trib to Southern Br. Mouth of Creek North of Interstate 64. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	Estuarine Bioassessments	2018	L	0.075

Deep Creek, Southern Br. Elizabeth R.- Mouth

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.075		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Industrial/Commercial Site Stormwater Discharge (Permitted); Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-01-01-TCDD Elizabeth River Southern Branch and its tidal tributaries. CBP segment SBEMH.

Cause Location: This cause encompasses the entirety of the Southern Branch Elizabeth River and its tidal tributaries.

Cause City/County: Chesapeake; Norfolk; Portsmouth

Use(s): Fish Consumption

Causes(s)/VA Category: Dioxin (including 2,3,7,8-TCDD)/5A

Cause Description: The Fish Consumption Use is impaired based on the VDH fish consumption advisory within the Southern Branch Elizabeth River and its tidal tributaries for Dioxin in Blue Crab hepatopancreas contamination, issued by the VDH 1/23/09.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_BLM01A22 / Bells Mill Creek - SB Elizabeth R. S. shore tributary / SB Elizabeth R S shore tributary SW of Great Bridge Locks. CBP & BIBI segment SBEMHa. Portion of DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.027
VAT-G15E_DEC01A06 / Deep Creek, Southern Br. Elizabeth R. / South of I-64 crossing of Southern Br. E shore trib to Southern Br. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.209
VAT-G15E_DEC02A18 / Deep Creek, Southern Br. Elizabeth R.- Mouth / South of I-64 crossing of Southern Br. E shore trib to Southern Br. Mouth of Creek North of Interstate 64. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.075
VAT-G15E_GIL01A10 / Gilligan Cr - Upper, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Upper portion no Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.012
VAT-G15E_GIL02A10 / Gilligan Cr - Lower, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Lower portion with Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.011
VAT-G15E_JON01A10 / Jones Cr - Upper, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Upper portion no Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.027

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_JON02A10 / Jones Cr - Lower, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Lower portion with Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.017
VAT-G15E_MAI01A10 / Mains Cr. - SB Eliz R. E shore Tributary / SB Eliz R. E shore upstream tributary, SE of Deep Cr. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.013
VAT-G15E_MDM01A10 / Milldam Cr trib S. Br. Elizabeth R. / Tributary to E shore SB Elizabeth R. N of Gilmerton Br. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.071
VAT-G15E_NMC01A00 / New Mill Creek - Southern Br. Elizabeth R. / Located south of I-64 crossing of Southern Br. Eastern shore trib to Southern Br, downstream of locks. Entirety of Creek. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.082
VAT-G15E_NTN01A10 / Newton Cr trib to SB Eliz R / Tributary to E shore SB Eliz R. NE of Deep Cr. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.038
VAT-G15E_PAR01A06 / Paradise Creek - Upper, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. No Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.025
VAT-G15E_PAR02A10 / Paradise Creek - Lower, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. With Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.028
VAT-G15E_SBE01A00 / Southern Branch, Elizabeth R. - Upper / South of I-64 crossing. From headwaters @ Great Br Locks downstream to I-64 crossing @ Deep Cr. (RM 6.86). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.636

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_SBE02A06 / Southern Branch, Elizabeth R. - Middle / From I-64 crossing @ Deep Cr. confluence (RM 6.86) downstream to the Jordan Bridge (RM 2.30). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	1.055
VAT-G15E_SBE02B20 / Southern Branch, Elizabeth R. - Middle / Shore along Chesapeake Deep Water Terminal south of Paradise Creek. CBP segment SBEMH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.015
VAT-G15E_SBE02C22 / Southern Branch, Elizabeth R. - Middle / Buffer of station 2CSBE005.84 outside of Newton Creek tributary. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.005
VAT-G15E_SBE03A06 / Southern Branch, Elizabeth R. - Lower / North of the Jordan Bridge. From the Jordan Bridge, Rt. 337 (RM 2.30) downstream to the mouth, confluence with the mainstem Elizabeth R. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMIN) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.545
VAT-G15E_SCU02A24 / Scuffeltown Creek / CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.029
VAT-G15E_STJ01A04 / Saint Julian Creek / Northwest of Gilmerton Bridge. Eastern shore tributary to Southern Br. Entirety of Creek. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.133
VAT-G15E_XFR01A10 / UT to SB Elizabeth R. S shore estuary SE of Mill Cr. / SB Eliz S shore estuary SE of Mill Cr. CBP & BIBI segment SBEMH. DSS (ADMIN-COND) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.008
VAT-G15E_XQT01A10 / UT to SB Elizabeth R. N shore creek near Great Bridge Locks / SB Elizabeth R. upstream N shore creek north of Great Bridge Locks. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.045

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_XQU01A10 / SB Eliz N shore creek SW of Mains Cr. / SB Elizabeth R. upstream N shore creek SW of Mains Cr. CBP & BIBI segment SBEMHa. DSS (ADMIN-COND) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.020
VAT-G15E_ZZZ02A08 / Unsegmented estuaries in SBEMH / CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Dioxin (including 2,3,7,8-TCDD)	2010	L	0.030

Elizabeth River Southern Branch and its tidal tributaries. CBP segment SBEMH.

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dioxin (including 2,3,7,8-TCDD) - Total Impaired Size by Water Type:	3.152		

Sources: Source Unknown; Sources Outside State Jurisdiction or Borders

James River Basin

Cause Group Code: G15E-01-02-EBEN Elizabeth River Southern Branch, Paradise, Saint Julian, New Mill and Deep Creeks and unsegmented estuaries in SBEMH

Cause Location: Elizabeth River Southern Branch, Paradise, Saint Julian, New Mill and Deep Creeks and unsegmented estuaries in SBEMH

Cause City/County: Chesapeake; Portsmouth

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Benthics are impaired for Chesapeake Bay Program segment SBEMHa.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_PAR01A06 / Paradise Creek - Upper, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. No Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.025
VAT-G15E_PAR02A10 / Paradise Creek - Lower, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. With Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.028
VAT-G15E_SBE01A00 / Southern Branch, Elizabeth R. - Upper / South of I-64 crossing. From headwaters @ Great Br Locks downstream to I-64 crossing @ Deep Cr. (RM 6.86). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.636
VAT-G15E_SBE02A06 / Southern Branch, Elizabeth R. - Middle / From I-64 crossing @ Deep Cr. confluence (RM 6.86) downstream to the Jordan Bridge (RM 2.30). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	1.055
VAT-G15E_SCU02A24 / Scuffeltown Creek / CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.029
VAT-G15E_STJ01A04 / Saint Julian Creek / Northwest of Gilmerton Bridge. Eastern shore tributary to Southern Br. Entirety of Creek. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.133

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_ZZZ02A08 / Unsegmented estuaries in SBEMH / CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.030

Elizabeth River Southern Branch, Paradise, Saint Julian, New Mill and Deep Creeks and unsegmented estuaries in SBEMH

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	1.935		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-01-03-EBEN Hampton River

Cause Location: Located between Cherry Acres & East Hampton areas of Hampton, north shore tributary to Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation 056-007 A (effective 20120529).

Cause City/County: Hampton

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: WoE: 2-HAI002.58 '21 5A, segment JMSPH

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_HAI01A06 / Hampton River / Located between Cherry Acres & East Hampton areas of Hampton, north shore tributary to Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	Estuarine Bioassessments	2024	L	0.547

Hampton River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.547		

Sources: Source Unknown; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: G15E-01-BAC Elizabeth River Mainstem - Middle

Cause Location: From a line between Hospital Pt and Smiths Cr down stream to the end of CBP-BIBI segment ELIMHa (downstream of Lamberts Pt.)

Cause City/County: Norfolk; Portsmouth

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/5A

Cause Description: The Aquatic Life Use - Estuarine Bioassessment impairment based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis is retained based on 2012 data. The Elizabeth River mainstem segment BIBI-ELIPHa was assessed as impaired for Aquatic Life Use due to the results of benthic BIBI probabilistic station surveys. The BIBI stressor tool yielded "unknown" as the probable impairment source.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_ELI02A06 / Elizabeth River Mainstem - Middle / From a line between Hospital Pt and Smiths Cr down stream to the end of CBP-BIBI segment ELIMHa (downstream of Lamberts Pt.). BIBI segment ELIMHa. CBP segment ELIPH. DSS (ADMIN) condemnation # 056-007 E and A (effective 20120529).	5A	Enterococcus	2022	L	4.005

Elizabeth River Mainstem - Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	4.005		

Sources: Source Unknown

James River Basin

Cause Group Code: G15E-02-02-BAC Broad Creek, Southern Branch-Lower Middle and Paradise Creek Recreation Impairment

Cause Location: This cause encompasses the Eastern Branch Lower Middle, Broad Creek and Paradise Creek.

Cause City/County: Chesapeake; Norfolk; Portsmouth

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired due to exceedance of two or more STV hits in same 90-day period with less than 10 samples. The Cause Code (G15E-02-02-BAC) relates the bacteria impairments in the lower Eastern & Southern Branches. Bacteria TMDL Development for the Elizabeth River Watershed EPA approved 7/20/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_BRO01A02 / Broad Creek, Eastern Br. Elizabeth R. / Located between Ingleside and Thomas Corner areas. North shore tributary to Eastern Br. Elizabeth R. Entirety of Broad Creek. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 065-007 E (effective 20120529).	4A	Enterococcus	1998	L	0.371
VAT-G15E_PAR01A06 / Paradise Creek - Upper, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. No Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2006	L	0.025
VAT-G15E_PAR02A10 / Paradise Creek - Lower, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. With Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2006	L	0.028
VAT-G15E_SBE03A06 / Southern Branch, Elizabeth R. - Lower / North of the Jordan Bridge. From the Jordan Bridge, Rt. 337 (RM 2.30) downstream to the mouth, confluence with the mainstem Elizabeth R. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMIN) shellfish condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	1998	L	0.545

Broad Creek, Southern Branch-Lower Middle and Paradise Creek Recreation Impairment

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.969		

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

James River Basin

Cause Group Code: G15E-02-03-BAC Southern Branch, Elizabeth R. - Lower and Middle

Cause Location: This cause encompasses the southern branch of the Elizabeth River from the mouth upstream to Deep Creek trib and Interstate 64.

Cause City/County: Chesapeake; Portsmouth

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on Enterococci data from Stations 2-SBE006.26 and 2-SBE001.98 with 2 or more STV hits in the same 90-day period with less than 10 samples. Previous impairment based on Enterococci data from Stations 2-SBE006.26 (7 exc/ 49 obs) and 2-SBE001.98 (14 exc/ 53 obs).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_SBE02A06 / Southern Branch, Elizabeth R. - Middle / From I-64 crossing @ Deep Cr. confluence (RM 6.86) downstream to the Jordan Bridge (RM 2.30). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2016	L	1.055
VAT-G15E_SBE02B20 / Southern Branch, Elizabeth R. - Middle / Shore along Chesapeake Deep Water Terminal south of Paradise Creek. CBP segment SBEMH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2016	L	0.015
VAT-G15E_SBE02C22 / Southern Branch, Elizabeth R. - Middle / Buffer of station 2CSBE005.84 outside of Newton Creek tributary. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2016	L	0.005

Southern Branch, Elizabeth R. - Lower and Middle

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	1.074		

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

James River Basin

Cause Group Code: G15E-02-04-EBEN Eastern Branch Elizabeth River, Broad Creek , Indian River, Steamboat Creek and Unsegmented estuaries in EBEMH

Cause Location: This cause encompasses the entirety of the Eastern Branch Elizabeth River and the tribs Broad Creek, Indian River and Steamboat Cr. CBP segment EBEMH.

Cause City/County: Chesapeake; Norfolk; Virginia Beach

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Benthics are impaired for the Ches Bay seg EBEMH during the 2024 IR. 2010- The Aquatic Life Use was impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis. The benthic source/stressor tool yielded sediment contaminants as the suspected source for the impairment. This segment was previously included (2004 IR) in TMDL ID: VAT-G15E-01-03.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_BRO01A02 / Broad Creek, Eastern Br. Elizabeth R. / Located between Ingleside and Thomas Corner areas. North shore tributary to Eastern Br. Elizabeth R. Entirety of Broad Creek. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 065-007 E (effective 20120529).	5A	Estuarine Bioassessments	2004	L	0.371
VAT-G15E_EBE01A00 / Eastern Branch, Elizabeth R. - Upper / Located between Carolanne Farms and Tanglewood areas. Upper Eastern Br., from headwaters to confluence of Broad Creek (RM 4.0). CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	Estuarine Bioassessments	2004	L	0.377
VAT-G15E_EBE02A06 / Eastern Branch, Elizabeth R. - Lower / From Broad Creek (RM 4.0) downstream to mouth of Elizabeth River mainstem. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	Estuarine Bioassessments	2004	L	1.015
VAT-G15E_IND01A02 / Indian River - Eastern Branch, Elizabeth R. / Located southwest of Broad Creek. Between Campostella Heights and Tanglewood. Entirety of creek including tribs. CBP segment EBEMH. Portion of the DSS (ADMINISTRATIVE) shellfish harvesting condemnation # 056-007 E (effective 20120529).	5A	Estuarine Bioassessments	2006	L	0.268
VAT-G15E_STM01A10 / Steamboat Creek / South Shore trib to E. Branch. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	5A	Estuarine Bioassessments	2006	L	0.058
VAT-G15E_ZZZ03A08 / Unsegmented estuaries in EBEMH / CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2006	L	0.261

Eastern Branch Elizabeth River, Broad Creek , Indian River, Steamboat Creek and Unsegmented estuaries in EBEMH

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.35		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-02-05-BAC Indian River, tributary of Eastern Branch, Elizabeth River

Cause Location: This cause encompasses the entirety of the Indian River. Located southwest of Broad Creek. Between Campostella Heights and Tanglewood. Entirety of creek including tribs. CBP segment EBEMH.

Cause City/County: Chesapeake; Norfolk

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on two or more STV hits in the same 90-day period with less than 10 samples at DEQ (AQM) monitoring station @ 2-IND000.98. Previously station had 23 exc/ 32 obs of the instantaneous criteria for Enterococcus bacteria. . Bacteria TMDL Development for the Elizabeth River Watershed EPA approved 7/20/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_IND01A02 / Indian River - Eastern Branch, Elizabeth R. / Located southwest of Broad Creek. Between Campostella Heights and Tanglewood. Entirety of creek including tribs. CBP segment EBEMH. Portion of the DSS (ADMINISTRATIVE) shellfish harvesting condemnation # 056-007 E (effective 20120529).	4A	Enterococcus	2002	L	0.268

Indian River, tributary of Eastern Branch, Elizabeth River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.268		

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

James River Basin

Cause Group Code: G15E-02-06-BAC Eastern Branch, Elizabeth R. - Lower

Cause Location: This cause encompasses the eastern branch of the Elizabeth River, from the Berkley Bridge to the Broad Creek confluence

Cause City/County: Chesapeake; Norfolk; Virginia Beach

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on Enterococcus data at station 2-EBE000.40 with two or more STV hits in the same 90-day period with less than 10 samples. There is insufficient data to assess at station 2-EBE002.98 with one or multiple STV exceedances in one or multiple 90-day period but insufficient data to analyze geomean. Previous impairment based on single sample maximum from station 2-EBE002.98 with 8 excl/ 47 obs and 2-EBE000.40 7 exc / 54 obs. Station 2-EBE000.40 has rotated on and off impairment between assessment cycles. EPA approved Enterococcus TMDL for Elizabeth River 7/20/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_EBE02A06 / Eastern Branch, Elizabeth R. - Lower / From Broad Creek (RM 4.0) downstream to mouth of Elizabeth River mainstem. CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	4A	Enterococcus	2006	L	1.015

Eastern Branch, Elizabeth R. - Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	1.015		

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

James River Basin

Cause Group Code: G15E-02-07-BAC Eastern Branch, Elizabeth R. - Upper

Cause Location: This cause encompasses the eastern branch of the Elizabeth River, from headwaters to confluence with Broad Creek.

Cause City/County: Norfolk; Virginia Beach

Use(s): Recreation

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

Cause Description: The Recreation Use is not supporting based on CitMon data collected at station 2EBE-LRN13-LRN by the Lynnhaven River Now with 2 exc / 2 obs of Enterococci data outside of the assessment window. The whole AU is listed based on station data, upstream and downstream bacteria impairments. EPA approved 9/30/2010 TMDL for Elizabeth River Watershed, Enterococci.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_EBE01A00 / Eastern Branch, Elizabeth R. - Upper / Located between Carolanne Farms and Tanglewood areas. Upper Eastern Br., from headwaters to confluence of Broad Creek (RM 4.0). CBP segment EBEMH. BIBI segment EBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	4A	Enterococcus	2020	L	0.377

Eastern Branch, Elizabeth R. - Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.377		

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

James River Basin

Cause Group Code: G15E-03-01-EBEN Elizabeth River Mainstem

Cause Location: This cause encompasses the entirety of the Elizabeth River Mainstem. CBP segment SBEMH. BIBI segment ELIMHa.

Cause City/County: Norfolk; Portsmouth

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: The Aquatic Life Use is assessed as impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis retained from 2010. The Elizabeth River mainstem segment for BIBI (ELIMHa) was assessed as impaired of the Clean Water Act's Aquatic Life Use Support Goal due to the results of benthic BIBI probabilistic station surveys. The BIBI stressor tool yielded "sediment contaminants" as the probable impairment source.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_ELI01A06 / Elizabeth River Mainstem - Upper / From start of mainstem downstream to line between Hospital Pt and Smiths Cr. (Incl. Hague). Segment ELIMHa (downstream Lamberts Pt.). DSS (ADMIN) cond # 056-007 E (effective 20120529).	5A	Estuarine Bioassessments	2004	L	0.468
VAT-G15E_ELI02A06 / Elizabeth River Mainstem - Middle / From a line between Hospital Pt and Smiths Cr down stream to the end of CBP-BIBI segment ELIMHa (downstream of Lamberts Pt.). BIBI segment ELIMHa. CBP segment ELIPH. DSS (ADMIN) condemnation # 056-007 E and A (effective 20120529).	5A	Estuarine Bioassessments	2004	L	4.005

Elizabeth River Mainstem

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	4.473		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-04-01-BAC Western Branch, Elizabeth R. - Upper

Cause Location: This cause encompasses the area located between Stewart Manor and Point Elizabeth areas. From headwaters (RM 8.5) downstream to Sterns Creek (RM 3.5). BIBI segment WBEMHa.

Cause City/County: Chesapeake; Portsmouth

Use(s): Recreation

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

Cause Description: The Recreation Use is not supporting based on Enterococcus bacteria data from station 2-WBE004.44 with 2 or more STV hits in the same 90-day period with less than 10 samples. (Previous water quality standard assessment 9 exc / 53 obs. EPA approved TMDL for Enterococcus in Lower and Upper Western Branch Elizabeth River 7/20/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_WBE01A02 / Western Branch, Elizabeth R. - Upper / Located between Stewart Manor and Point Elizabeth areas. From headwaters (RM 8.5) downstream to Sterns Creek (RM 3.5). BIBI segment WBEMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2006	L	0.561

Western Branch, Elizabeth R. - Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.561		

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

James River Basin

Cause Group Code: G15E-04-02-BAC Western Branch, Elizabeth R. - Lower

Cause Location: This cause encompasses the main stem of the Elizabeth River from the West Norfolk Bridge (164) to the confluence with Sterns Creek.

Cause City/County: Portsmouth

Use(s): Recreation

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

Cause Description: The Recreation Use is impaired based on the Enterococci data from Station 2-WBE002.11 with 2 or more STV hits in the same 90-day period with less than 10 samples. Previous water quality standard assessed 7 exc/ 52 obs.. This segment is included in the Bacteria TMDL Development for the Elizabeth River Watershed EPA approved 7/20/2010. This segment is included in the Bacteria TMDL Development for the Elizabeth River Watershed EPA approved 7/20/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_WBE02A00 / Western Branch, Elizabeth R. - Lower / Located between the Point Elizabeth and Lovett Point areas. From Sterns Creek confluence (RM 3.5) downstream to the mouth. CBP segment WBEMH. BIBI segment WBEMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2006	L	1.457

Western Branch, Elizabeth R. - Lower

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	1.457		

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

James River Basin

Cause Group Code: G15E-04-02-EBEN Western Branch Elizabeth River and Unsegmented estuaries in WBEMH

Cause Location: This cause encompasses the entirety of the Western Branch Elizabeth River and its tributaries. CBP segment WBEMH. BIBI segment WBEMHa.

Cause City/County: Chesapeake; Portsmouth

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: WBEMHa is impaired for benthics in the 2024 IR. 2010- The Aquatic Life Use was impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis (VERSAR-2005). The benthic source/stressor tool yielded sediment contaminants as the suspected source for the impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_DPT01A06 / Drum Point Creek - Western Branch, Elizabeth R. / Western shore trib to the Western Br. Entirety of creek including tributaries. Located in the area of Charlton Village to Ahoy Acres. CBP segment WBEMH. Portion of the DSS (ADMINISTRATIVE) shellfish condemnation # 065-007 E (effective 20210615).	5A	Estuarine Bioassessments	2010	L	0.148
VAT-G15E_WBE01A02 / Western Branch, Elizabeth R. - Upper / Located between Stewart Manor and Point Elizabeth areas. From headwaters (RM 8.5) downstream to Sterns Creek (RM 3.5). BIBI segment WBEMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2006	L	0.561
VAT-G15E_WBE02A00 / Western Branch, Elizabeth R. - Lower / Located between the Point Elizabeth and Lovett Point areas. From Sterns Creek confluence (RM 3.5) downstream to the mouth. CBP segment WBEMH. BIBI segment WBEMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2010	L	1.457
VAT-G15E_ZZZ04A08 / Unsegmented estuaries in WBEMH / CBP segment WBEMH. BIBI segment WBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2010	L	0.560

Western Branch Elizabeth River and Unsegmented estuaries in WBEMH

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.725		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-05-02-BAC Knitting Mill Creek and Lafayette R-Upper

Cause Location: This cause encompasses the Knitting Mill Creek, a Creek off of Lafayette River near Colonial Place and upper Lafayette River.

Cause City/County: Norfolk

Use(s): Recreation

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

Cause Description: The Recreation Use impairment is retained for Knitting Mill Creek with no current data to assess and retained for the upper Lafayette that has insufficient data to assess and analyze the new water quality standards. Bacteria TMDL Development for the Elizabeth River Watershed EPA approved 7/20/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_KMK01A12 / Knitting Mill Creek / Creek off of Lafayette River near Colonial Place. CBP segment ELIPH. BIBI segment LAFMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2002	L	0.027
VAT-G15E_LAF01A06 / Lafayette River - Upper / Located east of Craney Isl. From headwaters (approx. RM 7.5) downstream to past Rt 337 (Hampton Blvd bridge, RM 1.75) near Edgewater Haven. CBP segment LAFMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	4A	Enterococcus	2006	L	1.743

Knitting Mill Creek and Lafayette R-Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	1.77		

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

James River Basin

Cause Group Code: G15E-06-01-BAC James River - King/Lincoln Park Beach Area

Cause Location: Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH.

Cause City/County: Newport News

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/5A

Cause Description: Enterococcus data is Fully Supporting with Observed Effects - No geomean exceedances and only 1 STV exceedance in one or multiple 90-day periods represented by < 10 samples. Due to the multiple swimming advisories and previously high STV and geomean exceedances within the past 6 years, Recreation use remains impaired. Previous geomean assessments from 2020 (8 viol/ 19 Geo-mean obs) and multiple swimming advisories.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_JMS01B06 / James River - King/Lincoln Park Beach Area / Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	Enterococcus	2006	L	0.009

James River - King/Lincoln Park Beach Area

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.009		

Sources: Source Unknown

James River Basin

Cause Group Code: G15E-06-02-BAC James River - Anderson Park Beach Area

Cause Location: Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH.

Cause City/County: Newport News

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/5A

Cause Description: Enterococcus data is Fully Supporting with Observed Effects - No geomean exceedances and only 1 STV exceedance in one or multiple 90-day periods represented by < 10 samples. Due to the multiple swimming advisories and previously high STV and geomean exceedances within the past 6 years, Recreation use remains impaired. Previous monthly geomean assessment from 2020 (5 viol/ 18 Geo-mean obs) and multiple swimming advisories.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_JMS01C06 / James River - Anderson Park Beach Area / Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	Enterococcus	2012	L	0.011

James River - Anderson Park Beach Area

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.011		

Sources: Source Unknown

James River Basin

Cause Group Code: G15E-06-03-BAC Hoffler Creek

Cause Location: This cause encompasses the entirety of Hoffler Creek. Located along south shore of Hampton Roads Harbor. Entirety of Hoffler Creek. South shore trib to James River west of Craney Isl. (at mouth of Elizabeth R). CBP segment JMSMH.

Cause City/County: Portsmouth; Suffolk

Use(s): Recreation

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

Cause Description: The Recreation impairment is retained for the 2022 cycle. No data collected since 2009 - deactivated trend station. In 2016, there were 2 exc/ 4 obs for enterococcus at station 2-HOF000.44. In 2014, The Recreation Use was assessed as impaired based on exceedance of the instantaneous criteria for Enterococcus bacteria at station 2-HOF000.44 (5 / 12). The impairment was added for the 2008 IR under ID = VAT-G15E-06-03. Hoffler Creek Bacteria TMDL EPA approved 12/14/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_HOF01A06 / Hoffler Creek / Located along south shore of Hampton Roads Harbor. Entirety of Hoffler Cr. South shore trib to James R. west of Craney Isl. (at mouth of Elizabeth R). CBP segment JMSMH. DSS (ADMIN) shellfish harvesting condemnation # 064-018 A (effective 20210615).	4A	Enterococcus	2008	L	0.053

Hoffler Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.053		

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

James River Basin

Cause Group Code: G15E-06-04-BAC Willoughby Bay - Beach Area

Cause Location: This cause encompasses the area located along the northern shore portion of Willoughby Bay along Willoughby Spit. CBP segment JMSPH.

Cause City/County: Norfolk

Use(s): Recreation

Causes(s)/VA Category: Enterococcus/5A

Cause Description: The Recreation Use is assessed as impaired based on the data from the VDH Beach Monitoring Program Enterococci data, swimming advisories and joint VDH-DEQ assessment review at Captains Quarters VDH station. The station VA862384 has 2 or more STV exceedances in the same 90-day period represented by 10 plus samples, with no geomean exceedances.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_WLY03A06 / Willoughby Bay - Beach Area / Located along the northern shore portion of Willoughby Bay along Willoughby Spit. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	Enterococcus	2014	L	0.142

Willoughby Bay - Beach Area

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.142		

Sources: Source Unknown

James River Basin

Cause Group Code: G15E-06-EBEN Lafayette River

Cause Location: Located east of Craney Isl. From headwaters (approx. RM 7.5) downstream to past Rt 337 (Hampton Blvd bridge, RM 1.75) near Edgewater Haven. CBP segment LAFMHa. DSS (ADMIN) condemnation 056-007 E (effective 20120529).

Cause City/County: Norfolk

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Benthics are impaired for LAFMHa.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_LAF01A06 / Lafayette River - Upper / Located east of Craney Isl. From headwaters (approx. RM 7.5) downstream to past Rt 337 (Hampton Blvd bridge, RM 1.75) near Edgewater Haven. CBP segment LAFMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	1.743
VAT-G15E_LAF02A06 / Lafayette River - Lower / Located east of Craney Isl. From Rt. 337 (Hampton Blvd bridge, RM 1.75) downstream to the mouth. CBP segment LAFMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.404

Lafayette River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.147		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-08-EBEN Willoughby Bay [Less Beach Area]

Cause Location: This cause encompasses the area located adjacent to mouth of James River at Hampton Roads, southeast of Hampton Roads Bridge Tunnel. CBP segment JMSPH.

Cause City/County: Norfolk

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Aquatic Life Use is impaired based on WoE station 2-WLY002.03 assessed as category 5A with probable cumulative effects of sediment metals and PAH contamination.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_WLY01A06 / Willoughby Bay [Less Beach Area] / Located adjacent to mouth of James River at Hampton Roads, southeast of Hampton Roads Bridge Tunnel. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	5A	Estuarine Bioassessments	2018	L	2.476

Willoughby Bay [Less Beach Area]

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.476		

Sources: Agriculture; Source Unknown

James River Basin

Cause Group Code: G15E-09-EBEN Southern Branch, Elizabeth River - Middle

Cause Location: This cause encompasses the area located along the shore of the Deep Water Terminal, south of Paradise Creek. CBP segment SBEMH.

Cause City/County: Chesapeake; Norfolk; Portsmouth

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Aquatic Life Use is impaired based on the 2013 2CSBE003.65 WoE evaluation and assessment of the ALU for estuarine benthic communities. The 2013 assessment determined potential causes based on extremely high concentrations of Low Molecular Weight (LMW) PAHs in sediment. Elevated dissolved inorganic phosphorus and slightly depressed bottom DO.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_SBE02B20 / Southern Branch, Elizabeth R. - Middle / Shore along Chesapeake Deep Water Terminal south of Paradise Creek. CBP segment SBEMH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2020	L	0.015
VAT-G15E_SBE03A06 / Southern Branch, Elizabeth R. - Lower / North of the Jordan Bridge. From the Jordan Bridge, Rt. 337 (RM 2.30) downstream to the mouth, confluence with the mainstem Elizabeth R. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMIN) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.545

Southern Branch, Elizabeth River - Middle

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.56		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-10-EBEN Knitting Mill Creek

Cause Location: This cause encompasses the Creek off of Lafayette River near Colonial Place.

Cause City/County: Norfolk

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Aquatic Life Use is not supporting based on 2020 WoE station 2CKMK000.05 Category 5A based on Scenario 8, water quality, with comment contaminants are not bioavailable.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_KMK01A12 / Knitting Mill Creek / Creek off of Lafayette River near Colonial Place. CBP segment ELIPH. BIBI segment LAFMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2022	L	0.027

Knitting Mill Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.027		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-11-EBEN Southern Branch, Elizabeth R. - Middle

Cause Location: This cause encompasses the area buffering station 2CSEB005.84 on the Southern Branch of the Elizabeth River near the tributary Newton Creek.

Cause City/County: Chesapeake

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: The Aquatic Life Use is impaired based on WoE data collected at station 2CSEB005.84 in 2020 with a 5A category. Benthics are impaired and the data show strong evidence for pollution induced degradation , Scenario 1.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_SBE02C22 / Southern Branch, Elizabeth R. - Middle / Buffer of station 2CSBE005.84 outside of Newton Creek tributary. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2022	L	0.005

Southern Branch, Elizabeth R. - Middle

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.004		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: G15E-12-EBEN Chesapeake Bay segment SBEMHa

Cause Location: This cause encompasses the complete CBP segment SBEMHa.

Cause City/County: Chesapeake

Use(s): Aquatic Life

Causes(s)/VA Category: Estuarine Bioassessments/5A

Cause Description: Estuarine Benthics are impaired based on the CB BIBI assessment for segment SBEMHa.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_DEC01A06 / Deep Creek, Southern Br. Elizabeth R. / South of I-64 crossing of Southern Br. E shore trib to Southern Br. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.209
VAT-G15E_GIL01A10 / Gilligan Cr - Upper, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Upper portion no Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.012
VAT-G15E_GIL02A10 / Gilligan Cr - Lower, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Lower portion with Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.011
VAT-G15E_JON02A10 / Jones Cr - Lower, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Lower portion with Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.017
VAT-G15E_MAI01A10 / Mains Cr. - SB Eliz R. E shore Tributary / SB Eliz R. E shore upstream tributary, SE of Deep Cr. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.013
VAT-G15E_MDM01A10 / Milldam Cr trib S. Br. Elizabeth R. / Tributary to E shore SB Elizabeth R. N of Gilmerton Br. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.071
VAT-G15E_NMC01A00 / New Mill Creek - Southern Br. Elizabeth R. / Located south of I-64 crossing of Southern Br. Eastern shore trib to Southern Br, downstream of locks. Entirety of Creek. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.082

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_NTN01A10 / Newton Cr trib to SB Eliz R / Tributary to E shore SB Eliz R. NE of Deep Cr. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.038
VAT-G15E_XFR01A10 / UT to SB Elizabeth R. S shore estuary SE of Mill Cr. / SB Eliz S shore estuary SE of Mill Cr. CBP & BIBI segment SBEMH. DSS (ADMIN-COND) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.008
VAT-G15E_XQT01A10 / UT to SB Elizabeth R. N shore creek near Great Bridge Locks / SB Elizabeth R. upstream N shore creek north of Great Bridge Locks. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.045
VAT-G15E_XQU01A10 / SB Eliz N shore creek SW of Mains Cr. / SB Elizabeth R. upstream N shore creek SW of Mains Cr. CBP & BIBI segment SBEMHa. DSS (ADMIN-COND) shellfish condemnation # 056-007 E (effective 20210615).	5A	Estuarine Bioassessments	2024	L	0.020

Chesapeake Bay segment SBEMHa

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.523		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Source Unknown; Sources Outside State Jurisdiction or Borders; Urban Runoff/Storm Sewers; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: H01R-01-BAC Reed Creek

Cause Location: The upper limit is the headwaters in the Jefferson National Forest on the Sedalia Quad (intersection of State Routes 638 and 764). The impairment ends at the mouth of Reed Creek on the James River below Big Island, Virginia (Snowden, Sedalia and Big Island Quads).

Cause City/County: Bedford County

Use(s): Recreation

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

Cause Description: The Reed Creek Bacteria TMDL Load Duration Study received U.S. EPA approval on 6/21/04 [Fed. ID. 7763 / 21565] and SWCB approval on 12/02/04 for these 1998 303(d) Listed waters for fecal coliform bacteria (formerly 2002 thru 2006 VAW-H01R-01). Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters].

Three stations are located within the 8.83 mile impaired waters (NHD mileage correction from 2002 Listing 12.27 miles). 2-RED000.16 (Off Route 501), the original listing station, and two additional stations 2-RED005.36 (Route 637 Bridge) and 2-RED008.32 (Route 122 Bridge).

2-RED008.22- (Rt. 122 Bridge) There are no additional data within the 2014 or 2016 data windows. 2012 results are one (1300 cfu/100 ml) of three samples in excess of the instantaneous criterion.

2-RED005.36- (Rt. 637 Bridge) There are no additional data collected since the 2012 data window where three of three samples exceed the instantaneous criterion within the 2012 data window.

2-RED000.16- (Off Rt. 501) The 2020 data window finds two of 12 excursions of the 235 cfu/100 ml instantaneous criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H01R_RED01A00 / Reed Creek / Reed Creek mainstem from its mouth on the James River upstream to the intersection of State Routes 638 and 764 (JM02).	4A	Escherichia coli (E. coli)	2004	L	8.83

Reed Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.83

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

James River Basin

Cause Group Code: H01R-01-HG James River

Cause Location: James River from Balcony Falls Dam downstream to Holcomb Rock Dam

Cause City/County: Amherst County; Bedford County; Rockbridge County

Use(s): Fish Consumption

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

Cause Description: This initial 2010 303(d) Listing is based on 2005 fish tissue collections and new Water Quality Standards effective 2/01/10. Mercury (Hg) exceedances of the DEQ 0.3 parts per million (ppm) tissue value cause impairment of the Fish Consumption Use. No VDH Fish Consumption or Drinking Water Advisories are issued for mercury for these waters. The Virginia Department of Health (VDH) level of concern is 0.5 ppm. Please visit http://www.deq.virginia.gov/ for more information about mercury contamination and http://www.vdh.virginia.gov for VDH Advisories or Bans.

2-JMS279.41 (Blue Ridge Parkway Bridge) - The initial 2010 303(d) Listing is based on 2005 fish tissue analysis where mercury (Hg) is found in two species; smallmouth bass at 0.46 ppm and largemouth bass at 0.40 ppm; each in excess of the new WQS TV based 0.3 ppm. There are no additional data within the 2012, 2014, 2016, 2018, 2020, or 2022 data windows.

2-JMS277.30 - Anecdotal impairment information is found in 2017 fish tissue collections where mercury (Hg) is found in two species exceeding the WQS-based tissue value 0.3 ppm: smallmouth bass (7 fish) at 0.32 ppm; Carp (3 fish) at 0.42 ppm.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H01R_JMS01A00 / James River / James River mainstem from the mouth of Wilderness Creek downstream to Holcomb Rock Dam (JM03).	5A	Mercury in Fish Tissue	2010	L	1.37
VAW-H01R_JMS01A04 / James River / The James River from the upstream ending of the WQS PWS designation at Colemans Dam (37.5023, -79.300383) downstream to the mouth of Wilderness Creek (JM03).	5A	Mercury in Fish Tissue	2010	L	0.70
VAW-H01R_JMS02A00 / James River / James River mainstem from the Georgia Pacific outfalls downstream to the upstream ending of the WQS PWS designation at Colemans Dam (37.5023, -79.300383) (JM03).	5A	Mercury in Fish Tissue	2010	L	3.30
VAW-H01R_JMS03A00 / James River / James River mainstem from the mouth of Peters Creek downstream to the Georgia Pacific outfalls on the James River (JM01).	5A	Mercury in Fish Tissue	2010	L	3.05
VAW-H01R_JMS04A00 / James River / James River mainstem from the Balcony Falls Dam (historically located at 37.623, -79.444) near the Maury R. confluence downstream to the mouth of Peters Creek (JM01).	5A	Mercury in Fish Tissue	2010	L	7.42

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			15.84

Sources: Source Unknown

James River Basin

Cause Group Code: H01R-03-BAC James River

Cause Location: James River from the mouth of Reed Creek downstream to Holcomb Rock Dam.

Cause City/County: Amherst County; Bedford County

Use(s): Recreation

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

Cause Description: These waters were previously 303(d) Listed in 1998 and de-listed with the 2002 assessment. These waters return to impaired waters status with the 2016 Integrated Report (IR) and are Nested in the E. coli TMDL for the James River and Tributaries near Lynchburg, VA which was SWCB approved 7/19/17 and EPA approved 9/27/17 (TMDL ID: 68323).

2-JMS275.75 (Below Big Island) Six of 36 E.coli samples exceed the 235 cfu/100 ml instantaneous criterion during the 2018 data window.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H01R_JMS01A00 / James River / James River mainstem from the mouth of Wilderness Creek downstream to Holcomb Rock Dam (JM03).	4A	Escherichia coli (E. coli)	2016	L	1.37
VAW-H01R_JMS01A04 / James River / The James River from the upstream ending of the WQS PWS designation at Colemans Dam (37.5023, -79.300383) downstream to the mouth of Wilderness Creek (JM03).	4A	Escherichia coli (E. coli)	2016	L	0.70
VAW-H01R_JMS02A00 / James River / James River mainstem from the Georgia Pacific outfalls downstream to the upstream ending of the WQS PWS designation at Colemans Dam (37.5023, -79.300383) (JM03).	4A	Escherichia coli (E. coli)	2016	L	3.30

James River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.37

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H02L-01-PH Pedlar Lake

Cause Location: Pedlar Lake

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: Pedlar Lake located in Amherst County is listed for Aquatic Life Use due to pH during the 2024 303(d)/305(b) Integrated Report data window.

2-POL017.59 (Pedlar River Reservoir) The reservoir 2024 data window reports 15 of 125 pH measurements in excess of the Class V pH criterion of 6.0-9.0 pHU.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H02L_POL01A02 / Pedlar Lake / Pedlar Reservoir from its impounding structure to its backwaters.	5A	pH	2024	L	117.75

Pedlar Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		117.75	

Sources: Natural Sources; Source Unknown

James River Basin

Cause Group Code: H02L-01-TEMP Pedlar Lake

Cause Location: Pedlar Lake

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: Pedlar Lake located in Amherst County is listed for Aquatic Life Use during the 2020 303(d)/305(b) Integrated Report data window.

2-POL017.59 (Pedlar River Reservoir) The reservoir 2024 data window reports 87 of 510 Temperature measurements in excess of the Class V Temperature criterion of 21 C.

2020 data window reports 66 of 386 Temperature measurements in excess of the Class V Temperature criterion of 21 C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H02L_POL01A02 / Pedlar Lake / Pedlar Reservoir from its impounding structure to its backwaters.	5C	Temperature	2020	L	117.75

Pedlar Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:		117.75	

Sources: Natural Sources; Source Unknown

James River Basin

Cause Group Code: H02R-01-BAC Pedlar River

Cause Location: Pedlar River from its mouth on the James River to its confluence with Enchanted Creek.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: NESTED 2014: 35014, 12/4/2007

The James River Bacteria TMDL Study received U.S. EPA approval on 11/4/07 [Fed. ID.35014] and SWCB approval on 12/04/07 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 35014, 11/04/2007

Four stations are located within the 16.38 miles of impaired waters. 2-POL000.04(Route 650 Bridge-Amherst County), and three additional stations. 2-POL007.20 (Route 643), 2-POL008.53 (Pedlar River at Route 610), and 2-POL010.11 (Below Route 640 Bridge)

2-POL010.11 (Below Route 640 Bridge) 2018 results are two of 12 samples in excess of the instantaneous criterion. (exceedances were 325 and 1525 cfu/100ml)

2-POL008.53 (Pedlar River at Route 610) 2022 1 or 12 samples exceeds Statistical Threshold Value, IM carries.

2-POL007.20 (Route 643) 2018 results are three of 12 samples in excess of the instantaneous criterion. (exceedances were 375,300,and 700 cfu/100ml)

2-POL000.04(Route 650 Bridge-Amherst County) 2018 results are two of 12 samples in excess of the instantaneous criterion. (exceedances were 1275 and 2187 cfu/100ml)

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H02R_POL01A00 / Pedlar River / Pedlar River mainstem from its mouth on the James River upstream to the mouth of Horsley Creek (JM06).	4A	Escherichia coli (E. coli)	2016	L	5.54
VAW-H02R_POL01B14 / Pedlar River / Pedlar River from the mouth of Horsley Creek upstream to the mouth of Little Cedar Creek (JM05).	4A	Escherichia coli (E. coli)	2014	L	1.33
VAW-H02R_POL02A00 / Pedlar River / Pedlar River mainstem from the Little Cedar Creek mouth upstream to the mouth of an unnamed tributary located just downstream of the Rt. 610 crossing and upstream of the Little Dancing Creek mouth (JM05).	4A	Escherichia coli (E. coli)	2006	L	2.53
VAW-H02R_POL03A02 / Pedlar River / Pedlar River mainstem from an unnamed tributary's confluence with the Pedlar River, just downstream of the Rt. 610 crossing upstream to the mouth of Enchanted Creek (JM05).	4A	Escherichia coli (E. coli)	2006	L	7.00

Pedlar River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			16.4

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

James River Basin

Cause Group Code: H02R-02-BAC Pedlar River, Upper

Cause Location: Pedlar River from the National Forest boundary upstream to its headwaters.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: NESTED 2014: 35014, 12/4/2007

The James River Bacteria TMDL Study received U.S. EPA approval on 11/4/2007 [Fed. ID.35014] and SWCB approval on 12/04/2007 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 35014, 11/04/2007

One station is located within the 8.94 miles of impaired waters. 2-POL028.68(FR 76)

2-POL028.68 (FR 76) 2020 Results are 2 of 12 in excess of the instantaneous standard.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H02R_POL07B02 / Pedlar River / Pedlar River mainstem from the boundary of the National Forest upstream to its headwaters (JM04).	4A	Escherichia coli (E. coli)	2016	L	8.94

Pedlar River, Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.94

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

James River Basin

Cause Group Code: H02R-03-TEMP Pedlar River

Cause Location: Pedlar River mainstem (free flowing waters) from the Pedlar Reservoir backwaters upstream; five miles upstream from the Lynchburg City intake, the WQS public water supply (PWS) designation (JM04).

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: The initial 2020 assessment window listing for aquatic life use (temperature) is based on two measurements collected during the summer months on Pedlar River within the Tier III section.

2-POL019.63 (Pedlar River upstream of reservoir @ Rt 636) - The 2022 IR finds Temp 'IM' from two of 14 exceedances of the 21 C Class V Water Quality Criterion. The 2020 IR finds Temp 'IM' from two exceedances of the 21 C Class V Water Quality Criterion at 22.1 C (6/15/17) and 25.8 C (7/25/17).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H02R_POL05B02 / Pedlar River / Pedlar River mainstem (free flowing waters) from the Pedlar Reservoir backwaters upstream; five miles upstream from the Lynchburg City intake, the WQS public water supply (PWS) designation (JM04).	5C	Temperature	2020	L	4.89

Pedlar River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			4.89

Sources: Natural Sources

James River Basin

Cause Group Code: H02R-04-BEN Horsely Creek

Cause Location: Horsely Creek mainstem from its confluence on the Pedlar River upstream to the mouth of the South Fork Horsely Creek (JM06).

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: The initial 303(d) Aquatic Life Use impairment listing for Horsely Creek is based on benthic macroinvertebrate community collections during the 2024 data window.

2BHOY002.92 (Rt. 642) Benthic macroinvertebrate community impairment is based on two 2021 Virginia Stream Condition Index (VSCI) Scores of 65 (Spring) and 47 (Fall). Biologist notes that site has very little vegetated riparian zone other than grass. Eroded, failing streambanks were common as were embedded riffles, which result in poor habitat for aquatic life.

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community. Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H02R_HOY01A02 / Horsely Creek / Horsely Creek mainstem from its confluence on the Pedlar River upstream to the mouth of the South Fork Horsely Creek (JM06).	5A	Benthic Macroinvertebrates Bioassessments	2024	L	6.24

Horsely Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.24

Sources: Non-Point Source; Sediment Resuspension (Clean Sediment); Streambank Erosion

James River Basin

Cause Group Code: H03R-01-BAC Blackwater Creek

Cause Location: Blackwater Creek from the confluence of Tomahawk and Burton Creeks to the mouth at the James River.

Cause City/County: Lynchburg

Use(s): Recreation

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

Cause Description: The James River Bacteria TMDL Study (Blackwater Creek) received U.S. EPA approval on 11/4/07 [Fed. ID.35571] and SWCB approval on 12/04/07 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. In 2019, new criterion states that E. coli bacteria shall not exceed a geometric mean of 126 counts/100ml and shall not have greater than a 10% excursion frequency of a statistical threshold value (STV) of 410 counts/100 ml, both in an assessment period of up to 90 days [9VAC25-260-170].

Two stations are located within the 10.54 miles of impaired waters: 2-BKW000.40 (Blackwater Creek at Rivermont Ave) and 2-BKW000.40 (Blackwater Creek at Rivermont Ave).

2-BKW000.40 (Blackwater Creek at Rivermont Ave) 2022 results are two of 12 samples in excess of the Statistical Threshold Value.

2-BKW005.95 (Blackwater Creek at Hill Street [South of Langhorne]) No NEW data in 2022 or 2020 for bacteria. Two of 12 samples in excess of the instantaneous criterion. (exceedances were 325 and 1525 cfu/100ml)

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_BKW01A00 / Blackwater Creek / Blackwater Creek mainstem from the confluence of Tomahawk and Burton Creeks downstream to the Blackwater Creek confluence on the James River (JM10).	4A	Escherichia coli (E. coli)	2006	L	10.54

Blackwater Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.54

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-01-BEN Blackwater Creek

Cause Location: Blackwater Creek from the confluence of Tomahawk and Burton Creeks to the mouth at the James River.

Cause City/County: Lynchburg

Use(s): Aquatic Life

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

Cause Description: Blackwater Creek was initially impaired for Aquatic Life Use in 2010 due to benthic macroinvertebrate community data collections detailed below.

2-BKW000.40 (Rivermont Ave) The 2024 data window finds Aquatic Life Use impairment based on two Virginia Stream Condition Index (VSCI) scores of 38 (spring) and 59 (fall) (2021). Biologist notes that this stream has unstable banks and minimal habitat available. Original impairment based on benthic macroinvertebrate community data collected in 2007.

2-BKW004.87 (near Ivy Cr confluence) Benthic macroinvertebrate impairment continuation is confirmed from seven VSCI scores averaging 34 (Spring) and 59 (Fall) (2018-19, 2021-22). Biologist notes: This stream has unstable banks and heavy sediment deposits. The riffles are embedded with sand which impacts the benthic community. Initial impairment based on data collected in 2007.

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community. Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_BKW01A00 / Blackwater Creek / Blackwater Creek mainstem from the confluence of Tomahawk and Burton Creeks downstream to the Blackwater Creek confluence on the James River (JM10).	5A	Benthic Macroinvertebrates Bioassessments	2010	H	10.54

Blackwater Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			10.54

Sources: Non-Point Source

James River Basin

Cause Group Code: H03R-02-BAC Fishing Creek

Cause Location: Fishing Creek mainstem from its confluence with the James River upstream to its headwaters.

Cause City/County: Lynchburg

Use(s): Recreation

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

Cause Description: The James River Bacteria TMDL Study (Fishing Creek) received U.S. EPA approval on 11/4/07 [Fed. ID.35572] and SWCB approval on 12/04/07 for these 1996 and 2004 303(d) Listed waters for fecal coliform. These waters were incorporated in the E. coli TMDL Development for the James River and Tributaries near Lynchburg, VA located in the Counties of Amherst, Bedford, and Campbell and in the City of Lynchburg (EPA approved 9/27/17, SWCB approved 7/19/17) [TMDL IDs 68321,68326]. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. In 2019, new criterion states that E. coli bacteria shall not exceed a geometric mean of 126 counts/100ml and shall not have greater than a 10% excursion frequency of a statistical threshold value (STV) of 410 counts/100 ml, both in an assessment period of up to 90 days [9VAC25-260-170].

One station is located within the 6.32 miles of impaired waters: 2-FSG000.85 (Ambient, Lynchburg Area TMDL)(Fishing Creek at Winchester Rd) During the 2016 data window, five of 12 samples were observed in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_FSG01A00 / Fishing Creek / Fishing Creek mainstem from its confluence with the James River upstream to its headwaters (JM11).	4A	Escherichia coli (E. coli)	2008	L	6.32

Fishing Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.32

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-03-BAC Ivy Creek

Cause Location: Ivy Creek mainstem from its headwaters downstream to its confluence with Blackwater Creek.

Cause City/County: Lynchburg

Use(s): Recreation

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

Cause Description: The James River Bacteria TMDL Study (Ivy Creek) received U.S. EPA approval on 11/4/07 [Fed. ID.35573] and SWCB approval on 12/04/07 for these 1996 and 2004 303(d) Listed waters for fecal coliform. These waters were incorporated in the E. coli TMDL Development for the James River and Tributaries near Lynchburg, VA located in the Counties of Amherst, Bedford, and Campbell and in the City of Lynchburg (EPA approved 9/27/17, SWCB approved 7/19/17) [TMDL IDs 68321,68326]. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. In 2019, new criterion states that E. coli bacteria shall not exceed a geometric mean of 126 counts/100ml and shall not have greater than a 10% excursion frequency of a statistical threshold value (STV) of 410 counts/100 ml, both in an assessment period of up to 90 days [9VAC25-260-170].

2-IVA000.22 (Ivy Creek at Business Rt 501) 2022 data window finds two of 12 samples in excess of the Statistical Threshold Value.

2-IVA005.43 (Peaks View Park - Admore Bridge) Two of 12 samples in excess of the instantaneous criterion during the 2016 data window.

2-IVA006.38 (Ivy Creek at Wigginton Rd) No current data. E.coli impairment carries from 2/12 exceedances from a previous cycle.

2-IVA012.13 (Ivy Creek at Route 662) Five of 12 samples in excess of the instantaneous criterion (excursion range: 250-350 cfu/100ml) during the 2018 data window.

2IVA-MJ-IC-ACB - No current data. One historical [Lv.2] elevated E.coli sample at 300.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_IVA01A00 / Ivy Creek / Ivy Creek mainstem from its headwaters downstream to its confluence with Blackwater Creek (JM09).	4A	Escherichia coli (E. coli)	2008	L	21.45

Ivy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			21.45

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-03-BEN Ivy Creek

Cause Location: Ivy Creek mainstem from its headwaters downstream to its confluence with Blackwater Creek.

Cause City/County: Lynchburg

Use(s): Aquatic Life

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

Cause Description: Ivy Creek was initially impaired for Aquatic Life Use in 2010 due to benthic macroinvertebrate community data collections detailed below.

2-IVA000.05 (upstream of confluence with Blackwater Cr.) The 2024 data window finds continued impairment of the benthic macroinvertebrate community based on Virginia Stream Condition Index (VSCI) scores with a spring average of 38 and fall average of 62 (2018-19, 2021-22). Biologist notes that the watershed is urbanized. Habitat scores indicate a high probability of stress to Aquatic Life. Embedded riffles negatively affect the benthic community.

2-IVA005.75 (Peaks View - Tenbury bridge) Four benthic macroinvertebrate community samples show impairment during the 2024 data window with spring average VSCI score of 50 and fall average VSCI 57 (2021-22). Previous cycle resulted in an assessment of "Reserve Judgement" (four VSCI scores averaging 58.3 (2011, 2015)). Biologist notes: Ivy Creek flows through a city park and has high sediment deposition. However, satellite imagery shows that much of the upstream riparian zone is wooded or consists of fields and medium intensity residential areas. In 2015, 2-IVA005.75 had VSCI scores near the assessment threshold with a benthic community indicative of pressure from scour and sediment.

2-IVA012.13 (at Rt. 662) The 2024 data window confirms continuation of the impairment status. VSCI scores average 44 in spring and 57 in fall (2021-22). Biologist notes: This site has major sand/fine deposition on the stream bottom. Suburban development has increased in this area in recent years. Previous data windows showed impairment from four VSCI scores (2011, 2015) averaging 49.3. Heavy, fresh sediment deposition noted in stream at time of sampling. Available habitat was heavily embedded in sediment. This watershed is being rapidly developed and will likely degrade further due to increased runoff from new neighborhoods.

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community. Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_IVA01A00 / Ivy Creek / Ivy Creek mainstem from its headwaters downstream to its confluence with Blackwater Creek (JM09).	5A	Benthic Macroinvertebrates Bioassessments	2010	H	21.45

Ivy Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			21.45

Sources: Source Unknown

James River Basin

Cause Group Code: H03R-04-BAC James River

Cause Location: Holcomb Rock Dam to the Archer Creek confluence.

Cause City/County: Amherst County; Bedford County; Campbell County; Lynchburg

Use(s): Recreation

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

Cause Description: The James River Bacteria TMDL Study (James River) received U.S. EPA approval on 11/4/07 [Fed. ID.35014] and SWCB approval on 12/04/07 for these 1996 and 2004 303(d) Listed waters for fecal coliform. These waters were incorporated in the E. coli TMDL Development for the James River and Tributaries near Lynchburg, VA located in the Counties of Amherst, Bedford, and Campbell and in the City of Lynchburg (EPA approved 9/27/17, SWCB approved 7/19/17) [TMDL IDs 68321,68326]. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. In 2019, new criterion states that E. coli bacteria shall not exceed a geometric mean of 126 counts/100ml and shall not have greater than a 10% excursion frequency of a statistical threshold value (STV) of 410 counts/100 ml, both in an assessment period of up to 90 days [9VAC25-260-170].

Two stations are located within the 10.53 miles of impaired waters: 2-JMS258.54 and 2-JMS270.84.

2-JMS258.54 (Under Route 29 Bridge - Percivals Island Lot) (2022 data window) Two of 34 samples in excess of the Statistical Threshold Value.

2-JMS270.84 (At Power Plant at Holcomb Rock Dam) (2022 data window) Three of 36 samples in excess of the Statistical Threshold Value.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_JMS01A00 / James River / James River mainstem from the Business Route 29 bridge downstream to the mouth of Williams Run (JM11).	4A	Escherichia coli (E. coli)	2008	L	3.86
VAW-H03R_JMS04A02 / James River / James River mainstem from Reusens dam downstream to Business Route 29 (JM07).	4A	Escherichia coli (E. coli)	2008	L	4.22
VAW-H03R_JMS06A02 / James River / James River mainstem from Holcomb Rock Dam downstream to Reusens Dam (JM07).	4A	Escherichia coli (E. coli)	2014	L	8.26
VAW-H05R_JMS04A00 / James River / James River mainstem from the upper watershed boundary at the confluence of Williams Run downstream to the mouth of Archer Creek (JM13).	4A	Escherichia coli (E. coli)	2008	L	2.68

James River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			19.02

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Municipal Point Source Discharges; Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-04-PCB James River, Slate River

Cause Location: The James River from Big Island dam (below Blue Ridge Parkway) downstream to the I-95 bridge James River Bridge in Richmond including its tributaries: Hardware River up to Rt. 6 bridge and Slate River up the Rt. 676 bridge; Blackwater and Fishing Creeks from their confluences to their headwaters.

Cause City/County: Albemarle County; Amherst County; Appomattox County; Bedford County; Buckingham County; Campbell County; Chesterfield County; Cumberland County; Fluvanna County; Goochland County; Henrico County; Lynchburg; Nelson County; Powhatan County; Richmond

Use(s): Fish Consumption; Public Water Supply; Wildlife

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

Cause Description: Fish tissue data are reviewed by VDH to inform fish consumption advisory determinations. The VDH Fish Advisory effective 12/13/04 includes the James River main stem from Big Island dam downstream to the I-95 Bridge in Richmond to include a portion of the Hardware and Slate Rivers (https://www.vdh.virginia.gov/environmental-health/public-health-toxicology/fish-consumption-advisory/). In addition to the advisory, water column PCB data is considered. Criterion was 640 pg/L through the 2022 data window. During the 2024 data window, Blackwater Creek was added to this impairment listing based on application of new Human Health criterion of 580 pg/L.

2-JMS258.54 (Under Route 29 Bridge - Percival Island Lot) Three PCB water column samples collected during the 2020 data window (with one excursion of the 640 pg/L criterion): Dry Weather 220 pg/L (7/19/17), Wet Weather 610 pg/L (2/8/18), and Wet Weather 3200 pg/L (WW, 9/17/18). Four species analyzed in 2005: Redhorse sucker exceeds WQS TV of 20 ppb at 55.35 ppb. Remaining species analyzed are Flathead catfish at 158.84 ppb, 554.07 ppb, and 29.78 ppb; Gizzard shad at 278.20 ppb; and Channel catfish at 51.01 ppb.

2-JMS213.00 (near Wingina at State Wildlife Management Area) Three fish species were analyzed in 2005: Flathead catfish exceeds WQS TV of 20 ppb at 228.28 ppb, 51.66 ppb, and 29.15 ppb. Remaining species analyzed Redhorse sucker at 81.11 ppb; and Channel catfish at 113.99 ppb.

2-JMS189.31 (DWR Boat Launch at G.S. below Route 20 Bridge) Water column PCB samples find no exceedances of the 640 pg/L WQS at 120 pg/L (DW, 7/19/17), 250 pg/L (WW, 2/8/18), 110 pg/L (WW, 8/23/18), and 100 pg/L (4/3/19). 2014 four species analyzed: American eel exceeds WQS TV of 20 ppb at 35.73 ppb and 38.79 ppb. Remaining species analyzed Flathead catfish at 116.44 ppb, 230.66 ppb, and 41.52 ppb; Gizzard shad at 77.40 ppb; and Carp at 133.62 ppb, 579.34 ppb, and 419.28 ppb. There were no exceedances of PCBs in fish tissue during the 2024 data window from 10/12/21 collections (spotted bass, bluegill, channel catfish).

2BJMS182.94 (Hardware River Wildlife Management Area) In 2014, three fish species analyzed: American eel exceeds WQS TV of 20 ppb at 41.92 ppb and 34.98 ppb. Remaining species analyzed: Channel catfish at 28.68 ppb; and Flathead catfish at 55.54 ppb and 61.18 ppb.

2-JMS176.63 (Rt. 15 Bridge) 2005 two species analyzed - Channel catfish exceeds WQS TV of 20 ppb at 92.29 ppb. Remaining species analyzed Carp at 339.35 ppb. 2014 one species was analyzed - carp exceeds WQS TV of 20 ppb at 286.79 ppb.

2-FSG003.36 (Fishing Cr downstream of Carroll-Trailer Park lot) 2024 data window retroactively applies the updated criterion and confirms impairment based on 2018-19 water column PCBs median which exceeds 580 pg/L (median: 2565 pg/L from 4500 pg/L WW 9/17/18, 630 pg/L DW 2/7/19).

2-FSG000.85 (Fishing Cr at Winchester Rd) 2024 data window reinterpretation of this data confirms impairment based on 2018-19 water column PCBs median excursion of the new 580 pg/L criterion. The 2020 data window finds two Wet Weather exceedances of the 640 pg/L water column PCB criterion: 2800 pg/L (2/14/18) and 8900 pg/L (9/17/18).

2-BKW000.40 (Blackwater Cr. at Rivermont Ave.) - New criterion applied during 2024 IR results in impairment due to median of 600 pg/L from 3 samples in exceedance of the 580 pg/L Human Health criterion.

In addition, the impairment is based on PCB fish tissue value exceedances at multiple stations including 2-JMS166.50, 2-JMS157.28, 2-JMS140.00, 2BJMS118.99, 2BJMS129.14, 2-JMS127.50, 2-JMS115.29, 2-JMS111.17, 2CJMS110.00, 2-SLT000.20, et al. An exceedance of the human health water quality standard for PCBs occurred at stations 2-JMS157.28, 2-JMS140.00, 2-JMS117.35. 2-JMS110.34, 2-BJMS111.17-S, 2-JMS110.44.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H22R_SLT03A02 / Slate River / The Slate River from Rt. 676 downstream to a point 5 miles upstream of the Fork Union Sanitary District raw water intake (rivermile 3.88) to the mouth at the James River.	5A	PCBs in Fish Tissue	2008	H	1.00
VAP-H22R_SLT03B20 / Slate River / The Slate River from a point 5 miles upstream of the Fork Union Sanitary District raw water intake (rivermile 3.88) downstream to the mouth at the James River.	5A	PCBs in Fish Tissue	2008	H	2.90
VAP-H33R_JMS01A98 / James River / The James River from its confluence with Deep Creek downstream to the confluence with Big Lickinghole Creek at river mile 143.35.	5A	PCBs in Fish Tissue	2006	H	6.30
VAP-H33R_JMS01B24 / James River / The James River from its confluence with the Rivanna River at river mile 166.61 downstream to the confluence with Deep Creek.	5A	PCBs in Fish Tissue	2006	L	16.79
VAP-H38R_JMS01A06 / James River / From Big Lickinghole Creek to start of PWS section	5A	PCBs in Fish Tissue	2006	H	2.08
VAP-H38R_JMS02A04 / James River / James River from the confluence with Mohawk Creek to river mile 137.00	5A	PCBs in Fish Tissue	2006	H	3.75
VAP-H38R_JMS03A06 / James River / Rivermile 137 to rivermile 130.14 in H39	5A	PCBs in Fish Tissue	2006	H	6.95
VAP-H38R_JMS04A06 / James River / Start of PWS section downstream to Mohawk Creek	5A	PCBs in Fish Tissue	2006	H	0.79
VAP-H39R_JMS01A98 / James River / The James River from the confluence with Tuckahoe Creek to the William's Island dam.	5A	PCBs in Fish Tissue	2006	H	7.45
VAP-H39R_JMS01B00 / James River / The James River from river mile 130.14 to river mile 128.14.	5A	PCBs in Fish Tissue	2006	H	2.04
VAP-H39R_JMS02A98 / James River / The James River from the William's Island dam to the Boulevard Bridge.	5A	PCBs in Fish Tissue	2006	H	3.36
VAP-H39R_JMS02B04 / James River / The James River from river mile 128.14 to the confluence with Tuckahoe Creek.	5A	PCBs in Fish Tissue	2006	H	4.37
VAP-H39R_JMS03A98 / James River / The James River from the Boulevard Bridge to the fall line at approximately the railroad trestle above Mayos Bridge.	5A	PCBs in Fish Tissue	2006	H	5.13

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_JMS03B14 / James River - South Channel / The south channel of the James River from the Belle Island dam to the Brown's Island dam. State Scenic River	5A	PCBs in Fish Tissue	2006	H	0.95
VAV-H14R_JMS01A18 / James River / James River from its confluence with Bishop Creek downstream to its confluence with the Rockfish River.	5A	PCBs in Fish Tissue	2006	H	13.49
VAV-H14R_JMS02A18 / James River / James River from its confluence with the Tye River downstream to its confluence with Bishop Creek.	5A	PCBs in Fish Tissue	2006	H	5.09
VAV-H17R_JMS01A18 / James River / James River from its confluence with Totier Creek downstream to its confluence with the Hardware River.	5A	PCBs in Fish Tissue	2006	H	8.13
VAV-H17R_JMS02A18 / James River / James River from its confluence with Ballinger Creek downstream to its confluence with Totier Creek.	5A	PCBs in Fish Tissue	2006	H	4.82
VAV-H17R_JMS03A18 / James River / James River from its confluence with the Rockfish River downstream to its confluence with Ballinger Creek.	5A	PCBs in Fish Tissue	2006	H	5.74
VAV-H19R_HRD01A00 / Hardware River / Hardware River from the Rt. 6 bridge, downstream to its confluence with the James River.	5A	PCBs in Fish Tissue	2008	H	7.00
VAV-H20R_JMS01A02 / James River / James River from the Hardware River downstream to a point 5 miles above Fork Union Sanitary District raw water intake.	5A	PCBs in Fish Tissue	2006	H	1.98
VAV-H20R_JMS02A02 / James River / The James River from a point 5 miles above Fork Union Sanitary District's raw water intake downstream to its confluence with the Slate River.	5A	PCBs in Fish Tissue	2006	H	2.94
VAV-H20R_JMS02B18 / James River / The James River from its confluence with the Slate River downstream to the Fork Union Sanitary District's raw water intake.	5A	PCBs in Fish Tissue	2006	H	2.16
VAV-H20R_JMS03A02 / James River / The James River from the Fork Union Sanitary District's raw water intake downstream to the confluence with the Rivanna River.	5A	PCBs in Fish Tissue	2006	H	9.25
VAW-H01R_JMS01A00 / James River / James River mainstem from the mouth of Wilderness Creek downstream to Holcomb Rock Dam (JM03).	5A	PCBs in Fish Tissue	2006	H	1.37
VAW-H01R_JMS01A04 / James River / The James River from the upstream ending of the WQS PWS designation at Colemans Dam (37.5023, -79.300383) downstream to the mouth of Wilderness Creek (JM03).	5A	PCBs in Fish Tissue	2006	H	0.70

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H01R_JMS02A00 / James River / James River mainstem from the Georgia Pacific outfalls downstream to the upstream ending of the WQS PWS designation at Colemans Dam (37.5023, -79.300383) (JM03).	5A	PCBs in Fish Tissue	2006	H	3.30
VAW-H01R_JMS03A00 / James River / James River mainstem from the mouth of Peters Creek downstream to the Georgia Pacific outfalls on the James River (JM01).	5A	PCBs in Fish Tissue	2006	H	3.05
VAW-H03R_JMS01A00 / James River / James River mainstem from the Business Route 29 bridge downstream to the mouth of Williams Run (JM11).	5A	PCBs in Fish Tissue	2004	H	3.86
VAW-H03R_JMS04A02 / James River / James River mainstem from Reusens dam downstream to Business Route 29 (JM07).	5A	PCBs in Fish Tissue	2004	H	4.22
VAW-H03R_JMS06A02 / James River / James River mainstem from Holcomb Rock Dam downstream to Reusens Dam (JM07).	5A	PCBs in Fish Tissue	2006	H	8.26
VAW-H05R_JMS01A00 / James River / James River mainstem from the Wreck Island Creek confluence downstream to the watershed boundary at the mouth of Bent Creek (JM17).	5A	PCBs in Fish Tissue	2006	H	6.27
VAW-H05R_JMS02A00 / James River / James River mainstem from the confluence of Stonewall Creek to the Wreck Island Creek mouth on the James River (JM15).	5A	PCBs in Fish Tissue	2006	H	6.78
VAW-H05R_JMS02B14 / James River / James River from the confluence of Beck Creek to the confluence of Stonewall Creek (JM14).	5A	PCBs in Fish Tissue	2014	H	3.05
VAW-H05R_JMS03A00 / James River / James River mainstem from the confluence of Archer Creek downstream to the mouth of Beck Creek (JM13).	5A	PCBs in Fish Tissue	2006	H	7.71
VAW-H05R_JMS04A00 / James River / James River mainstem from the upper watershed boundary at the confluence of Williams Run downstream to the mouth of Archer Creek (JM13).	5A	PCBs in Fish Tissue	2004	H	2.68
VAW-H08R_JMS01A00 / James River / James River from Bent Creek to its confluence with the Tye River (JM20).	5A	PCBs in Fish Tissue	2006	H	9.68

James River, Slate River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			185.39

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_BKW01A00 / Blackwater Creek / Blackwater Creek mainstem from the confluence of Tomahawk and Burton Creeks downstream to the Blackwater Creek confluence on the James River (JM10).	5A	Polychlorinated biphenyls (PCBs)	2024	L	10.54
VAW-H03R_FSG01A00 / Fishing Creek / Fishing Creek mainstem from its confluence with the James River upstream to its headwaters (JM11).	5A	Polychlorinated biphenyls (PCBs)	2020	H	6.32
VAW-H05R_JMS03A00 / James River / James River mainstem from the confluence of Archer Creek downstream to the mouth of Beck Creek (JM13).	5A	Polychlorinated biphenyls (PCBs)	2024	L	7.71

James River, Slate River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			24.57

James River, Slate River

Public Water Supply	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			10.54

James River, Slate River

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			14.03

Sources: Atmospheric Deposition - Toxics; Contaminated Sediments; Source Unknown

James River Basin

Cause Group Code: H03R-05-BAC Burton Creek

Cause Location: Burton Creek from its headwaters to its mouth on Tomahawk Creek.

Cause City/County: Lynchburg

Use(s): Recreation

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

Cause Description: The James River Bacteria TMDL Study (Burton Creek) received U.S. EPA approval on 11/4/2007 [Fed. ID.35017] and SWCB approval on 12/04/2007 for these 1996 and 2004 303(d) Listed waters for fecal coliform. These waters were incorporated in the E. coli TMDL Development for the James River and Tributaries near Lynchburg, VA located in the Counties of Amherst, Bedford, and Campbell and in the City of Lynchburg (EPA approved 9/27/17, SWCB approved 7/19/17) [TMDL IDs 68321,68326]. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. In 2019, new criterion states that E. coli bacteria shall not exceed a geometric mean of 126 counts/100ml and shall not have greater than a 10% excursion frequency of a statistical threshold value (STV) of 410 counts/100 ml, both in an assessment period of up to 90 days [9VAC25-260-170].

One station is located within the 3.48 miles of impaired waters:
2-BUN001.64 (Off Fort Ave., Below Rub's Rest.) No new data since the 2016 data window where one of 12 samples was found in excess of the instantaneous criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_BUN01A06 / Burton Creek / Burton Creek from its headwaters to the confluence with Tomahawk Creek (JM10).	4A	Escherichia coli (E. coli)	2006	L	3.48

Burton Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.48

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-05-BEN Burton Creek

Cause Location: Burton Creek from its headwaters to its mouth on Tomahawk Creek.

Cause City/County: Lynchburg

Use(s): Aquatic Life

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

Cause Description: Burton Creek was listed for Aquatic Life Use impairment during the 2006 data window based on benthic macroinvertebrate community data collected at the following station.

2-BUN000.04 - (off Rhonda Rd near Tomahawk Cr. confluence) Benthic macroinvertebrate community impairment is confirmed from 7 Virginia Stream Condition Index (VSCI) Scores with the following seasonal averages during the 2024 data window: Spring 38, Fall 53 (2018-19, 2021-22). Biologist notes: The stream has unstable banks and fine sediment deposition, resulting in poor habitat quality.

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community. Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_BUN01A06 / Burton Creek / Burton Creek from its headwaters to the confluence with Tomahawk Creek (JM10).	5A	Benthic Macroinvertebrates Bioassessments	2010	H	3.48

Burton Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.48

Sources: Source Unknown

James River Basin

Cause Group Code: H03R-06-BAC Judith Creek

Cause Location: Judith Creek from its headwaters to the confluence with the James River.

Cause City/County: Bedford County; Lynchburg

Use(s): Recreation

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

Cause Description: The James River Bacteria TMDL Study (Judith Creek) received U.S. EPA approval on 11/4/07 [Fed. ID.35015] and SWCB approval on 12/04/07 for these 1996 and 2004 303(d) Listed waters for fecal coliform. These waters were incorporated in the E. coli TMDL Development for the James River and Tributaries near Lynchburg, VA located in the Counties of Amherst, Bedford, and Campbell and in the City of Lynchburg (EPA approved 9/27/17, SWCB approved 7/19/17) [TMDL IDs 68321,68326]. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. In 2019, new criterion states that E. coli bacteria shall not exceed a geometric mean of 126 counts/100ml and shall not have greater than a 10% excursion frequency of a statistical threshold value (STV) of 410 counts/100 ml, both in an assessment period of up to 90 days [9VAC25-260-170].

Two stations are located within the 11.1 miles of impaired waters: 2-JTH001.52 (Rt. 645 (Trents Ferry Road)) 2016 data window finds one of 12 samples in excess of the instantaneous criterion.

2-JTH006.53 (crossing of 761 & 647 just off 501 past Boonsboro) (2018 data window) Eight of 12 samples in excess of the instantaneous criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_JTH01A06 / Judith Creek / Judith Creek from its headwaters to the confluence with the James River (JM07).	4A	Escherichia coli (E. coli)	2006	L	11.09

Judith Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.09

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-06-BEN Judith Creek

Cause Location: Judith Creek from its headwaters to the confluence with the James River.

Cause City/County: Bedford County; Lynchburg

Use(s): Aquatic Life

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

Cause Description: The entire length of Judith Creek is impaired for the Aquatic Life Use in 2010 based on benthic macroinvertebrate community data collection.

2-JTH006.53 (crossing of 761 & 647 just off 501 past Boonsboro) 2019 and 2021 Virginia Stream Condition Index (VSCI) scores show benthic macroinvertebrate community impairment based on seasonal average scores of 57 (spring, n=3) and 50 (fall, n=2). Biologist notes: Parts of the streambanks were scoured and failing. Sediment deposition was negatively impacting the available habitat. The habitat scores indicate a medium to high probability of stress to aquatic life.

2-JTH001.52 (Rt. 645 / Trents Ferry Road) The 2024 data window finds benthic macroinvertebrate community impairment from four VSCI scores with seasonal averages of 62 and 54 during spring and fall, respectively. Biologist notes: Heavy sediment deposition on the stream bottom. Slick algal mats on bedrock substrate. Prior collections found a non-impaired benthic community at this station (2008-10).

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community. Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_JTH01A06 / Judith Creek / Judith Creek from its headwaters to the confluence with the James River (JM07).	5A	Benthic Macroinvertebrates Bioassessments	2010	H	11.09

Judith Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			11.09

Sources: Non-Point Source

James River Basin

Cause Group Code: H03R-07-BAC Tomahawk Creek

Cause Location: Tomahawk Creek from its headwaters to its confluence with Burton Creek.

Cause City/County: Lynchburg

Use(s): Recreation

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

Cause Description: The James River Bacteria TMDL Study (Tomahawk Creek) received U.S. EPA approval on 11/4/07 [Fed. ID.35016] and SWCB approval on 12/04/07 for these 1996 and 2004 303(d) Listed waters for fecal coliform. These waters were incorporated in the E. coli TMDL Development for the James River and Tributaries near Lynchburg, VA located in the Counties of Amherst, Bedford, and Campbell and in the City of Lynchburg (EPA approved 9/27/17, SWCB approved 7/19/17) [TMDL IDs 68321,68326]. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. In 2019, new criterion states that E. coli bacteria shall not exceed a geometric mean of 126 counts/100ml and shall not have greater than a 10% excursion frequency of a statistical threshold value (STV) of 410 counts/100 ml, both in an assessment period of up to 90 days [9VAC25-260-170].

Two stations are located within the 6.06 miles of impaired waters: 2-THK001.31(Tomahawk Cr @ McConneville Rd) 2022 data window: E.coli impairment ('IM') carries. Four of 12 samples in excess of the instantaneous criterion during the 2016 data window.

2-THK002.33 (Tomahawk Cr. @ Graves Mill Rd.) 2022 data window: 'IM' carries. Two of 12 samples in excess of the instantaneous criterion during the 2016 data window.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_THK01A06 / Tomahawk Creek / Tomahawk Creek from its headwaters to its confluence with Burton Creek (JM10).	4A	Escherichia coli (E. coli)	2006	L	6.06

Tomahawk Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.06

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-07-BEN Tomahawk Creek

Cause Location: Tomahawk Creek from its headwaters to its confluence with Burton Creek.

Cause City/County: Lynchburg

Use(s): Aquatic Life

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

Cause Description: The initial Aquatic Life Use 2010 303(d) listing is a result of benthic macroinvertebrate community sampling on Tomahawk Creek.

2-THK000.03 (Off Rhonda Rd near confluence with Burton Cr.) Benthic macroinvertebrate community impairment confirmed from 7 Virginia Stream Condition Index (VSCI) scores with seasonal averages of 43 (Spring) and 57 (Fall) (2018-19, 2021-22). Biologist notes that Tomahawk Creek is an urban stream with highly embedded substrate and unstable banks.

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community. Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_THK01A06 / Tomahawk Creek / Tomahawk Creek from its headwaters to its confluence with Burton Creek (JM10).	5A	Benthic Macroinvertebrates Bioassessments	2010	H	6.06

Tomahawk Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.06

Sources: Source Unknown

James River Basin

Cause Group Code: H03R-08-BAC Williams Run

Cause Location: Williams Run from its confluence with the James River upstream to it headwaters.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: NESTED 2014:35014, 12/04/2007

The James River Bacteria TMDL Study received U.S. EPA approval on 11/4/2007 [Fed. ID.35014] and SWCB approval on 12/04/2007 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 35014, 11/04/2007

One station is located within the 6.49 miles of impaired waters. 2-WLM002.69 (Ambient)(Williams Run at Route 622 Bridge)

2-WLM002.69 (Ambient)(Williams Run at Route 622 Bridge) 2022: IM carries 2016:Two of 12 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_WLM01A02 / Williams Run / Williams Run from its confluence with the James River upstream to it headwaters (JM11).	4A	Escherichia coli (E. coli)	2006	L	6.49

Williams Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.49

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-09-BAC Dreaming Creek

Cause Location: Dreaming Creek from its headwaters to its mouth on Burton Creek

Cause City/County: Lynchburg

Use(s): Recreation

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

Cause Description: NESTED 2014:35017, 12/04/2007

The James River Bacteria TMDL Study received U.S. EPA approval on 11/4/2007 [Fed. ID.35017] and SWCB approval on 12/04/2007 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 35017, 11/04/2007

One station is located within the 5.04 miles of impaired waters. 2-DMG000.58 (Ambient, Lynchburg Area TMDL)(Dreaming Creek at Graves Mill)

2-DMG000.58 (Ambient, Lynchburg Area TMDL)(Dreaming Creek at Graves Mill) 2022: IM carries. 2016: Three of 12 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_DMG01A08 / Dreaming Creek / Dreaming Creek from its headwaters to its mouth on Burton Creek (JM10).	4A	Escherichia coli (E. coli)	2008	L	5.04

Dreaming Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.04

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H03R-10-BAC Burton Creek, Unnamed Tributary

Cause Location: Burton Creek, UT from its headwaters to its mouth on Burton Creek.

Cause City/County: Lynchburg

Use(s): Recreation

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

Cause Description: NESTED 2014:35017, 12/04/2007

The James River Bacteria TMDL Study received U.S. EPA approval on 11/4/2007 [Fed. ID.35017] and SWCB approval on 12/04/2007 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 35017, 11/04/2007

One station is located within the 3.47 miles of impaired waters. 2-XXA001.43 (Lynchburg Area TMDL)(UT Burton Creek at Harvard Street)

2-XXA001.43 (Lynchburg Area TMDL)(UT Burton Creek at Harvard Street) 2022: IM carries. 2016: Four of 12 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H03R_XXA01A08 / Burton Creek, Unnamed Tributary / Burton Creek, UT from its headwaters to its mouth on Burton Creek (JM10).	4A	Escherichia coli (E. coli)	2008	L	3.46

Burton Creek, Unnamed Tributary

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

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H04R-01-BAC Graham Creek

Cause Location: Graham Creek mainstem from the Graham Creek Reservoir backwaters upstream to its headwaters.

Cause City/County: Amherst County

Use(s): Recreation

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: NESTED 2014:35014, 12/04/2007

The James River Bacteria TMDL Study received U.S. EPA approval on 11/4/2007 [Fed. ID.35014] and SWCB approval on 12/04/2007 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 35014, 11/04/2007

One station is located within the 6.49 miles of impaired waters. 2-GRA002.89 (Ambient)(Route 652 Bridge)

2-GRA002.89 (Ambient)(Route 652 Bridge) Two of three samples of fecal coliform in excess of criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H04R_GRA02A02 / Graham Creek / Graham Creek mainstem from the Graham Creek Reservoir backwaters upstream to its headwaters (JM08).	4A	Fecal Coliform	2002	L	5.59

Graham Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			5.59

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H04R-02-BAC Harris Creek

Cause Location: Harris Creek from its confluence with Falling Rock Creek to just upstream of the Amherst County USA secondary water intake.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: NESTED 2014:35014, 12/04/2007

The James River Bacteria TMDL Study received U.S. EPA approval on 11/4/2007 [Fed. ID.35014] and SWCB approval on 12/04/2007 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 35014, 11/04/2007

One station is located within the 8.33 miles of impaired waters. 2-HAZ010.92 (Ambient)(2018)(Harris Creek at Route 657)

2-HAZ010.92 (Ambient)(2018)(Harris Creek at Route 657) Three of 12 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H04R_HAZ02A08 / Harris Creek / Harris Creek from its confluence with Falling Rock Creek to just upstream of the Amherst County USA secondary water intake (JM08).	4A	Escherichia coli (E. coli)	2008	L	8.33

Harris Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.33

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H05R-01-BAC James River

Cause Location: The confluence with Wreck Island Creek to Tye River

Cause City/County: Amherst County; Appomattox County; Buckingham County; Campbell County; Nelson County

Use(s): Recreation

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

Cause Description: Station ID:
2-JMS229.14 (Ambient, Trend)(2018)(Route 60 at Bent Creek) E. coli - 2022: E.coli 4/34 in the Statistical Threshold Value, 1/1 Exceedance rate in the Geomean. 1/12 Exceedance Rate

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_JMS01A00 / James River / James River mainstem from the Wreck Island Creek confluence downstream to the watershed boundary at the mouth of Bent Creek (JM17).	5A	Escherichia coli (E. coli)	2010	L	6.27
VAW-H08R_JMS01A00 / James River / James River from Bent Creek to its confluence with the Tye River (JM20).	5A	Escherichia coli (E. coli)	2010	L	9.68

James River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			15.95

Sources: Source Unknown

James River Basin

Cause Group Code: H05R-03-BAC Beaver Creek

Cause Location: Beaver Creek mainstem from its mouth on the James River upstream to an unnamed tributaries mouth at the Rt. 501 Bridge.

Cause City/County: Campbell County

Use(s): Recreation

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

Cause Description: Station ID:
2-BCR000.20 (Ambient) E. coli - (2022IR) 2/12 Exceedance Rate

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_BCR01A00 / Beaver Creek / Beaver Creek mainstem from its mouth on the James River upstream to an unnamed tributaries mouth at the Rt. 501 Bridge (JM12).	4A	Escherichia coli (E. coli)	2004	L	8.68

Beaver Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.68

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H05R-04-BAC Opossum Creek

Cause Location: Opossum Creek mainstem from its mouth on the James River upstream to the Rt. 660 crossing.

Cause City/County: Campbell County

Use(s): Recreation

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

Cause Description: NESTED 2014: 35014, 12/04/2007

The James River Bacteria TMDL Study received U.S. EPA approval on 11/4/2007 [Fed. ID.35014] and SWCB approval on 12/04/2007 for these 1996 and 2004 303(d) Listed waters for fecal coliform. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 35014, 11/04/2007

One station is located within the 3.17 miles of impaired waters. 2-OPP000.16 (Ambient)(Route 460 Bridge - Campbell County)

2-OPP000.16 (Ambient)(Route 460 Bridge - Campbell County) 2022: IM carries. 2016:Three of 24 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_OPP01A00 / Opossum Creek / Opossum Creek mainstem from its mouth on the James River upstream to the Rt. 660 crossing (JM11).	4A	Escherichia coli (E. coli)	2010	L	3.17

Opossum Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.17

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H05R-05-BAC Stonewall Creek

Cause Location: Stonewall Creek from its headwaters to its mouth on the James River

Cause City/County: Appomattox County

Use(s): Recreation

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

Cause Description: The Bent Creek, North Creek, Stonewall Creek Walkers Ford Creek, and Wreck Island Creek Bacteria TMDL Study (Stonewall Creek) received U.S. EPA approval on 9/30/2013 [Fed. ID.53774] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53774, 9/30/2013

One station is located within the 9.4 miles of impaired waters. 2-STW001.72 (Ambient) (Stonewall Cr @ rt 605)

2-STW001.72 (Ambient) (Stonewall Cr @ rt 605) 2022: Insufficient Information- No STV exceedances but insufficient data to analyze geomean; IM carries.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_STW01A08 / Stonewall Creek / Stonewall Creek from its headwaters to its mouth on the James River (JM14).	4A	Escherichia coli (E. coli)	2008	L	9.4

Stonewall Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.4

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

James River Basin

Cause Group Code: H05R-05-BEN Stonewall Creek

Cause Location: Stonewall Creek from its headwaters to its mouth on the James River (JM14).

Cause City/County: Appomattox County

Use(s): Aquatic Life

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

Cause Description: The initial 303(d) Impaired Waters Listing for Aquatic Life Use on Stonewall Creek is based on benthic macroinvertebrate community data collected during the 2024 data window.

2BSTW006.56 (Stonewall Cr 0.16 mile upstream of Arrowhead Rd) Benthic macroinvertebrate community impairment is based on two 2021 Virginia Stream Condition Index (VSCI) scores of 44 (spring) and 49 (fall). Biologist notes that site had some heavy sediment deposition that could be negatively impacting the benthic community.

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_STW01A08 / Stonewall Creek / Stonewall Creek from its headwaters to its mouth on the James River (JM14).	5A	Benthic Macroinvertebrates Bioassessments	2024	L	9.4

Stonewall Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.4

Sources: Source Unknown

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Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: H05R-06-BAC Little Beaver Creek

Cause Location: Little Beaver Creek from its headwaters to its mouth on the James River.

Cause City/County: Campbell County

Use(s): Recreation

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

Cause Description: Station ID: 2-LTJ000.16 (James River TMDL Site) (Little Beaver Creek @ Rte. 662) 2016: E. coli - 3/12 Exceedance Rate

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_LTJ01A10 / Little Beaver Creek / Little Beaver Creek from its headwaters to its mouth on the Beaver Creek (JM12).	4A	Escherichia coli (E. coli)	2010	L	7.13

Little Beaver Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.13

Sources: Combined Sewer Overflows; Discharges from Municipal Separate Storm Sewer Systems (MS4); Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H05R-08-BAC Beck Creek

Cause Location: Beck Creek from the confluence of the North and South Forks of Stovall Creek to its mouth.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: Station ID:

2-BEK000.10 (Ambient) (Beck Creek, Route 622 Galtsmill Road) No additional data since the 2012 data window.

E. coli - 6/12 Exceedance Rate

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_BEK01A06 / Beck Creek / Beck Creek from the confluence of the North and South Forks of Stovall Creek to its mouth (JM14).	5A	Escherichia coli (E. coli)	2012	L	6.28

Beck Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.28

Sources: Source Unknown

James River Basin

Cause Group Code: H05R-09-BAC Partridge Creek

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

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: Station ID:

2-PDG000.12 (Ambient) (Partridge Creek, Route 622 Galtsmill) No new data since 2012 data window.

E. coli - 5/15 Exceedance Rate

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_PDG01A06 / Partridge Creek / Partridge Creek from its headwaters to the mouth.	5A	Escherichia coli (E. coli)	2012	L	10.41

Partridge Creek

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

Sources: Source Unknown

James River Basin

Cause Group Code: H05R-10-BAC Archer Creek

Cause Location: Archer Creek from its headwaters to its mouth on the James River

Cause City/County: Campbell County

Use(s): Recreation

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

Cause Description: Station ID:

2BACH000.09 (Ambient)(Route 609)

E. coli - 2016 data window: 5/12 Exceedance Rate.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_ACH01A16 / Archer Creek / Archer Creek from its headwaters to its mouth on the James River (JM13).	5A	Escherichia coli (E. coli)	2016	L	7.47

Archer Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.47

Sources: Source Unknown

James River Basin

Cause Group Code: H05R-11-BAC Allens Creek

Cause Location: Allens Creek from its headwaters to its mouth on the James River

Cause City/County: Campbell County

Use(s): Recreation

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

Cause Description: Station ID:

2BANC000.09 (Ambient)(Route 622)

E. coli - 2016 data window: 5/12 Exceedance Rate.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H05R_ANC01A16 / Allens Creek / Allens Creek from its headwaters to the mouth on the James River (JM17).	5A	Escherichia coli (E. coli)	2016	L	7.18

Allens Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.18

Sources: Source Unknown

James River Basin

Cause Group Code: H06R-01-BAC Wreck Island Creek

Cause Location: Wreck Island Creek from its headwaters to its mouth on the James River.

Cause City/County: Appomattox County

Use(s): Recreation

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

Cause Description: The Bent Creek, North Creek, Stonewall Creek Walkers Ford Creek, and Wreck Island Creek Bacteria TMDL Study (Wreck Island Creek) received U.S. EPA approval on 9/30/2013 [Fed. ID.53771] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53771, 9/30/2013

Two stations are located within the 19.55 miles of impaired waters.
2-WIC000.40 (Ambient) (Route 605 Bridge, near Riverville)(2018) and 2-WIC012.60 (James River TMDL Monitoring) (Wreck Island Ck @ rt 613)

2-WIC000.40 (Ambient)(Route 605 Bridge, near Riverville) (2022) 2 out of 12 in excess of the Statistical Threshold Value, Insufficient information, IM carries.

2-WIC012.60 (James River TMDL Monitoring) (Wreck Island Ck @ rt 613) Six of 12 samples in excess of the instantaneous criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H06R_WIC01A00 / Wreck Island Creek / Wreck Island Creek mainstem from its mouth on the James River to its confluence with Little Wreck Island Creek.	4A	Escherichia coli (E. coli)	2008	L	9.78
VAW-H06R_WIC02A10 / Wreck Island Creek / Wreck Island Creek from the confluence with Little Wreck Island Creek to its headwaters (JM16).	4A	Escherichia coli (E. coli)	2010	L	9.77

Wreck Island Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			19.55

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

James River Basin

Cause Group Code: H06R-01-BEN Phelps Branch

Cause Location: Phelps Branch from the State Route 659 crossing to its mouth on North Creek.

Cause City/County: Appomattox County

Use(s): Aquatic Life

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

Cause Description: The Phelps Branch Sediment TMDL for a Benthic Impairment received U.S. EPA approval on 8/16/13 [Fed. ID.53640] and SWCB approval on 9/30/13 for this 2010 303(d) Listed impairment to the benthic macroinvertebrate community.

2-PLP002.08 (100 m downstream of route 659) Benthic macroinvertebrate community samples from 2008 show impairment. Biologist noted that Phelps Branch is an incised stream with past cattle access likely, though livestock are currently fenced out of stream. Habitat includes good riffles but algae covers most rocks. High rate of sediment deposition observed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H06R_PLP01A08 / Phelps Branch / Phelps Branch from its headwaters to its mouth on North Creek (JM16).	4A	Benthic Macroinvertebrates Bioassessments	2010	L	2.21

Phelps Branch

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

Sources: Clean Sediments

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Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: H06R-02-BAC North Creek

Cause Location: North Creek from its headwaters to its confluence with Wreck Island Creek.

Cause City/County: Appomattox County

Use(s): Recreation

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

Cause Description: The Bent Creek, North Creek, Stonewall Creek Walkers Ford Creek, and Wreck Island Creek Bacteria TMDL Study (North Creek) received U.S. EPA approval on 9/30/2013 [Fed. ID.53772] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53772, 09/30/2013

One station is located within the 5.87 miles of impaired waters. 2-NOT001.59 (James River TMDL Monitoring) (North Creek @ Rt. 660).

2-NOT001.59 (James River TMDL Monitoring) (North Creek @ Rt. 660) Ten of 12 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H06R_NOT01A10 / North Creek / North Creek from its headwaters to its confluence with Wreck Island Creek (JM16).	4A	Escherichia coli (E. coli)	2010	L	5.88

North Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.88

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

James River Basin

Cause Group Code: H07R-01-BAC Bent Creek

Cause Location: Bent Creek mainstem from its mouth on the James River upstream to its headwaters.

Cause City/County: Appomattox County

Use(s): Recreation

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

Cause Description: The Bent Creek, North Creek, Stonewall Creek Walkers Ford Creek, and Wreck Island Creek Bacteria TMDL Study (Bent Creek) received U.S. EPA approval on 9/30/2013 [Fed. ID.53773] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53773,09/30/2013

One station is located within the 13.82 miles of impaired waters. 2-BTC000.16 (Ambient) (Off Route 26, near confluence with James)

2-BTC000.16 (Ambient)(2018) ((Off Route 26, near confluence with James) -
2022: Three of 12 samples in excess of the Statistical Threshold Value.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H07R_BTC01A00 / Bent Creek / Bent Creek mainstem from its mouth on the James River upstream to its headwaters (JM18).	4A	Escherichia coli (E. coli)	2008	L	13.83

Bent Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.83

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

James River Basin

Cause Group Code: H08R-01-BAC Davids Creek

Cause Location: David Creek from the confluence with Stevens Run to the mouth.

Cause City/County: Appomattox County; Buckingham County

Use(s): Recreation

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

Cause Description: Station ID: 2-DVD000.23 (Ambient)(Davids Creek, Route 605) 2022: E. coli - 5/12 Exceedance Rate.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H08R_DVD01A00 / David Creek / David Creek from the confluence with Stevens Run to the mouth (JM19).	5A	Escherichia coli (E. coli)	2012	L	5.18

Davids Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.18

Sources: Source Unknown

James River Basin

Cause Group Code: H09R-01-BEN Montebello Spring Branch

Cause Location: Montebello Spring Branch from the spring downstream to its confluence with Mill Creek.

Cause City/County: Nelson County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to a severely impaired benthic assessment in 1998 at station 2-MSB000.01. No new data in the 2024 cycle. Initial Listing Date: 1998. This impairment is included in the EPA approved TMDL for Trout Farm watersheds.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H09R_XXM01A00 / Montebello Spring Branch / Montebello Spring Branch from the spring downstream to its confluence with Mill Creek.	4A	Benthic Macroinvertebrates Bioassessments	1998	L	0.13

Montebello Spring Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.13

Sources: Aquaculture (Permitted); Source Unknown

James River Basin

Cause Group Code: H09R-01-PH Montebello Spring Branch

Cause Location: Montebello Spring Branch from the spring downstream to its confluence with Mill Creek. (Start Mile: .13 End Mile: 0.00 Total Impaired Size: .13 Miles)

Cause City/County: Nelson County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to excursions of the pH WQS at station: 2-XXM000.01 (2 excursions of 3 samples for pH in 2008). There was no new data collected at this station in the 2022 cycle. Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H09R_XXM01A00 / Montebello Spring Branch / Montebello Spring Branch from the spring downstream to its confluence with Mill Creek.	5A	pH	2004	L	0.13

Montebello Spring Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.13

Sources: Aquaculture (Permitted); Source Unknown

James River Basin

Cause Group Code: H09R-02-BAC Hat Creek

Cause Location: Hat Creek from the headwaters downstream to its confluence with the Tye River.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment remains impaired due to exceedances of the e-coli bacteria WQS at station: 2-HAT000.14 (4 exceedances of 12 samples in 2010; two or more STV hits in the same 90-day period with less than 10 samples in 2024). Initial Listing Date: 2002 (fecal coliform)/2010 (E.coli). This impairment is included in the EPA approved Tye River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H09R_HAT01A04 / Hat Creek / Hat Creek from the headwaters downstream to its confluence with the Tye River.	4A	Escherichia coli (E. coli)	2010	L	9.52

Hat Creek

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

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

James River Basin

Cause Group Code: H09R-02-BEN Hat Creek

Cause Location: Hat Creek from the headwaters downstream to its confluence with the Tye River.

Cause City/County: Nelson County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-HAT000.14. Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H09R_HAT01A04 / Hat Creek / Hat Creek from the headwaters downstream to its confluence with the Tye River.	5A	Benthic Macroinvertebrates Bioassessments	2012	H	9.52

Hat Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.52

Sources: Non-Point Source

James River Basin

Cause Group Code: H09R-03-BAC Tye River

Cause Location: Tye River from its confluence with Hat Creek downstream to its confluence with the James River.

Cause City/County: Amherst County; Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at stations: 2-TYE020.67 (3 exceedances of 36 samples in 2012, one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024); 2-TYE008.77 (2 exceedances of 10 samples in 2008, one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024); and 2-TYE000.30 (one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024). Initial Listing Date: 2004. This impairment is included in the EPA approved Tye River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H09R_TYE01A00 / Tye River / Tye River from its confluence with Piney River downstream to its confluence with the Buffalo River.	4A	Escherichia coli (E. coli)	2008	L	8.24
VAV-H09R_TYE02A00 / Tye River / Tye River from its confluence with Hat Creek downstream to its confluence with Piney River.	4A	Escherichia coli (E. coli)	2006	L	8.40
VAV-H13R_TYE01A00 / Tye River / Tye River from its confluence with the Buffalo River downstream to its confluence with the James River.	4A	Escherichia coli (E. coli)	2022	L	7.65

Tye River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			24.29

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

James River Basin

Cause Group Code: H09R-04-TEMP Tye River

Cause Location: Tye River from its confluence with North & South Fork Tye River downstream to its confluence with Silver Creek.

Cause City/County: Nelson County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: This segment is impaired due to exceedances of the Class V Temperature WQS at station: 2-TYE032.15 (2 exceedances of 11 samples in 2022, no new data 2024). Initial Listing Cycle: 2022

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H09R_TYE04A04 / Tye River / Tye River from its confluence with North & South Fork Tye River downstream to its confluence with Silver Creek.	5A	Temperature	2022	L	4.85

Tye River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			4.85

Sources: Source Unknown

James River Basin

Cause Group Code: H09R-05-BEN Black Creek

Cause Location: Black Creek from the headwaters downstream to its confluence with the Tye River.

Cause City/County: Nelson County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at stations 2-BKC001.43 and 2-BKC001.55. Initial Listing Cycle: 2014

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H09R_BKC01A14 / Black Creek / Black Creek from the headwaters downstream to its confluence with the Tye River.	5A	Benthic Macroinvertebrates Bioassessments	2014	H	1.96

Black Creek

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

Sources: Non-Point Source

James River Basin

Cause Group Code: H10R-01-BAC Piney River

Cause Location: Piney River from a point 13.40 miles upstream of the Tye River downstream to its confluence with the Tye River.

Cause City/County: Amherst County; Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station 2-PNY005.29 (4 exceedances of 31 samples in 2008, one E.coli STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024). Initial Listing Date: 2008 This segment was lengthened in 2010. This segment is included in the EPA approved Tye River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H10R_PNY01A00 / Piney River / Piney River from the USGS gaging station downstream to its confluence with the Tye River.	4A	Escherichia coli (E. coli)	2008	L	5.29
VAV-H10R_PNY02A00 / Piney River / Piney River from its confluence with Indian Creek downstream to the USGS gaging station.	4A	Escherichia coli (E. coli)	2008	L	1.61
VAV-H10R_PNY03A04 / Piney River / Piney River from a point 13.4 miles upstream of the Tye River downstream to its confluence with Indian Creek.	4A	Escherichia coli (E. coli)	2010	L	6.50

Piney River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.4

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

James River Basin

Cause Group Code: H11L-01-BAC Stonehouse Creek Reservoir

Cause Location: Stonehouse Creek Reservoir from its impounding structure upstream to its backwaters.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: Station ID:
2-SHS001.00 (Lake Station) 2022: One STV exceedances but insufficient data to analyze geomean. Impairment carries. 2020: E.coli 3/14 Exceedance Rate Note: The initial listing date was in 2020 based on the instantaneous 235 WQS.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11L_SHS01A02 / Stonehouse Creek Reservoir / Stonehouse Creek Reservoir from its impounding structure upstream to its backwaters.	5A	Escherichia coli (E. coli)	2020	L	33.54

Stonehouse Creek Reservoir

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:		33.54	

Sources: Source Unknown

James River Basin

Cause Group Code: H11L-01-DO Stonehouse Creek Reservoir

Cause Location: Stonehouse Creek Reservoir from its impounding structure upstream to its backwaters.

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: Station ID:
2-SHS001.00 (Lake Station) 2024 DO - 4/42 Exceedance Rate 2022:DO - 5/43 Exceedance Rate

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11L_SHS01A02 / Stonehouse Creek Reservoir / Stonehouse Creek Reservoir from its impounding structure upstream to its backwaters.	5A	Dissolved Oxygen	2008	L	33.54

Stonehouse Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		33.54	

Sources: Dam or Impoundment; Source Unknown

James River Basin

Cause Group Code: H11L-01-PH Stonehouse Creek Reservoir

Cause Location: Stonehouse Creek Reservoir from its impounding structure upstream to its backwaters.

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: Station ID:
2-SHS001.00 (Lake Station) 2022: pH - 7/39 Exceedance Rate

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11L_SHS01A02 / Stonehouse Creek Reservoir / Stonehouse Creek Reservoir from its impounding structure upstream to its backwaters.	5A	pH	2006	L	33.54

Stonehouse Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		33.54	

Sources: Dam or Impoundment; Source Unknown

James River Basin

Cause Group Code: H11L-02-BAC Thrashers Creek Reservoir

Cause Location: Thrashers Creek Reservoir from its impounding structure upstream to its backwaters.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: Station ID: 2-TRH000.40 2022: E.coli - Two STV exceedances but insufficient data to analyze geomean. Impairment carries.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11L_TRH01A02 / Thrashers Creek Reservoir / Thrashers Creek Reservoir from its impounding structure upstream to its backwaters.	5A	Escherichia coli (E. coli)	2020	L	31.95

Thrashers Creek Reservoir

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:		31.95	

Sources: Source Unknown

James River Basin

Cause Group Code: H11L-02-CHLA Thrashers Creek Reservoir

Cause Location: Thrashers Creek Reservoir from its impounding structure upstream to its backwaters.

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: Station ID: 2-TRH000.40 (Lake Station) 2024: Chlorophyll a - 2/2 Samples (90% Calculated over 2 Sample Yrs)

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11L_TRH01A02 / Thrashers Creek Reservoir / Thrashers Creek Reservoir from its impounding structure upstream to its backwaters.	5A	Chlorophyll-a	2014	L	31.95

Thrashers Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		31.95	

Sources: Source Unknown

James River Basin

Cause Group Code: H11L-02-PH Thrashers Creek Reservoir

Cause Location: Thrashers Creek Reservoir from its impounding structure upstream to its backwaters.

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: Station ID: 2-TRH000.40 (Lake Station)

2022: pH - 9/41 Exceedance Rate

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11L_TRH01A02 / Thrashers Creek Reservoir / Thrashers Creek Reservoir from its impounding structure upstream to its backwaters.	5A	pH	2006	L	31.95

Thrashers Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		31.95	

Sources: Source Unknown

James River Basin

Cause Group Code: H11L-03-PH Mill Creek Reservoir

Cause Location: Mill Creek Reservoir

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: Station ID:
2-MIN000.98 (Mill Cr Reservoir- Main Lake site @ dam) 2024: pH 8/37 exceedance rate

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11L_MIN01A06 / Mill Creek Reservoir / Mill Creek Reservoir	5A	pH	2014	L	186.41

Mill Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		186.41	

Sources: Dam or Impoundment; Source Unknown

James River Basin

Cause Group Code: H11R-01-BAC Buffalo River

Cause Location: Buffalo River from the confluence of Long Branch to the confluence with Rutledge Creek

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: The Hat Creek, Piney River, Rucker Run, Mill Creek, Rutledge Creek, Turner Creek, Buffalo River, and Tye River Bacteria TMDL Study (Buffalo River) received U.S. EPA approval on 9/20/2013 [Fed. ID.53766] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53766, 9/20/2013

Five stations are located within the 17.78 miles of impaired waters. 2-BUF011.95 (TMDL) (Rt 739 Bridge Boxwood Farm Road), 2-BUF013.53 (Ambient) (Route 29 Bridge), 2-BUF023.21 (Ambient)(Route 778 Bridge, NW of Amherst) , 2-BUF026.58 (TMDL)(2018)(At Route 610), and 2-BUF026.43 (TMDL)(2018) (Buffalo River @ Rt 60)

2-BUF011.95 (TMDL)(2018) (Rt 739 Bridge Boxwood Farm Road) - No new data since the 2014 data window: Four of 12 samples in excess of the instantaneous criterion.

2-BUF013.53 (Ambient) (Route 29 Bridge) - 2022: Insufficient Information - zero of 12 samples in excess of the Statistical Threshold Value and not enough samples to analyze geomean, IM carries.

2-BUF023.21 (Ambient)(Route 778 Bridge, NW of Amherst)- No new data since 2012 data window: Five of 27 samples in excess of the instantaneous criterion.

2-BUF026.58 (TMDL)(2018)(At Route 610) - No new data since 2014 data window: Seven of 12 samples in excess of the instantaneous criterion.

2-BUF026.43 (TMDL)(2018) (Buffalo River @ Rt 60) - 2022: Five of 12 samples in excess of the Statistical Threshold Value.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11R_BUF01A00 / Buffalo River / Buffalo River mainstem from the watershed boundary at the Rutledge Creek mouth upstream to the Town of Amherst WTP intake (JM29).	4A	Escherichia coli (E. coli)	2010	L	4.59
VAW-H11R_BUF02A00 / Buffalo River / Buffalo River mainstem from the Town of Amherst WTP intake upstream five miles, the WQS public water supply (PWS) designation (JM29).	4A	Escherichia coli (E. coli)	2010	L	5.26
VAW-H11R_BUF03A00 / Buffalo River / Buffalo River mainstem from the upstream end of the WQS public water supply (PWS) designation upstream to the mouth of Stonehouse Creek (JM29).	4A	Escherichia coli (E. coli)	2006	L	3.67
VAW-H11R_BUF03B14 / Buffalo River / Buffalo River from its confluence with Stonehouse Creek to its confluence with Franklin Creek (JM28).	4A	Escherichia coli (E. coli)	2014	L	2.17
VAW-H11R_BUF04A08 / Buffalo River / Buffalo River from its confluence with Long Branch downstream to its confluence with Franklin Creek.	4A	Escherichia coli (E. coli)	2014	L	2.09

Buffalo River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			17.78

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

James River Basin

Cause Group Code: H11R-01-BEN Long Branch

Cause Location: Long Branch from its headwaters to the mouth at Buffalo River

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: The Long Branch and Buffalo River (Long Branch) Sediment TMDL for a Benthic Impairment received U.S. EPA approval on 11/21/13 [Fed. ID.55242] and SWCB approval on 3/28/14 for these 2008 303(d) Listed impairments to the benthic community.

2-LOB000.37 (Amherst County Property off of Rt. 60) Benthic macroinvertebrate community impairment is established in 2008 based on sampling conducted that was initially part of the 2001 Probabilistic Monitoring network. Seasonal difference noted by Regional Biologist. The most recent data collection is from 2009-12 where two Virginia Stream Condition Index (VSCI) surveys result in the following scores: 47.8 (Spring 2011) and 63.3 (Fall 2011). Biologist notes: This stream has embedded riffles, noticeable sediment deposition, and is bordered on one side by a cow pasture.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11R_LOB01A04 / Long Branch / Long Branch from its headwaters to the mouth at Buffalo River (JM28).	4A	Benthic Macroinvertebrates Bioassessments	2008	L	3.6

Long Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.6

Sources: Clean Sediments

James River Basin

Cause Group Code: H11R-02-BAC Mill Creek

Cause Location: Mill Creek from its headwaters to the backwaters of Mill Creek Reservoir.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: The Hat Creek, Piney River, Rucker Run, Mill Creek, Rutledge Creek, Turner Creek, Buffalo River, and Tye River Bacteria TMDL Study (Mill Creek) received U.S. EPA approval on 9/20/2013 [Fed. ID.53767] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53767, 9/20/2013

One station is located within the 4.19 miles of impaired waters. 2-MIN002.25 (Citmon Follow-up) (Mill Creek @ rt 778 Lowesville Rd)

2-MIN002.25 (Citmon Follow-up)(Mill Creek @ rt 778 Lowesville Rd) Five of 12 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11R_MIN01A08 / Mill Creek / Mill Creek from its headwaters to the backwaters of Mill Creek Reservoir.	4A	Escherichia coli (E. coli)	2008	L	4.16

Mill Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.16

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

James River Basin

Cause Group Code: H11R-02-BEN Buffalo River

Cause Location: Buffalo River from its confluence with Long Branch downstream to its confluence with Franklin Creek.

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: The Long Branch and Buffalo River (Buffalo River) Sediment TMDL for a Benthic Impairment received U.S. EPA approval on 11/21/13 [Fed. ID.55241] and SWCB approval on 3/28/04 for these 2008 303(d) Listed impairments to the benthic macroinvertebrate community.

2-BUF026.43 (Rt. 60) There is no additional data since the 2014 data window where three 2011 Virginia Stream Condition Index (VSCI) surveys average 54.9. Biologist notes: This stream has good riffles but algae are dominant, indicating potential nutrient enrichment. It also has excessive sediment deposition, likely due to its location in an agricultural watershed with pasture adjacent to the left bank.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H11R_BUF04A08 / Buffalo River / Buffalo River from its confluence with Long Branch downstream to its confluence with Franklin Creek.	4A	Benthic Macroinvertebrates Bioassessments	2008	L	2.09

Buffalo River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.09

Sources: Clean Sediments

James River Basin

Cause Group Code: H12R-01-BAC Rutledge Creek

Cause Location: Rutledge Creek mainstem from the Town of Amherst outfall downstream to its mouth on the Buffalo River.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: The Hat Creek, Piney River, Rucker Run, Mill Creek, Rutledge Creek, Turner Creek, Buffalo River, and Tye River Bacteria TMDL Study (Rutledge Creek) received U.S. EPA approval on 9/20/2013 [Fed. ID.53764] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53764, 9/20/2013

One station is located within the 3.33 miles of impaired waters.2-RTD003.08 (Ambient)(2018) (Below Amherst STP Outfall)

2-RTD003.08 (Ambient)(2018)(Below Amherst STP Outfall) Four of 12 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H12R_RTD01A00 / Rutledge Creek / Rutledge Creek mainstem from the Town of Amherst outfall downstream to its mouth on the Buffalo River (JM30).	4A	Escherichia coli (E. coli)	2012	L	3.33

Rutledge Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.33

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

James River Basin

Cause Group Code: H12R-01-BEN Rutledge Creek

Cause Location: Rutledge Creek mainstem from the Town of Amherst outfall downstream to its mouth on the Buffalo River.

Cause City/County: Amherst County

Use(s): Aquatic Life

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

Cause Description: Rutledge Creek is impaired for Aquatic Life Use with the 2012 303(d) Impaired Waters list based on benthic macroinvertebrate community data.

2-RTD003.08 (Below Amherst STP Outfall) The benthic macroinvertebrate community is impaired based on two 2007 Virginia Stream Condition Index scores of 28.6 (spring) and 50.7 (fall). Biologist notes: This site was highly embedded with unstable banks and poor bank vegetative protection. Available habitat was covered with periphyton and filamentous algae. Subsequent VSCI scores (2011) find continued impairment (spring: 54.7 and fall 53.4). There is no recent benthic data collected but 2021 water chemistry data finds seven out of 12 Total Phosphorus observations in the high probability of stress to aquatic life category (range: 0.14-1.23 mg/L).

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community. Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H12R_RTD01A00 / Rutledge Creek / Rutledge Creek mainstem from the Town of Amherst outfall downstream to its mouth on the Buffalo River (JM30).	5A	Benthic Macroinvertebrates Bioassessments	2010	L	3.33

Rutledge Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.33

Sources: Source Unknown

James River Basin

Cause Group Code: H12R-03-BAC Buffalo River

Cause Location: Rocky Creek to its mouth on the Tye River.

Cause City/County: Amherst County; Nelson County

Use(s): Recreation

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

Cause Description: The Hat Creek, Piney River, Rucker Run, Mill Creek, Rutledge Creek, Turner Creek, Buffalo River, and Tye River Bacteria TMDL Study (Buffalo River) received U.S. EPA approval on 9/20/2013 [Fed. ID.55241] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 55241, 9/20/2013

One station is located within the 7.81 miles of impaired waters. 2-BUF002.10 (Ambient)(Route 657 at Gaging Station)

2-BUF002.10 (Ambient)(Route 657 at Gaging Station) - 2022: 16 of 41 samples in excess of the Statistical Threshold Value.

Flow adjusted trend analysis (2016) reports a degrading trend in E.coli data.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H12R_BUF01A00 / Buffalo River / Buffalo River mainstem from its mouth on the Tye River upstream to a low water dam near Route 657 (JM31).	4A	Escherichia coli (E. coli)	2008	L	2.34
VAW-H12R_BUF02A02 / Buffalo River / Buffalo River from Rocky Creek to the dam at the Route 657 bridge (JM31).	4A	Escherichia coli (E. coli)	2008	L	5.47

Buffalo River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.81

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

James River Basin

Cause Group Code: H12R-04-BAC Turner Creek

Cause Location: Turner Creek from its headwaters to the mouth on the Buffalo River

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: The Hat Creek, Piney River, Rucker Run, Mill Creek, Rutledge Creek, Turner Creek, Buffalo River, and Tye River Bacteria TMDL Study (Turner Creek) received U.S. EPA approval on 9/20/2013 [Fed. ID.53765] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53765, 9/20/2013

One station is located within the 4.49 miles of impaired waters.2-TNR000.25 (Ambient) (Turner Cr @ rt 739 Boxwood Farm Rd)

2-TNR000.25 (Ambient) (Turner Cr @ rt 739 Boxwood Farm Rd)- :2018: Four of 12 samples in excess of the instantaneous criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H12R_TNR01A08 / Turner Creek / Turner Creek from its headwaters to the mouth on the Buffalo River (JM29).	4A	Escherichia coli (E. coli)	2008	L	4.49

Turner Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.49

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

James River Basin

Cause Group Code: H12R-05-BAC Rutledge Creek

Cause Location: Rutledge Creek from its confluence with Higginbottom Creek to its headwaters.

Cause City/County: Amherst County

Use(s): Recreation

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

Cause Description: NESTED 2014: 53764, 9/20/2013

The Hat Creek, Piney River, Rucker Run, Mill Creek, Rutledge Creek, Turner Creek, Buffalo River, and Tye River Bacteria TMDL Study (Rutledge Creek) received U.S. EPA approval on 9/20/2013 [Fed. ID.53764] and SWCB approval on 4/4/2014 for these 2004 303(d) Listed waters for fecal coliform and 2008 and 2010 303(d) Listed water for E.coli. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. 53764, 9/20/2013

One station is located within the 4.17 miles of impaired waters. 2-RTD007.61 (TMDL Station)(2018) (Rutledge Creek at Sweetbriar entrance)

2-RTD007.61 (TMDL Station)(2018)(Rutledge Creek at Sweetbriar entrance) Three of 12 samples in excess of the instantaneous criterion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-H12R_RTD03A14 / Rutledge Creek / Rutledge Creek from its confluence with Higginbottom Creek to its headwaters (JM30).	4A	Escherichia coli (E. coli)	2014	L	4.17

Rutledge Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.17

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

James River Basin

Cause Group Code: H13L-02-PH Lake Nelson

Cause Location: Lake Nelson

Cause City/County: Nelson County

Use(s): Aquatic Life

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

Cause Description: This lake is impaired due to excursions of the pH WQS at station: 2-XLU000.10 (6 excursions of 56 samples in 2018; 15 excursions of 34 samples in 2022; No new data 2024). Initial Listing Cycle: 2018

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H13L_XLU01A04 / Lake Nelson / Lake Nelson	5A	pH	2018	L	40.62

Lake Nelson

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		40.62	

Sources: Non-Point Source

James River Basin

Cause Group Code: H13R-01-BAC Rucker Run

Cause Location: Rucker Run from the headwaters downstream to its confluence with the Tye River.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment remains impaired due to exceedances of the e-coli bacteria WQS at station: 2-RKR000.02 (one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024). Initial Listing Date: 2004 (fecal coliform)/ 2012 (E.coli). This segment is included in the EPA approved Tye River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H13R_RKR01A00 / Rucker Run / Rucker Run from the headwaters downstream to its confluence with the Tye River.	4A	Escherichia coli (E. coli)	2012	L	18.36

Rucker Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			18.36

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

James River Basin

Cause Group Code: H13R-02-BAC Bobs Creek

Cause Location: Bobs Creek from the headwaters downstream to its confluence with Rucker Run.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2BBOB000.19 (5 exceedances of 12 samples in 2014, no new data in 2024). Initial Listing Date: 2014 This segment is included in the EPA approved Tye River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H13R_BOB01A10 / Bobs Creek / Bobs Creek from the headwaters downstream to its confluence with Rucker Run.	4A	Escherichia coli (E. coli)	2014	L	4.35

Bobs 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; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H14R-01-BEN Mallorys Creek

Cause Location: Mallorys Creek from the headwaters downstream to its confluence with the James River.

Cause City/County: Buckingham County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-MLY005.39. No new data 2024. Initial Listing Cycle: 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H14R_MLY01A14 / Mallorys Creek / Mallorys Creek from the headwaters downstream to its confluence with the James River.	5A	Benthic Macroinvertebrates Bioassessments	2016	L	8.75

Mallorys Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.75

Sources: Source Unknown

James River Basin

Cause Group Code: H14R-01-HG James River

Cause Location: James River from its confluence with the Tye River downstream to its confluence with the Rockfish River.

Cause City/County: Buckingham County; Nelson County

Use(s): Fish Consumption

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

Cause Description: Exceedances of the mercury fish tissue value of 0.30 parts per million (ppm) occurred at station 2-JMS213.00 on 6/15/2005: Channel Catfish at 0.44 ppm and Flathead Catfish at 0.32 ppm. No new data in the 2024 data window. Initial Listing Cycle: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H14R_JMS01A18 / James River / James River from its confluence with Bishop Creek downstream to its confluence with the Rockfish River.	5A	Mercury in Fish Tissue	2010	L	13.49
VAV-H14R_JMS02A18 / James River / James River from its confluence with the Tye River downstream to its confluence with Bishop Creek.	5A	Mercury in Fish Tissue	2010	L	5.09

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			18.58

Sources: Source Unknown

James River Basin

Cause Group Code: H15R-01-BAC South Fork Rockfish River

Cause Location: South Fork Rockfish River from the headwaters downstream to its confluence with the Rockfish River.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-RFS001.00 (two exceedances of 12 samples in 2008; two or more STV hits in the same 90-day period with less than 10 samples in 2024). Initial Listing Date: 2008. This segment is included in the EPA Approved South Fork Rockfish River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H15R_RFS01A00 / Rockfish River South Fork / South Fork Rockfish River from a point approximately 8 miles upstream of the Rockfish River downstream to its confluence with the Rockfish River.	4A	Escherichia coli (E. coli)	2008	L	7.82
VAV-H15R_RFS02A10 / Rockfish River South Fork / South Fork Rockfish River from the headwaters downstream to a point approximately 8 miles upstream of the Rockfish River.	4A	Escherichia coli (E. coli)	2008	L	3.74

South Fork Rockfish River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.56

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

James River Basin

Cause Group Code: H15R-02-BAC North Fork Rockfish River

Cause Location: North Fork Rockfish River from the headwaters downstream to its confluence with the Rockfish River.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-RFN002.83 (4 exceedances of 12 samples in 2006, no new data 2024). Initial Listing Date: 2006. This segment is included in the EPA approved North Fork Rockfish River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H15R_RFN01A00 / Rockfish River North Fork / North Fork Rockfish River from the headwaters downstream to its confluence with the Rockfish River.	4A	Escherichia coli (E. coli)	2006	L	7.18

North Fork Rockfish River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.18

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

James River Basin

Cause Group Code: H15R-03-BAC Taylor Creek

Cause Location: Taylor Creek from the headwaters downstream to its confluence with Perry Creek.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-TLR000.05. No new data 2024. Initial Listing Date: 2012. This segment is included in the EPA Approved North Fork Rockfish River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H15R_TLR01A08 / Taylor Creek / Taylor Creek from the confluence of the two headwater tributaries downstream to its confluence with Perry Creek.	4A	Escherichia coli (E. coli)	2012	L	4.99

Taylor Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.99

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

James River Basin

Cause Group Code: H15R-04-BAC Goodwin Creek

Cause Location: Goodwin Creek from the headwaters downstream to its confluence with the North Fork Rockfish River.

Cause City/County: Albemarle County; Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2BGOW000.76 (5 exceedances of 10 samples in 2016, no new data 2024). Initial Listing Date: 2016. This segment is included in the EPA approved North Fork Rockfish River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H15R_GOW01A16 / Goodwin Creek / Goodwin Creek from the headwaters downstream to its confluence with the North Fork Rockfish River.	4A	Escherichia coli (E. coli)	2016	L	2.55

Goodwin Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.55

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

James River Basin

Cause Group Code: H15R-05-TEMP South Fork Rockfish River

Cause Location: South Fork Rockfish River from the headwaters downstream to a point approximately 8 miles upstream of the Rockfish River.

Cause City/County: Nelson County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: This segment is impaired due to exceedances of the temperature WQS at station: 2-RFS001.00 (11 exceedances out of 48 samples in 2022). Initial Listing Date: 2022.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H15R_RFS02A10 / Rockfish River South Fork / South Fork Rockfish River from the headwaters downstream to a point approximately 8 miles upstream of the Rockfish River.	5A	Temperature	2022	L	3.74

South Fork Rockfish River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			3.74

Sources: Source Unknown

James River Basin

Cause Group Code: H16R-01-BAC Rockfish River

Cause Location: Rockfish River from the headwaters downstream to its confluence with Davis Creek.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-RKF026.42 (3 exceedances of 12 samples in 2006, no new data 2024). Initial Listing Date: 2006. This segment is included in the EPA approved Rockfish River Bacteria TMDL

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H16R_RKF02A00 / Rockfish River / Rockfish River from the headwaters downstream to its confluence with Davis Creek.	4A	Escherichia coli (E. coli)	2006	L	5.78

Rockfish River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.78

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

James River Basin

Cause Group Code: H16R-02-BAC Beaver Creek

Cause Location: Beaver Creek from the confluence of its two headwater branches downstream to its confluence with the Rockfish River.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-BVR000.83 (2 exceedances of 12 samples in 2016, no new data 2024). Initial Listing Cycle: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H16R_BVC01A04 / Beaver Creek / Beaver Creek from the confluence of its two headwater branches downstream to its confluence with the Rockfish River.	5A	Escherichia coli (E. coli)	2012	L	7.41

Beaver Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.41

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H16R-03-BAC Cove Creek

Cause Location: Cove Creek from the headwaters downstream to its confluence with the Rockfish River.

Cause City/County: Albemarle County; Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-COV003.44 (7 exceedances of 12 samples in 2012; two or more STV hits in the same 90-day period with less than 10 samples in 2024). Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H16R_COV01A00 / Cove Creek / Cove Creek from the headwaters downstream to its confluence with the Rockfish River.	5A	Escherichia coli (E. coli)	2012	L	10.47

Cove Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.47

Sources: Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H16R-04-BAC Rockfish River

Cause Location: Rockfish River from its confluence with Davis Creek downstream to its confluence with the James River.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at stations: 2-RKF007.28 (two exceedances of 12 samples in 2012; no STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024); 2-RKF014.71 (two exceedances of 12 samples in 2012; one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024) and 2-RKF000.19 (3 exceedences of 12 samples in 2018; no STV exceedances in multiple 90-day periods but insufficient data to analyze geomean in 2024) Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H16R_RKF01A00 / Rockfish River / Rockfish River from its confluence with Hog Creek downstream to its confluence with the James River.	5A	Escherichia coli (E. coli)	2018	L	6.06
VAV-H16R_RKF01B10 / Rockfish River / Rockfish River from its confluence with Cove Creek downstream to its confluence with the Hog Creek.	5A	Escherichia coli (E. coli)	2012	L	8.02
VAV-H16R_RKF01C10 / Rockfish River / Rockfish River from its confluence with Davis Creek downstream to its confluence with the Cove Creek.	5A	Escherichia coli (E. coli)	2012	L	9.28

Rockfish River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			23.36

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H16R-05-BAC Rockfish River UT

Cause Location: Rockfish River UT (Lower Rockfish River watershed) from the headwaters downstream to its confluence with the Rockfish River.

Cause City/County: Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-XRK001.64 (two exceedances of 13 samples in 2016; Insufficient Information to change status of impairment-No E.coli STV exceedances but insufficient data to analyze geomean in 2024). Initial Listing Date: 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H16R_XRK01A14 / Rockfish River UT / Rockfish River UT located within the VAV-H16R (Lower Rockfish River) watershed.	5A	Escherichia coli (E. coli)	2016	L	2.69

Rockfish River UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.69

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H17L-01-CHLA Totier Creek Reservoir

Cause Location: Totier Creek Reservoir (37.23 Acres)

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This lake is impaired due to exceedances of the Chlorophyll-A WQS at station 2-TOT001.01. Initial Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H17L_TOT01A04 / Totier Creek Reservoir / Totier Creek Reservoir	5A	Chlorophyll-a	2024	L	37.23

Totier Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		37.23	

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H17L-01-DO Totier Creek Reservoir

Cause Location: Totier Creek Reservoir (37.23 Acres)

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This lake is impaired due to excursions of the dissolved oxygen WQS in the Epilimnion at station: 2-TOT001.01 (15 excursions of 38 samples). Initial Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H17L_TOT01A04 / Totier Creek Reservoir / Totier Creek Reservoir	5A	Dissolved Oxygen	2024	L	37.23

Totier Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		37.23	

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H17R-01-BAC Totier Creek

Cause Location: Totier Creek from the headwaters downstream to its confluence with the James River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-TOT002.61 (11 exceedances of 30 samples for e-coli in 2008, no new data 2024). Initial Listing Date: 2002 (fecal coliform)/ 2006 (E.coli). This segment is included in the EPA approved James River watersheds bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H17R_TOT01A00 / Totier Creek / Totier Creek from the RWSA-Scottsville Public Water Intake downstream to its confluence with the James River.	4A	Escherichia coli (E. coli)	2008	L	0.72
VAV-H17R_TOT02A00 / Totier Creek / Totier Creek from the headwaters downstream to the upper end of Totier Creek Reservoir.	4A	Escherichia coli (E. coli)	2008	L	9.61

Totier Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.33

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

James River Basin

Cause Group Code: H17R-02-BAC James River

Cause Location: James River from its confluence with the Rockfish River downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County; Buckingham County; Cumberland County; Fluvanna County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station(s): 2-JMS189.31 (three exceedances of 25 samples in 2008; no STV exceedances but insufficient data to analyze geomean in 2024); and 2-JMS176.63 (five exceedances of 37 samples in 2012; no STV exceedances but insufficient data to analyze geomean in 2024). Initial Listing Date: 2008

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H17R_JMS01A18 / James River / James River from its confluence with Totier Creek downstream to its confluence with the Hardware River.	5A	Escherichia coli (E. coli)	2008	L	8.13
VAV-H17R_JMS02A18 / James River / James River from its confluence with Ballinger Creek downstream to its confluence with Totier Creek.	5A	Escherichia coli (E. coli)	2008	L	4.82
VAV-H17R_JMS03A18 / James River / James River from its confluence with the Rockfish River downstream to its confluence with Ballinger Creek.	5A	Escherichia coli (E. coli)	2008	L	5.74
VAV-H20R_JMS01A02 / James River / James River from the Hardware River downstream to a point 5 miles above Fork Union Sanitary District raw water intake.	5A	Escherichia coli (E. coli)	2012	L	1.98
VAV-H20R_JMS02A02 / James River / The James River from a point 5 miles above Fork Union Sanitary District's raw water intake downstream to its confluence with the Slate River.	5A	Escherichia coli (E. coli)	2012	L	2.94
VAV-H20R_JMS02B18 / James River / The James River from its confluence with the Slate River downstream to the Fork Union Sanitary District's raw water intake.	5A	Escherichia coli (E. coli)	2012	L	2.16
VAV-H20R_JMS03A02 / James River / The James River from the Fork Union Sanitary District's raw water intake downstream to the confluence with the Rivanna River.	5A	Escherichia coli (E. coli)	2012	L	9.25

James River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			35.02

Sources: Source Unknown

James River Basin

Cause Group Code: H17R-03-BAC Ballinger Creek

Cause Location: Ballinger Creek from the headwaters downstream to its confluence with the James River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-BLR003.00 (3 exceedances of 18 samples in 2008, no new data in 2024). Initial Listing Date; 2004. This impairment is included in the EPA approved James River (Slate River Watershed) Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H17R_BLR01A18 / Ballinger Creek / Ballinger Creek from the headwaters downstream to its confluence with the James River.	4A	Escherichia coli (E. coli)	2008	L	10.09

Ballinger Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.09

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

James River Basin

Cause Group Code: H17R-05-BEN Totier Creek

Cause Location: Totier Creek from the RWSA-Scottsville Public Water Intake downstream to its confluence with the James River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-TOT000.08. No new data 2024. Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H17R_TOT01A00 / Totier Creek / Totier Creek from the RWSA-Scottsville Public Water Intake downstream to its confluence with the James River.	5A	Benthic Macroinvertebrates Bioassessments	2006	L	0.72

Totier Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.72

Sources: Source Unknown

James River Basin

Cause Group Code: H18R-01-BAC North Fork Hardware River

Cause Location: North Fork Hardware River from the headwaters downstream to its confluence with the Hardware River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station 2-HNF008.28 (9 exceedances of 18 samples in 2008, insufficient data with no STV exceedances but insufficient data to analyze geomean in 2024). Additional data collected at 2-HNF000.10 (two or more STV hits in the same 90-day period with less than 10 samples in 2024). Initial Listing Date: 2004. This segment is included in the EPA approved North Fork Hardware River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H18R_HNF01A00 / Hardware River North Fork / North Fork Hardware River form the headwaters downstream to its confluence with the Hardware River.	4A	Escherichia coli (E. coli)	2008	L	11.35

North Fork Hardware River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.35

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

James River Basin

Cause Group Code: H18R-02-BAC South Branch North Fork Hardware River and Tributaries

Cause Location: South Branch North Fork Hardware River and tributaries from the headwaters downstream to its confluence with the North Fork Hardware River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-HNS002.40 (5 exceedances of 9 samples in 2008, two or more STV hits in the same 90-day period with less than 10 samples in 2024). Initial Listing Date: 2008. This segment is included in the EPA approved North Fork Hardware River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H18R_HNS01A08 / South Branch North Fork Hardware River / South Branch of the North Fork Hardware River (including tributaries) from the headwaters downstream to its confluence with the North Fork Hardware River.	4A	Escherichia coli (E. coli)	2008	L	24.02
VAV-H18R_XNH01A10 / X-trib to the South Branch North Fork Hardware River 1 / X-trib of the South Branch North Fork Hardware River and tributaries from their headwaters downstream to its confluence with the South Branch North Fork Hardware River.	4A	Escherichia coli (E. coli)	2012	L	1.76

South Branch North Fork Hardware River and Tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			25.78

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

James River Basin

Cause Group Code: H19R-01-BAC Hardware River

Cause Location: Hardware River from the headwaters downstream to its confluence with the James River.

Cause City/County: Albemarle County; Fluvanna County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-HRD011.57 (six exceedances of 34 samples in 2008; insufficient data with one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024). Additional data was collected in 2024 at 2-HRD000.36 (insufficient data with one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean). Initial Listing Date: 2008 (E.coli). This segment is included in the EPA approved Hardware River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H19R_HRD01A00 / Hardware River / Hardware River from the Rt. 6 bridge, downstream to its confluence with the James River.	4A	Escherichia coli (E. coli)	2008	L	7.0
VAV-H19R_HRD02A10 / Hardware River / Hardware River from the headwaters downstream to the Rt. 6 bridge.	4A	Escherichia coli (E. coli)	2008	L	16.3

Hardware River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			23.3

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

James River Basin

Cause Group Code: H20R-01-BAC Bear Garden Creek

Cause Location: Bear Garden Creek from the headwaters downstream to its confluence with the James River.

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-BSG000.58 (2 exceedances of 10 samples in 2010, no new data in 2024) Initial Listing Date: 2010. This segment is included in the EPA approved Bear Garden Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H20R_BGC01A98 / Bear Garden Creek / Bear Garden Creek from the a point 5 miles above the Fork Union Sanitary District raw water intake to the mouth at the James River.	4A	Escherichia coli (E. coli)	2010	L	4.71
VAV-H20R_BGC02A04 / Bear Garden Creek / Bear Garden Creek from its headwaters downstream to a point 5 miles above the Fork Union Sanitary District's raw water intake.	4A	Escherichia coli (E. coli)	2010	L	4.89

Bear Garden Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.6

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

James River Basin

Cause Group Code: H20R-01-BEN Bear Garden Creek

Cause Location: Bear Garden Creek from its headwaters downstream to a point 5 miles above the Fork Union Sanitary District's raw water intake.

Cause City/County: Buckingham County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to exceedances of the General Standard for benthics at station(s): 2-BGC008.10 (Impaired for VSCI). Initial Listing Date: 2022

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H20R_BGC02A04 / Bear Garden Creek / Bear Garden Creek from its headwaters downstream to a point 5 miles above the Fork Union Sanitary District's raw water intake.	5A	Benthic Macroinvertebrates Bioassessments	2022	L	4.89

Bear Garden Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.89

Sources: Source Unknown

James River Basin

Cause Group Code: H20R-02-BAC South Creek

Cause Location: South Creek from the headwaters downstream to its confluence with the James River.

Cause City/County: Fluvanna County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station 2-SSX001.39 (4 exceedances of 12 samples for e-coli in 2014). No new data in 2024. Initial Listing Date: 2014

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H20R_SSX01A08 / South Creek / South Creek from its headwaters downstream to its confluence with the James River	5A	Escherichia coli (E. coli)	2014	L	6.67

South Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.67

Sources: Source Unknown

James River Basin

Cause Group Code: H20R-02-BEN North Creek

Cause Location: North Creek from headwaters downstream to the first unnamed tributary confluence.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station(s): 2-NOR003.28 and 2-NOR003.59. No new data in 2024. Initial Listing Date: 2008. This impairment is included in the EPA approved North Creek Benthic TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H20R_NOR01A02 / North Creek / North Creek from headwaters downstream to the first unnamed tributary confluence.	4A	Benthic Macroinvertebrates Bioassessments	2008	L	3.32

North Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.32

Sources: Agriculture; Clean Sediments; Crop Production (Crop Land or Dry Land); Erosion from Derelict Land (Barren Land); Managed Pasture Grazing; Municipal Point Source Discharges; Non-Point Source; Unspecified Urban Stormwater

James River Basin

Cause Group Code: H20R-03-BEN North Creek

Cause Location: North Creek from approximately two miles upstream, downstream to its confluence with South Creek.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-NOR000.20. Initial Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H20R_NOR02A02 / North Creek / North Creek from approximately two miles upstream, downstream to its confluence with South Creek.	5A	Benthic Macroinvertebrates Bioassessments	2024	L	1.98

North Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.98

Sources: Source Unknown

James River Basin

Cause Group Code: H21L-01-DO Troublesome Reservoir

Cause Location: Troublesome Reservoir in its entirety

Cause City/County: Buckingham County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle the segment was impaired for Dissolved Oxygen with an exceedance rate of 8/65 at station 2-TBM000.92.

During the 2018, 2020, 2022 and 2024 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-H21L_TBM01A06 / Troublesome Reservoir / Troublesome Reservoir	5A	Dissolved Oxygen	2010	L	52.68

Troublesome Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		52.68	

Sources: Changes in Ordinary Stratification and Bottom Water Hypoxia/Anoxia; Dam or Impoundment

James River Basin

Cause Group Code: H21R-01-BAC Horsepen Creek

Cause Location: Horsepen Creek from its headwaters to its mouth on the Slate River

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, Horsepen Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at

2BHOX0.62.

The impairment is considered nested within the James River (Slate River) Bacterial TMDL; therefore, it is considered a Category 4A water.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H21R_HOX01A08 / Horsepen Creek / Horsepen Creek from its headwaters to its mouth on the Slate River	4A	Escherichia coli (E. coli)	2016	L	5.87

Horsepen Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.87

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

James River Basin

Cause Group Code: H21R-01-BEN Horsepen Creek

Cause Location: Horsepen Creek from its headwaters to its mouth on the Slate River

Cause City/County: Buckingham County

Use(s): Aquatic Life

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

Cause Description: Horsepen Creek was impaired of the Aquatic Life Use due to benthic monitoring at 2BHOX000.62 during 2009 and 2012.

Biologist notes from 2009 indicated that the riffles were highly embedded and unstable, which was likely a result of relatively unstable stream banks and heavy local watershed erosion. Sediment is a likely stressor in this stream.

Further monitoring in 2017 was variable and an assessment could not be determined.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H21R_HOX01A08 / Horsepen Creek / Horsepen Creek from its headwaters to its mouth on the Slate River	5A	Benthic Macroinvertebrates Bioassessments	2014	L	5.87

Horsepen Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.87

Sources: Source Unknown

James River Basin

Cause Group Code: H21R-02-BAC Walton Fork

Cause Location: Walton Fork from its confluence with Ripley Creek to its mouth on the Slate River

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: Walton Fork downstream of the confluence with Ripley Fork was impaired of the Recreation Use during the 2018 cycle due to an E. coli exceedance rate of 4/12 at 2-WTN002.50.

The segment is located within the study area for the James River (Slate River) Watershed Bacterial TMDL, which was approved by the EPA on 9/20/2007 and by the SWCB on 7/31/2008. TMDL implementation would be expected to bring Walton Fork into compliance; therefore, the segment is considered nested.

The exceedance rate was 6/24 in the 2022 cycle; in addition, it was 6/17 at 2-WTN001.23.

During the 2024 cycle, there was insufficient information to assess the Recreation Use at 2-WTN001.23 (3/11).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H21R_WTN01A08 / Walton Fork / Walton Fork from its confluence with Ripley Creek to its mouth on the Slate River	4A	Escherichia coli (E. coli)	2018	L	3

Walton Fork

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3

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

James River Basin

Cause Group Code: H21R-02-BEN Walton Fork

Cause Location: Walton Fork from its confluence with Ripley Creek to its mouth on the Slate River

Cause City/County: Buckingham County

Use(s): Aquatic Life

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

Cause Description: Lower Walton Fork was impaired of the Aquatic Life Use in the 2016 cycle to benthic monitoring at 2-WTN002.50. This stream had riffles consisting of mostly gravel and a little cobble. There was excessive sedimentation throughout the stream and an abundance of periphyton.

2016 benthic monitoring at 2-WTN002.08 was inconclusive.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H21R_WTN01A08 / Walton Fork / Walton Fork from its confluence with Ripley Creek to its mouth on the Slate River	5A	Benthic Macroinvertebrates Bioassessments	2016	L	3

Walton Fork

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3

Sources: Source Unknown

James River Basin

Cause Group Code: H21R-03-BAC North River

Cause Location: The North River from the confluence with an unnamed tributary near Route 56 to its headwaters

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: The North River from its headwaters at Meadow Creek to its mouth was impaired of the Recreation Use in the 2002 cycle. The impairment was subsequently addressed in the James River Watershed (Slate River) Bacterial TMDL which was approved by the EPA on 9/20/2007 and by the SWCB on 7/31/2008. The lower portion was later partially delisted in the 2008 cycle due to an acceptable E.coli exceedance rate (2/23) at 2-NTH001.65.

During the 2016 cycle, the E. coli exceedance rate was 4/12 at 2-NTH003.88. No additional data has been collected.

Note: the segment was shortened in the 2018 cycle to correct the location of the headwaters.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H21R_NTH02A08 / North River / The North River from the confluence with an unnamed tributary near Route 56 to its headwaters.	4A	Escherichia coli (E. coli)	2008	L	5.98

North River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.98

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

James River Basin

Cause Group Code: H21R-04-BAC Slate River

Cause Location: The Slate River from the confluence with North Fork downstream to its confluence with Walton Fork

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: A portion of the Slate River was first listed for the Recreation Use in the 2002 IR. The segment length was adjusted to Grease Creek downstream to Walton Fork in the 2004 cycle. The segment was addressed in the James River (Slate River Watershed) Bacterial TMDL which was approved by the EPA on 9/20/2007. A portion was partially delisted in the 2008 cycle and the impairment now extended from the North River to Walton Fork.

The E. coli exceedance rate was 3/12 at 2-SLT024.72 during the 2020 cycle. That station has subsequently been deemed unsafe. Station 2-SLT030.19 in VAP-H21R_SLT02B12 has been sampled as a replacement. There was insufficient information at that station to assess the Recreation Use in the 2024 cycle (no STV exceedances but insufficient data to analyze geomean); therefore, the impairment will be carried over.

NOTE: During the 2008 cycle, a downstream portion of the Slate River from Walton Fork to Joshua Creek was considered impaired due to an E. coli exceedance rate of 3/22 at 2-SLT018.85. The segment was mistakenly combined with the upstream TMDL segment. It was split off in the 2018 cycle and considered nested. See fact sheet H21R-05-BAC

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H21R_SLT02A08 / Slate River / Slate River from the North River downstream to Walton Fork.	4A	Escherichia coli (E. coli)	2012	L	6.25

Slate River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.25

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

James River Basin

Cause Group Code: H21R-05-BAC Slate River

Cause Location: The Slate River from the confluence with Walton Fork downstream to its confluence with Joshua Creek

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, a downstream portion of the Slate River from Walton Fork to Joshua Creek was considered impaired due to an E. coli exceedance rate of 3/22 at 2-SLT018.85. This segment was initially mistakenly combined with an existing upstream TMDL segment (Grease Creek to Walton Fork), which was addressed in the James River (Slate River Watershed) Bacterial TMDL (EPA approval 9/20/2007). It was split off in the 2018 cycle and considered nested.

Station 2-SLT018.85 has subsequently been deemed unsafe and cannot be resampled. Downstream station 2-SLT014.52 is the closest representative station to replace the listing station. That station was impaired for E. coli in previous cycles; therefore, the impairment is carried over for this segment as well.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H21R_SLT01A00 / Slate River / The Slate River from the confluence with Walton Fork downstream to its confluence with Joshua Creek	4A	Escherichia coli (E. coli)	2008	L	6.69

Slate River

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

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

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: H22R-01-BAC Slate River

Cause Location: Slate River from its confluence with Joshua Creek to its mouth at the James River.

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: The Slate River from the confluence with Sharps Creek downstream to its mouth was initially listed as impaired of the Recreation Use in the 2002 cycle due to fecal coliform exceedances at 2-SLT003.68.

The Slate River Bacterial TMDL was approved by the EPA on 9/20/2007 and by the SWCB on 7/31/2008.

The impairment was later converted to E. coli and was extended upstream to the confluence with Joshua Creek because of additional exceedances at 2-SLT014.52.

During the 2022 cycle, 2-SLT003.68 remained impaired due to 2 or more STV hits in the same 90-day period with < 10 samples. There was insufficient information to assess E. coli in the 2024 cycle (0/11 at 2-SLT003.68.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H22R_SLT01A06 / Slate River / Slate River from Joshua Creek downstream to its confluence with Sharps Creek.	4A	Escherichia coli (E. coli)	2008	L	9.04
VAP-H22R_SLT02A02 / Slate River / The Slate River from the confluence with Sharps Creek to Rt. 676.	4A	Escherichia coli (E. coli)	2012	L	3.27
VAP-H22R_SLT03A02 / Slate River / The Slate River from Rt. 676 downstream to a point 5 miles upstream of the Fork Union Sanitary District raw water intake (rivermile 3.88) to the mouth at the James River.	4A	Escherichia coli (E. coli)	2012	L	1.00
VAP-H22R_SLT03B20 / Slate River / The Slate River from a point 5 miles upstream of the Fork Union Sanitary District raw water intake (rivermile 3.88) downstream to the mouth at the James River.	4A	Escherichia coli (E. coli)	2012	L	2.90

Slate River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			16.21

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

James River Basin

Cause Group Code: H22R-02-BAC Muddy Creek

Cause Location: Muddy Creek from its headwaters to its mouth on the Slate River

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: Muddy Creek was impaired of the Recreation Use in the 2008 cycle due to E. coli exceedances at 2-MYC000.50. The exceedance rate was 6/12 in the 2014 cycle; no additional monitoring has been conducted.

The creek is located within the study area for the James River (Slate River) Watershed Bacterial TMDL, which was approved by the EPA on 9/20/2007 and by the SWCB on 7/31/2008. 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-H22R_MYC01A08 / Muddy Creek / Muddy Creek from its headwaters to its mouth on the Slate River	4A	Escherichia coli (E. coli)	2008	L	6.77

Muddy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.77

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

James River Basin

Cause Group Code: H22R-04-BAC Hunts Creek

Cause Location: Hunts Creek from its headwaters to its mouth on the Slate River.

Cause City/County: Buckingham County

Use(s): Recreation

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

Cause Description: Hunts Creek was impaired of the Recreation Use in the 2014 cycle due to an E. coli exceedance rate of 2/12 at 2-HUS002.24. The stream is located within the study area for Slate River Bacterial TMDL, which was approved by the EPA on 09/20/2007, and is considered nested (Category 4A.) No additional E. coli monitoring has been conducted.

The stream extent was corrected in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H22R_HUS01A06 / Hunts Creek / Hunts Creek from its headwaters to a point 5 miles above the Fork Union Sanitary District intake.	4A	Escherichia coli (E. coli)	2014	L	9.65
VAP-H22R_HUS01B20 / Hunts Creek / Hunts Creek from a point 5 miles above the Fork Union Sanitary District intake to its mouth on the Slate River.	4A	Escherichia coli (E. coli)	2014	L	1.99

Hunts Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.64

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

James River Basin

Cause Group Code: H23L-01-CHLA Lake Albemarle

Cause Location: Lake Albemarle

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This lake is impaired due to exceedances of the chlorophyll-a nutrients criteria at station : 2-SIN000.44 (> 35 ug/l - 2018 cycle). No new data 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23L_SIN01A04 / Lake Albemarle / Lake Albemarle	5A	Chlorophyll-a	2016	L	37.02

Lake Albemarle

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		37.02	

Sources: Dam or Impoundment; Non-Point Source

James River Basin

Cause Group Code: H23R-01-BEN Broad Axe Run

Cause Location: Broad Axe Run and tributaries from the headwaters downstream to its confluence with the Mechums River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-BRX000.66. Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_BRX01A00 / Broad Axe Run / Broad Axe Run and tributaries from the headwaters downstream to its confluence with the Mechums River.	5A	Benthic Macroinvertebrates Bioassessments	2004	H	8.32

Broad Axe Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.32

Sources: Source Unknown

James River Basin

Cause Group Code: H23R-02-BEN Lickinghole Creek

Cause Location: Lickinghole Creek from the headwaters downstream to its confluence with the Mechums River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station(s): 2-LKN-LKN01-RCA (Level III benthic data from Rivanna Conservation Alliance-Impaired for VSCI 2024) and 2-LKN000.02 (Impaired for VSCI-2022). Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_LKN01A00 / Lickinghole Creek / Lickinghole Creek from a point 5 miles above the Rivanna Water and Sewer Authority's raw water intake downstream to its confluence with the Mechums River.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	1.21
VAV-H23R_LKN02A22 / Lickinghole Creek / Lickinghole Creek from the headwaters downstream to a point 5 miles above the Rivanna Water and Sewer Authority's raw water intake.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	7.73

Lickinghole Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.94

Sources: Non-Point Source

James River Basin

Cause Group Code: H23R-03-BAC Mechums River

Cause Location: Mechums River from the headwaters downstream to its confluence with the Moormans River.

Cause City/County: Albemarle County; Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-MCM005.12 (2024 cycle- one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean) and 2-MCM018.92 (three exceedances of 11 samples in 2012; two STV hits in the same 90-day period with less than 10 samples in 2022, no new data 2024). Additional data collected in 2024 at 2-MCM016.11 (one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean). Initial Listing Date: 2006. This segment is included in the EPA approved Mechums River bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_MCM01A00 / Mechums River / Mechums River from the pumping station below Lake Albemarle downstream to its confluence with the Moormans River.	4A	Escherichia coli (E. coli)	2006	L	7.27
VAV-H23R_MCM01B10 / Mechums River / Mechums River from its confluence with Lickinghole Creek downstream to the pumping station below Lake Albemarle.	4A	Escherichia coli (E. coli)	2006	L	3.92
VAV-H23R_MCM02A00 / Mechums River / Mechums River from its confluence with Stockton Creek downstream to its confluence with Lickinghole Creek.	4A	Escherichia coli (E. coli)	2012	L	2.07
VAV-H23R_MCM02B10 / Mechums River / Mechums River from the headwaters downstream to its confluence with Stockton Creek.	4A	Escherichia coli (E. coli)	2012	L	13.10

Mechums River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			26.36

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

James River Basin

Cause Group Code: H23R-03-BEN Mechums River

Cause Location: Mechums River from the headwaters downstream to its confluence with Lickinghole Creek.

Cause City/County: Albemarle County; Nelson County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-MCM018.92. In 2024, data collected at 2-MCM015.42 and RCA Level III station 2-MCM-MCM11-RCA is impaired. Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_MCM02A00 / Mechums River / Mechums River from its confluence with Stockton Creek downstream to its confluence with Lickinghole Creek.	5A	Benthic Macroinvertebrates Bioassessments	2004	H	2.07
VAV-H23R_MCM02B10 / Mechums River / Mechums River from the headwaters downstream to its confluence with Stockton Creek.	5A	Benthic Macroinvertebrates Bioassessments	2004	H	13.10

Mechums River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			15.17

Sources: Source Unknown

James River Basin

Cause Group Code: H23R-04-BEN Slabtown Branch

Cause Location: Slabtown Branch and tribs from the headwaters downstream to its confluence with Lickinghole Creek.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-SBT-SLB01-RCA (Level III benthic data from the Rivanna Conservation Alliance). Data collected at DEQ station 2-SBT000.17 (co-located with 2-SBT-SLB01-RCA) shows continued impairment in 2022. Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_SBT01A08 / Slabtown Branch / Slabtown Branch and tributaries from the headwaters downstream to the confluence with Lickinghole Creek.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	4.92

Slabtown Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.92

Sources: Golf Courses; Non-Point Source

James River Basin

Cause Group Code: H23R-05-BEN Stockton Creek

Cause Location: Stockton Creek from the headwaters downstream to its confluence with the Mechums River.

Cause City/County: Albemarle County; Nelson County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-SKM-STC06-RCA (Level III benthic data from Rivanna Conservation Alliance). Initial Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_SKM01A10 / Stockton Creek / Stockton Creek from the headwaters downstream to its confluence with the Mechums River.	5A	Benthic Macroinvertebrates Bioassessments	2024	L	12.07

Stockton Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			12.07

Sources: Source Unknown

James River Basin

Cause Group Code: H23R-06-BEN Parrott Branch X-trib

Cause Location: Parrott Branch X-trib from the headwaters downstream to its confluence with Parrott Branch.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-XPT-XPT01-RCA (Level III benthic data from Rivanna Conservation Alliance). Data collected in the 2022 cycle at DEQ station 2-XJV000.25, co-located with RCA's 2-XPT-XPT01-RCA, is impaired. No new data 2024. Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_XJV01A10 / X-trib to Parrott Branch / X-trib to Parrott Branch from the headwaters downstream to its confluence with Parrott Branch.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	1.15

Parrott Branch X-trib

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.15

Sources: Non-Point Source

James River Basin

Cause Group Code: H23R-08-BAC Stockton Creek

Cause Location: Stockton Creek from the headwaters downstream to its confluence with the Mechums River.

Cause City/County: Albemarle County; Nelson County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-SKM001.47 (8 exceedances of 12 samples in 2014; 2 exceedances of 12 samples in 2020; no new data 2024). Initial Listing Date: 2014. The recreation use impairment is nested into the EPA approved Rivanna River Bacteria TMDL (Mechums River Watershed).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_SKM01A10 / Stockton Creek / Stockton Creek from the headwaters downstream to its confluence with the Mechums River.	4A	Escherichia coli (E. coli)	2014	L	12.07

Stockton Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.07

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

James River Basin

Cause Group Code: H23R-09-BAC X-trib to Parrott Branch

Cause Location: X-trib to Parrott Branch from the headwaters downstream to its confluence with Parrott Branch.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the E.coli WQS at RCA Level III station 2-XJV-XPT01-RCA (two or more STV hits in the same 90-day period with < 10 samples in 2024). This impairment is nested into the EPA approved Rivanna River (Beaver Creek watershed) Bacteria TMDL. Initial Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H23R_XJV01A10 / X-trib to Parrott Branch / X-trib to Parrott Branch from the headwaters downstream to its confluence with Parrott Branch.	4A	Escherichia coli (E. coli)	2024	L	1.15

X-trib to Parrott Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.15

Sources: Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H24L-01-DO Sugar Hollow Reservoir

Cause Location: Sugar Hollow Reservoir

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This lake is impaired due to excursions of the Dissolved Oxygen WQS at DEQ station 2-MNR014.50 (12 excursions of 70 samples = 17.1% excursion rate in 2022). Initial Listing Date: 2022.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H24L_MNR01A04 / Sugar Hollow Reservoir / Sugar Hollow Reservoir	5A	Dissolved Oxygen	2022	L	47.46

Sugar Hollow Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		47.46	

Sources: Source Unknown

James River Basin

Cause Group Code: H24R-02-BEN X-trib to Doyles River

Cause Location: X-trib to Doyles River from the headwaters downstream to its confluence with the Doyles River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2BXDL-XDY01-RCA (Level III Rivanna Conservation Alliance station), no new data 2024. Initial Listing Date: 2012

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H24R_XDL01A12 / X-trib to Doyles River / X-trib and tributaries to Doyles River from the headwaters downstream to its confluence with the Doyles River.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	4.74

X-trib to Doyles River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.74

Sources: Source Unknown

James River Basin

Cause Group Code: H24R-03-BAC X-trib to Doyles River

Cause Location: X-trib to Doyles River from the headwaters downstream to its confluence with the Doyles River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2BXDY001.38 (2022-2 STV exceedances in the same 90-day period with less than 10 samples), no new data 2024. Initial Listing Date: 2022. This recreation use impairment is nested into the EPA approved Rivanna River Watershed Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H24R_XDY01A22 / X-trib to Doyles River / X-trib and tributaries to Doyles River from the headwaters downstream to its confluence with the Doyles River.	4A	Escherichia coli (E. coli)	2022	L	4.92

X-trib to Doyles River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.92

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

James River Basin

Cause Group Code: H25R-01-BAC Buck Mountain Creek

Cause Location: Buck Mountain Creek from the headwaters downstream to its confluence with the South Fork Rivanna River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-BKM002.01 (2 exceedances of 12 samples in 2010, no new data 2024). Initial Listing Date: 2010 The recreation use impairment is nested into the EPA approved Rivanna River Watershed Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H25R_BKM01A00 / Buck Mountain Creek / Buck Mountain Creek from its confluence with an unnamed tributary at Lick Mountain downstream to its confluence with the South Fork Rivanna River.	4A	Escherichia coli (E. coli)	2010	L	10.59

Buck Mountain Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.59

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

James River Basin

Cause Group Code: H25R-02-BEN Piney Creek

Cause Location: Piney Creek from the headwaters of the pond located off Piney Creek Lane downstream to its confluence with the tributary that borders Free Union Road. This impaired segment was shortened in 2024.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-XPY-XPY02-RCA (Level III Rivanna Conservation Alliance station). Initial Listing Date: 2012. This impaired segment was shortened in 2024 due to the delisting of the headwaters portion (upstream of the pond) based on new benthic macroinvertebrate data.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H25R_XPY01A12 / Piney Creek / Piney Creek from the headwaters of the pond located off Piney Creek Lane downstream to its confluence with the tributary that borders Free Union Road.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	1.77

Piney Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.77

Sources: Source Unknown

James River Basin

Cause Group Code: H26L-01-DO South Fork Rivanna River Reservoir

Cause Location: South Fork Rivanna Reservoir from the dam upstream to the confluence of Ivy Creek, including the Ivy Creek arm of reservoir.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: The South Fork Rivanna River Reservoir from the dam upstream to the confluence of Ivy Creek, including the Ivy Creek arm of reservoir, is impaired for aquatic life use due to excursions of the Dissolved Oxygen WQS at station 2-RRS003.59. The extent of this impairment is decreased in the 2024 cycle as the 217 acre upstream portion of the reservoir, from the confluence of Ivy Creek upstream to the uppermost extent of the reservoir, is delisted for aquatic life use (DO impairment) in the 2024 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26L_01 / S F Rivanna River Reservoir / South Fork Rivanna Reservoir from the dam upstream to the confluence with Ivy Creek	5A	Dissolved Oxygen	2018	L	120.30
VAV-H26L_IVC01A22 / S F Rivanna River Reservoir / South Fork Rivanna River Reservoir Ivy Creek Arm	5A	Dissolved Oxygen	2018	L	61.01

South Fork Rivanna River Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		181.31	

Sources: Natural Sources; Non-Point Source

James River Basin

Cause Group Code: H26R-01-BAC Ivy Creek

Cause Location: Ivy Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the S. F. Rivanna Reservoir Intake.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-IVC008.09 (four exceedances of 12 samples in 2014, no new data 2024). Initial Listing Date: 2014 This impairment is nested into the EPA approved Rivanna River Watershed Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_IVC02A00 / Ivy Creek / Ivy Creek from its confluence with Little Ivy Creek downstream to the 5 mile upper limit of the PWS designation for the RWSA-SF Rivanna River Public Water Intake.	4A	Escherichia coli (E. coli)	2014	L	4.02
VAV-H26R_IVC03A00 / Ivy Creek / Ivy Creek from the headwaters downstream to its confluence with Little Ivy Creek.	4A	Escherichia coli (E. coli)	2014	L	5.49

Ivy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.51

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

James River Basin

Cause Group Code: H26R-02-PH Ivy Creek

Cause Location: Ivy Creek from the headwaters downstream to its confluence with Little Ivy Creek.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to excursions of the pH WQS at station: 2-IVC010.20 (2 excursions of 6 samples for pH in 2010, no new data in 2024). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_IVC03A00 / Ivy Creek / Ivy Creek from the headwaters downstream to its confluence with Little Ivy Creek.	5A	pH	2006	L	5.49

Ivy Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			5.49

Sources: Atmospheric Deposition - Acidity; Source Unknown

James River Basin

Cause Group Code: H26R-03-BEN Ivy Creek

Cause Location: Ivy Creek from the headwaters downstream to its confluence with the South Fork Rivanna River Reservoir.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at stations: 2-IVC005.19 and 2-IVC010.20. Additional impaired level III data collected in 2024 by the Rivanna Conservation Alliance at stations 2-IVC-IVC09-RCA and 2-IVC-IVC01-RCA. Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_IVC01A00 / Ivy Creek / Ivy Creek from the 5 mile upper limit of the PWS designation for the RWSA-SF Rivanna River Public Water Intake downstream to its confluence with the South Fork Rivanna River Reservoir.	5A	Benthic Macroinvertebrates Bioassessments	2008	H	2.57
VAV-H26R_IVC02A00 / Ivy Creek / Ivy Creek from its confluence with Little Ivy Creek downstream to the 5 mile upper limit of the PWS designation for the RWSA-SF Rivanna River Public Water Intake.	5A	Benthic Macroinvertebrates Bioassessments	2008	H	4.02
VAV-H26R_IVC03A00 / Ivy Creek / Ivy Creek from the headwaters downstream to its confluence with Little Ivy Creek.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	5.49

Ivy Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			12.08

Sources: Atmospheric Deposition - Acidity; Source Unknown

James River Basin

Cause Group Code: H26R-04-BEN South Fork Rivanna River

Cause Location: South Fork Rivanna River from the RWSA SF Rivanna River Public Water Intake downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-RRS001.81. Additional impaired data was collected at 2-RRS-RVN31-RCA in 2024 (Level III Rivanna Conservation Alliance). Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_RRS01A00 / Rivanna River South Fork / South Fork Rivanna River from the RWSA SF Rivanna River Public Water Intake downstream to its confluence with the Rivanna River.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	3.47

South Fork Rivanna River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.47

Sources: Dam or Impoundment; Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H26R-05-BEN Powell Creek

Cause Location: Powell Creek (including all tributaries) from the headwaters downstream to its confluence with the South Fork Rivanna River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-PLC001.49. Initial Listing Date; 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_PLC01A10 / Powell Creek / Powell Creek and tributaries from the headwaters downstream to its confluence with the South Fork Rivanna River.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	10.37

Powell Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			10.37

Sources: Non-Point Source

James River Basin

Cause Group Code: H26R-06-BEN Naked Creek

Cause Location: Naked Creek (including all tributaries) from the headwaters downstream to its confluence with the South Fork Rivanna Reservoir.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-NKD-NKD02-RCA (Level III Rivanna Conservation Alliance data). Additional impaired data collected at 2BNAK001.37 and 2-NKD-NKD12-RCA in 2024. Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_NAK01A10 / Naked Creek / Naked Creek and tributaries from the headwaters downstream to its confluence with the South Fork Rivanna Reservoir.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	9.83

Naked Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.83

Sources: Non-Point Source

James River Basin

Cause Group Code: H26R-07-BEN South Fork Rivanna River X-trib

Cause Location: South Fork Rivanna River X-trib from the headwaters downstream to its confluence with the South Fork Rivanna River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-XRV-XZW01-RCA (Level III Rivanna Conservation Alliance data). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_XRV01A10 / South Fork Rivanna River X-trib / South Fork Rivanna River X-trib (including tributaries) from the headwaters downstream to its confluence with the South Fork Rivanna River.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	3.2

South Fork Rivanna River X-trib

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.2

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H26R-08-BEN Fishing Creek

Cause Location: Fishing Creek and tributaries from the headwaters downstream to its confluence with the South Fork Rivanna Reservoir.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-FSH-FSH01-RCA (Level III Rivanna Conservation Alliance data; no new data 2024). In the 2024 cycle the benthic impairment remains with data collected at stations 2-FSH000.62 and 2-FSH-FSH02-RCA showing continued impairment based on VSCI scores. Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_FSH01A12 / Fishing Creek / Fishing Creek and tributaries from the headwaters downstream to its confluence with the South Fork Rivanna Reservoir.	5A	Benthic Macroinvertebrates Bioassessments	2012	H	12.54

Fishing Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			12.54

Sources: Non-Point Source

James River Basin

Cause Group Code: H26R-09-BEN Little Ivy Creek X-trib

Cause Location: Little Ivy Creek X-trib from the headwaters downstream to its confluence with Little Ivy Creek.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to exceedances of the General Standard for benthics at station: 2-XLI-XLI01-RCA (Impaired for VSCI). Initial Listing Date: 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H26R_XLI01A16 / Little Ivy Creek X-trib / Little Ivy Creek X-trib (including tributaries) from the headwaters downstream to its confluence with Little Ivy Creek.	5A	Benthic Macroinvertebrates Bioassessments	2016	H	4.44

Little Ivy Creek X-trib

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.44

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

James River Basin

Cause Group Code: H27R-01-BEN Flat Branch X-trib

Cause Location: Flat Branch X-trib from the headwaters downstream to its confluence with Flat Branch.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at stations: 2-XKL000.37. Initial List Date: 2010. This impairment is included in the North Fork Rivanna Benthic TMDL, approved by EPA in 2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_XKL01A08 / X-trib to Flat Branch / X-trib to Flat Branch from the headwaters (including tributaries) downstream to its confluence with Flat Branch.	4A	Benthic Macroinvertebrates Bioassessments	2010	L	2.03

Flat Branch X-trib

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.03

Sources: Agriculture; Impervious Surface/Parking Lot Runoff; Municipal Point Source Discharges; Streambank Erosion

James River Basin

Cause Group Code: H27R-02-BAC Swift Run

Cause Location: Swift Run from its confluence with Welsh Run downstream to its confluence with the North Fork Rivanna River.

Cause City/County: Albemarle County; Greene County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-SFR000.60 (2 exceedances of 12 samples for e-coli in 2010, no new data 2024). The impairment is nested into the Rivanna River Bacteria TMDL (NF Rivanna Watershed) in 2022. Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_SFR01A00 / Swift Run / Swift Run from its confluence with Welsh Run downstream to its confluence with the North Fork Rivanna River.	4A	Escherichia coli (E. coli)	2010	L	1.91

Swift Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.91

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

James River Basin

Cause Group Code: H27R-02-BEN Swift Run

Cause Location: Swift Run from its confluence with Welsh Run downstream to its confluence with the North Fork Rivanna River.

Cause City/County: Albemarle County; Greene County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-SFR00.60. Initial Listing Date: 2012. This impairment is included in the North Fork Rivanna Benthic TMDL, approved by EPA in 2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_SFR01A00 / Swift Run / Swift Run from its confluence with Welsh Run downstream to its confluence with the North Fork Rivanna River.	4A	Benthic Macroinvertebrates Bioassessments	2012	L	1.91

Swift Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.91

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; Impervious Surface/Parking Lot Runoff; Livestock (Grazing or Feeding Operations); Streambank Erosion

James River Basin

Cause Group Code: H27R-03-BAC Preddy Creek

Cause Location: Preddy Creek and North Branch Preddy Creek from the headwaters downstream to its confluence with the North Fork Rivanna River.

Cause City/County: Albemarle County; Greene County; Orange County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-PRD000.21 (3 exceedances of 12 samples in 2006, two or more STV hits in the same 90-day period with < 10 samples in 2024) and 2-PRD004.42 (2 exceedances of 14 samples in 2010, no new data 2024) . Initial Listing Date: 2006. This segment is included in the EPA approved Preddy Creek bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_PRD01A00 / Preddy Creek / Preddy Creek from the headwaters downstream to its confluence with the North Fork Rivanna River.	4A	Escherichia coli (E. coli)	2006	L	7.49
VAV-H27R_PRD02A06 / Preddy Creek North Branch / North Branch of Preddy Creek from the headwaters downstream to its confluence with Preddy Creek	4A	Escherichia coli (E. coli)	2010	L	6.25

Preddy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.74

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

James River Basin

Cause Group Code: H27R-03-BEN Preddy Creek North Branch

Cause Location: Preddy Creek North Branch from the headwaters downstream to its confluence with Preddy Creek.

Cause City/County: Albemarle County; Greene County; Orange County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to exceedances of the General Standard for Benthics at station: 2-PRD004.42 (Impaired for VSCI). Initial Listing Date: 2010 This impairment is included in the EPA approved North Fork Rivanna Benthic TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_PRD02A06 / Preddy Creek North Branch / North Branch of Preddy Creek from the headwaters downstream to its confluence with Preddy Creek	4A	Benthic Macroinvertebrates Bioassessments	2010	L	6.25

Preddy Creek North Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.25

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; Streambank Erosion; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H27R-04-BAC North Fork Rivanna River

Cause Location: North Fork Rivanna River from its confluence with the Lynch River downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County; Greene County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-RRN002.19 (5 exceedances of 21 samples in 2008, insufficient data to change assessment: one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024) and 2-RRN015.61 (2 exceedances of 12 samples for e-coli in 2010, no new data 2024). Additional data collected at 2-RRN010.92 in 2024 (one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean). Initial Listing Date: 2006. This segment is nested into the EPA approved North Fork Rivanna River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_RRN01A00 / Rivanna River North Fork / North Fork Rivanna River from its confluence with Preddy Creek downstream to its confluence with the Rivanna River.	4A	Escherichia coli (E. coli)	2006	L	6.56
VAV-H27R_RRN01B10 / Rivanna River North Fork / North Fork Rivanna River from the RWSA NF Rivanna River Public Water Intake downstream to its confluence with the Preddy Creek.	4A	Escherichia coli (E. coli)	2006	L	3.99
VAV-H27R_RRN02A00 / Rivanna River North Fork / North Fork Rivanna River from its confluence with Swift Run downstream to the RWSA-NF Rivanna River Public Water Intake.	4A	Escherichia coli (E. coli)	2010	L	3.82
VAV-H27R_RRN03A10 / Rivanna River North Fork / North Fork Rivanna River from its confluence with the Lynch River downstream to its confluence with Swift Run.	4A	Escherichia coli (E. coli)	2010	L	3.51

North Fork Rivanna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			17.88

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

James River Basin

Cause Group Code: H27R-05-BEN Marsh Run

Cause Location: Marsh Run from the headwaters downstream to its confluence with the North Fork Rivanna River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-MSH-XZY01-RCA. Additional benthic data collected in the 2022 cycle at 2BMSH000.10 (Impaired for VSCI). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_MSH01A10 / Marsh Run / Marsh Run from the headwaters downstream to its confluence with the North Fork Rivanna River.	4A	Benthic Macroinvertebrates Bioassessments	2010	L	3.66

Marsh Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.66

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; Impervious Surface/Parking Lot Runoff; Livestock (Grazing or Feeding Operations); Streambank Erosion

James River Basin

Cause Group Code: H27R-06-BEN Blue Run

Cause Location: Blue Run from the headwaters downstream to its confluence with Swift Run.

Cause City/County: Greene County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-BLU-BLU02-RCA. Additional impaired benthic data collected in the 2022 cycle at DEQ station 2-BLU004.86. This impairment is addressed in the EPA approved North Fork Rivanna Benthic TMDL. Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_BLU01A04 / Blue Run / Blue Run from the headwaters downstream to its confluence with Swift Run.	4A	Benthic Macroinvertebrates Bioassessments	2012	L	8.72

Blue Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.72

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; Impervious Surface/Parking Lot Runoff; Streambank Erosion

James River Basin

Cause Group Code: H27R-07-BEN Stanardsville Run

Cause Location: Stanardsville Run and tributaries from the headwaters downstream to its confluence with Blue Run.

Cause City/County: Greene County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-SDV001.02. Additional impaired benthic data collected at Rivanna Conservation Alliance station 2-SDV-SDV04-RCA (level III data). Initial Listing Date: 2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_SDV01A14 / Stanardsville Run / Stanardsville Run and tributaries from the headwaters downstream to its confluence with Blue Run.	4A	Benthic Macroinvertebrates Bioassessments	2014	L	5.71

Stanardsville Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.71

Sources: Agriculture; Impervious Surface/Parking Lot Runoff; Livestock (Grazing or Feeding Operations); Streambank Erosion

James River Basin

Cause Group Code: H27R-08-BEN Preddy Creek

Cause Location: Preddy Creek from the headwaters downstream to its confluence with the North Fork Rivanna River.

Cause City/County: Albemarle County; Orange County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-PRD-BRN01-RCA. Initial Listing Date: 2016 This impairment is included in the North Fork Rivanna Benthic TMDL, EPA approved in 2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_PRD01A00 / Preddy Creek / Preddy Creek from the headwaters downstream to its confluence with the North Fork Rivanna River.	4A	Benthic Macroinvertebrates Bioassessments	2016	L	7.49

Preddy Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.49

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; Livestock (Grazing or Feeding Operations); Streambank Erosion; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H27R-09-BEN North Fork Rivanna River

Cause Location: North Fork Rivanna River from its confluence with the Lynch River downstream to the RWSA - North Fork Rivanna River Public Water Intake.

Cause City/County: Albemarle County; Greene County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to exceedances of the General Standard for benthics at station: 2-RRN012.89. Additional data collected at Rivanna Conservation Alliance level III station 2-RRN-RRN06-RCA (Impaired 2024). Additional benthic data collected at stations 2-RRN010.92 and 2-RRN015.61 in 2024. Initial Listing Date: 2016 This impairment is nested into the EPA approved North Fork Rivanna Benthic TMDL in 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_RRN02A00 / Rivanna River North Fork / North Fork Rivanna River from its confluence with Swift Run downstream to the RWSA-NF Rivanna River Public Water Intake.	4A	Benthic Macroinvertebrates Bioassessments	2016	L	3.82
VAV-H27R_RRN03A10 / Rivanna River North Fork / North Fork Rivanna River from its confluence with the Lynch River downstream to its confluence with Swift Run.	4A	Benthic Macroinvertebrates Bioassessments	2016	L	3.51

North Fork Rivanna River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.33

Sources: Agriculture; Impervious Surface/Parking Lot Runoff; Non-Point Source; Streambank Erosion

James River Basin

Cause Group Code: H27R-10-BEN Quarter Creek

Cause Location: Quarter Creek from the dam outfall at Jonquil Road downstream to its confluence with Swift Run.

Cause City/County: Greene County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-QTR-QTR03-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2016 This impairment is included in the EPA approved North Fork Rivanna Benthic TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_QTR01A16 / Quarter Creek / Quarter Creek from the dam outfall at Jonquil Road to its confluence with Swift Run.	4A	Benthic Macroinvertebrates Bioassessments	2016	L	1.58

Quarter Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.58

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; Streambank Erosion; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H27R-11-BAC Foster Branch

Cause Location: Foster Branch from the headwaters downstream to its confluence with the North Fork Rivanna River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station(s): 2BFOS001.01 (2 exceedences of 13 samples in 2018, no new data 2024). This impairment is nested into the Rivanna River Watershed Bacteria TMDL in 2022. Initial Listing Date: 2018

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_FOS01A12 / Foster Branch / Foster Branch from the headwaters downstream to its confluence with the North Fork Rivanna River.	4A	Escherichia coli (E. coli)	2018	L	4.26

Foster Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.26

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

James River Basin

Cause Group Code: H27R-11-BEN Parker Branch

Cause Location: Parker Branch and tributary from the headwaters downstream to its confluence with a tributary of the Roach River.

Cause City/County: Greene County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-PKR-PKR01-RCA (Rivanna Conservation Alliance Level III data).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H27R_PKR01A10 / Parker Branch / Parker Branch and tributary from the headwaters downstream to its confluence with a tributary of the Roach River.	5A	Benthic Macroinvertebrates Bioassessments	2022	L	12.73

Parker Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			12.73

Sources: Source Unknown

James River Basin

Cause Group Code: H28R-01-BEN Rivanna River/Moores Creek

Cause Location: Rivanna River from its confluence with the North/South Fork Rivanna downstream to its confluence with an unnamed tributary just below the RWSA-Glemore STP. (Includes a .54 mile segment of Moores Creek).

Cause City/County: Albemarle County; Charlottesville

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at stations: 2-RVN-RVN11-RCA (Rivanna Conservation Alliance Level III station) and 2-RVN033.65. Additional impaired data collected at 2-RVN-RVN01-RCA. Initial Listing Dates: 1996, lengthened in 2006. This segment is included in the EPA approved Rivanna River Sediment TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_MSC01B12 / Moores Creek / Moores Creek from the RSWA Moores Creek STP bridge downstream to its confluence with the Rivanna River.	4A	Benthic Macroinvertebrates Bioassessments	2008	L	0.54
VAV-H28R_RVN01A00 / Rivanna River / Rivanna River from its confluence with North/South Fork Rivanna downstream to its confluence with Moores Creek.	4A	Benthic Macroinvertebrates Bioassessments	1996	L	5.49
VAV-H29R_RVN04A00 / Rivanna River / Rivanna River from its confluence with Moores Creek downstream to its confluence with an unnamed tributary just below the RWSA-Glenmore STP.	4A	Benthic Macroinvertebrates Bioassessments	2006	L	5.92

Rivanna River/Moores Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			11.95

Sources: Agriculture; Impervious Surface/Parking Lot Runoff; Municipal (Urbanized High Density Area); Streambank Erosion; Unrestricted Cattle Access; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H28R-02-BAC Moores Creek

Cause Location: Moores Creek from its confluence with the Ragged Mountain Dam receiving stream downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County; Charlottesville

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-MSC000.60 (10 exceedances of 18 samples in 2008, no new data 2024). Additional data collected at Rivanna Conservation Alliance Level III station 2-MSC-MSC05-RCA in 2024 (impaired with a geomean exceedance in any 90-day period). Initial Listing Date: 2002. This assessment unit was included in the EPA approved Moores Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_MSC01A00 / Moores Creek / Moores Creek from its confluence with the Ragged Mountain Dam receiving stream downstream to the RSWA Moores Creek STP bridge.	4A	Escherichia coli (E. coli)	2008	L	6.32
VAV-H28R_MSC01B12 / Moores Creek / Moores Creek from the RSWA Moores Creek STP bridge downstream to its confluence with the Rivanna River.	4A	Escherichia coli (E. coli)	2008	L	0.54

Moores Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.86

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Sanitary Sewer Overflows (Collection System Failures); Sewage Discharges in Unsewered Areas; Unrestricted Cattle Access; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H28R-02-BEN Moores Creek

Cause Location: Moores Creek from its confluence with the Ragged Mountain Dam receiving stream downstream to the RWSA Moores Creek STP bridge. (Start Mile: 6.86 End Mile: 0..54 Total Impaired Size: 6.32 Miles)

Cause City/County: Albemarle County; Charlottesville

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-MSC000.60. Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_MSC01A00 / Moores Creek / Moores Creek from its confluence with the Ragged Mountain Dam receiving stream downstream to the RSWA Moores Creek STP bridge.	4A	Benthic Macroinvertebrates Bioassessments	2008	L	6.32

Moores Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.32

Sources: Impervious Surface/Parking Lot Runoff; Loss of Riparian Habitat; Municipal (Urbanized High Density Area); Post-development Erosion and Sedimentation; Urban Runoff/Storm Sewers

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: H28R-03-BAC Meadow Creek

Cause Location: Meadow Creek from where it becomes a perennial stream downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County; Charlottesville

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-MWC000.60 (4 exceedances of 12 samples in 2008, no new data 2024). Additional data collected at Rivanna Conservation Alliance Level III Bacteria stations in 2024: 2-MWC-MWC11-RCA and 2-MWC-MWC13-RCA both stations were impaired with a geomean exceedance in any 90-day period.. Initial Listing Date: 2002. This segment is included in the EPA approved Meadow Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_MWC01A00 / Meadow Creek / Meadow Creek from where it becomes a perennial stream downstream to its confluence with the Rivanna River.	4A	Escherichia coli (E. coli)	2008	L	4.98

Meadow Creek

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

Sources: Agriculture; Municipal (Urbanized High Density Area); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Sanitary Sewer Overflows (Collection System Failures); Sewage Discharges in Unsewered Areas; Unrestricted Cattle Access; Urban Runoff/Storm Sewers; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H28R-04-BAC Moores Creek X-trib

Cause Location: Moores Creek X-trib from the headwaters downstream to its confluence with Moores Creek.

Cause City/County: Charlottesville

Use(s): Recreation

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

Cause Description: Recreational use is not supporting based on E.coli WQS exceedances at Rivanna Conservation Alliance (RCA) stations 2-XRC-LDC01-RCA, 2-XRC-LDC03-RCA, 2-XRC-XLC01-RCA, and 2-XRC-XLD01-RCA (Level III data). In the 2024 cycle all four RCA stations remain impaired with two or more E.coli STV exceedances in the same 90-day period with less than 10 samples. This recreational use impairment is included in the Moores Creek bacteria TMDL as a nested segment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XRC01A04 / Moores Creek X-Trib (Lodge Creek) / Moores Creek X-trib from the headwaters downstream to its confluence with Moores Creek.	4A	Escherichia coli (E. coli)	2020	L	1.66

Moores Creek X-trib

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.66

Sources: Sanitary Sewer Overflows (Collection System Failures); Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H28R-04-BEN Moores Creek X-trib

Cause Location: Moores Creek X-trib from the headwaters downstream to its confluence with Moores Creek.

Cause City/County: Charlottesville

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-XRC001.15. Additional data collected at RCA level III station 2-XRC-XRC01-RCA. Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XRC01A04 / Moores Creek X-Trib (Lodge Creek) / Moores Creek X-trib from the headwaters downstream to its confluence with Moores Creek.	4A	Benthic Macroinvertebrates Bioassessments	2006	L	1.66

Moores Creek X-trib

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.66

Sources: Impervious Surface/Parking Lot Runoff; Loss of Riparian Habitat; Municipal (Urbanized High Density Area); Post-development Erosion and Sedimentation; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H28R-05-BEN Meadow Creek

Cause Location: Meadow Creek from where it becomes a perennial stream downstream to its confluence with Moores Creek.

Cause City/County: Albemarle County; Charlottesville

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-MWC000.60. Additional impaired data has been collected 2-MWC-MWC03-RCA (Impaired for VSCI) 2-MWC-MWC07-RCA (Impaired for VSCI); 2-MWC-MWC05-RCA (Impaired for VSCI); 2-MWC-MWC06-RCA (Impaired for VSCI); 2-MWC-MWC08-RCA (Impaired for VSCI); 2-MWC-MWC09-RCA (Impaired for VSCI); and 2-MWC-MWC10-RCA Impaired for VSCI). Initial Listing Date: 2006. This impairment is included in the EPA approved Meadow Creek sediment TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_MWC01A00 / Meadow Creek / Meadow Creek from where it becomes a perennial stream downstream to its confluence with the Rivanna River.	4A	Benthic Macroinvertebrates Bioassessments	2006	L	4.98

Meadow Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.98

Sources: Impervious Surface/Parking Lot Runoff; Loss of Riparian Habitat; Municipal (Urbanized High Density Area); Post-development Erosion and Sedimentation; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H28R-06-BAC Rivanna River

Cause Location: Rivanna River from its confluence with the North/South Fork Rivanna downstream to its confluence with Moores Creek.

Cause City/County: Albemarle County; Charlottesville

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-RVN037.54 (2 exceedances of 10 samples for e-coli in 2010, no new data 2024). 2024 cycle: Level III citizen monitoring E.coli samples were collected at RCA stations 2-RVN-RVN09-RCA and 2-RVN-RVN11-RCA. Both stations are impaired with a geomean exceedance in any 90-day period. Initial Listing Date: 2006. This segment is included in the EPA approved Rivanna River bacteria TMDL. Federal TMDL ID 35768.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_RVN01A00 / Rivanna River / Rivanna River from its confluence with North/South Fork Rivanna downstream to its confluence with Moores Creek.	4A	Escherichia coli (E. coli)	2006	L	5.49

Rivanna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.49

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

James River Basin

Cause Group Code: H28R-07-BAC Schenks Branch

Cause Location: Schenks Branch and tributaries from the headwaters downstream to its confluence with Meadow Creek.

Cause City/County: Charlottesville

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-SNK000.88 (3 exceedances of 3 samples for e-coli in 2010, no data in 2024). Additional data collected at RCA Level III E.coli station 2-SNK-SCK01-RCA in 2024 is impaired with two or more STV exceedances in the same 90-day period with less than 10 samples. Initial Listing Date: 2010. This impairment is nested into the EPA approved Rivanna River Bacteria TMDL (Meadow Creek watershed)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_SNK01A02 / Schenk's Branch / Schenk's Branch and tributaries from the headwaters downstream to its confluence with Meadow Creek.	4A	Escherichia coli (E. coli)	2010	L	2.92

Schenks Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.92

Sources: Municipal (Urbanized High Density Area); Sanitary Sewer Overflows (Collection System Failures); Urban Runoff/Storm Sewers; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H28R-07-BEN Schenks Branch

Cause Location: Schenks Branch and tributaries from the headwaters downstream to its confluence with Meadow Creek.

Cause City/County: Charlottesville

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at stations: 2-SNK000.88. Additional impaired benthic macroinvertebrate data collected at RCA Level III benthic station 2-SNK-XXK01-RCA in 2024. Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_SNK01A02 / Schenk's Branch / Schenk's Branch and tributaries from the headwaters downstream to its confluence with Meadow Creek.	4A	Benthic Macroinvertebrates Bioassessments	2008	L	2.92

Schenks Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.92

Sources: Impervious Surface/Parking Lot Runoff; Loss of Riparian Habitat; Municipal (Urbanized High Density Area); Post-development Erosion and Sedimentation; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H28R-08-BAC Rivanna River UT

Cause Location: Rivanna River UT from the headwaters downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County; Charlottesville

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2BXRM-MDC01-RCA (two or more STV exceedances in the same 90-day period with less than 10 samples in 2022, geomean exceedance in any 90-day period in 2024). This impairment is nested into the Rivanna River Bacteria TMDL. Initial Listing Date: 2022

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XRM01A18 / Rivanna River UT (Meade Creek) / Rivanna River UT from the headwaters downstream to its confluence with the Rivanna River.	4A	Escherichia coli (E. coli)	2022	L	0.43

Rivanna River UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.43

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

James River Basin

Cause Group Code: H28R-08-BEN Biscuit Run

Cause Location: Biscuit Run from its headwaters downstream to its confluence with Moores Creek.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at RCA Level III benthic macroinvertebrate stations: 2-BSC-BSC01-RCA and 2-BSC-BSC03-RCA. Additional impaired benthic macroinvertebrate data collected at 2-BSC001.58 in 2022. This segment was lengthened in 2024. Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_BSC01A00 / Biscuit Run / Biscuit Run and tributaries from the confluence with the tributary at the mobile home park (Minor Drive) downstream to its confluence with Moores Creek.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	6.60
VAV-H28R_BSC02A10 / Biscuit Run / Biscuit Run from its headwaters downstream to its confluence with the tributary at the mobile home park (Minor Drive).	5A	Benthic Macroinvertebrates Bioassessments	2024	L	2.28

Biscuit Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.88

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H28R-09-BAC Meadow Creek X-trib

Cause Location: Meadow Creek X-trib beginning near Rothery Street downstream to its confluence with Meadow Creek.

Cause City/County: Charlottesville

Use(s): Recreation

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

Cause Description: This tributary to Meadow Creek is impaired for recreation use based on Level III E. coli data collected at Rivanna Conservation Alliance station 2BXMW-MWC12-RCA (two or more STV exceedances in the same 90-day period with less than 10 samples- 2022). Initial Listing Date: 2022. This segment is nested in the EPA approved Meadow Creek bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XMW01A10 / Meadow Creek X-trib / Meadow Creek X-trib beginning near Rothery Street downstream to its confluence with Meadow Creek.	4A	Escherichia coli (E. coli)	2022	L	1.78

Meadow Creek X-trib

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

Sources: Municipal (Urbanized High Density Area); Sanitary Sewer Overflows (Collection System Failures); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H28R-09-BEN Morey Creek

Cause Location: Morey Creek from the headwaters downstream to its confluence with Moores Creek.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-MOY-MRY01-RCA (Level III Rivanna Conservation Alliance data). Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_MOY01A02 / Morey Creek / Morey Creek from the headwaters downstream to its confluence with Moore's Creek.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	2.93

Morey Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.93

Sources: Non-Point Source

James River Basin

Cause Group Code: H28R-10-BAC Biscuit Run

Cause Location: Biscuit Run from its headwaters downstream to its confluence with Moores Creek.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at Rivanna Conservation Alliance level III stations 2-BSC-BSC01-RCA (two STV exceedances in the same 90-day period with less than 10 samples in 2022; a geomean exceedance in any 90-day period in 2024) and 2-BSC-BSC03-RCA (a geomean exceedance in any 90-day period in 2024) Initial Listing Date: 2022. This assessment unit is nested into the EPA approved Moores Creek bacteria TMDL. This assessment unit was lengthened in 2024, extending to the headwaters.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_BSC01A00 / Biscuit Run / Biscuit Run and tributaries from the confluence with the tributary at the mobile home park (Minor Drive) downstream to its confluence with Moores Creek.	4A	Escherichia coli (E. coli)	2022	L	6.60
VAV-H28R_BSC02A10 / Biscuit Run / Biscuit Run from its headwaters downstream to its confluence with the tributary at the mobile home park (Minor Drive).	4A	Escherichia coli (E. coli)	2024	L	2.28

Biscuit Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.88

Sources: Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H28R-10-BEN Town Branch

Cause Location: Town Branch and tributary from the headwaters downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at Rivanna Conservation Alliance Level III station: 2-TWN-TWN01-RCA. Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_TWN01A10 / Town Branch / Town Branch and tributary from the headwaters downstream to its confluence with the Rivanna River.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	1.2

Town Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.2

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H28R-11-BAC UT to Moores Creek X-trib

Cause Location: UT to Moores Creek X-trib from the headwaters downstream to its confluence with Moores Creek X-trib.

Cause City/County: Albemarle County; Charlottesville

Use(s): Recreation

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

Cause Description: Recreational use is not supported based on E.coli WQS exceedances collected at Rivanna Conservation Alliance stations: 2BXRO-RCK01-RCA, 2BXRO-RCK02-RCA, and 2BXRO-XRC01-RCA (level III data). All three stations exhibit two or more STV exceedances in the same 90-day period with less than 10 samples in the 2024 cycle. This recreational use impairment is included in the Moores Creek Bacteria TMDL as a nested segment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XRO01A18 / UT to Moores Creek X-trib (Rock Creek) / UT to Moores Creek X-trib from the headwaters downstream to its confluence with Moores Creek X-trib.	4A	Escherichia coli (E. coli)	2022	L	1.16

UT to Moores Creek X-trib

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.16

Sources: Sanitary Sewer Overflows (Collection System Failures); Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H28R-11-BEN Meadow Creek X-trib

Cause Location: Meadow Creek X-trib beginning near Rothery Street downstream to its confluence with Meadow Creek.

Cause City/County: Charlottesville

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at Rivanna Conservation Alliance Level III station: 2BXMW-XMW01-RCA. No new data 2024. Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XMW01A10 / Meadow Creek X-trib / Meadow Creek X-trib beginning near Rothery Street downstream to its confluence with Meadow Creek.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	1.78

Meadow Creek X-trib

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.78

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H28R-12-BAC Town Branch

Cause Location: Town branch and tributary from the headwaters downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the E.coli WQS at Rivanna Conservation Alliance Level III station 2-TWN-TWN01-RCA (2024- impaired with a geomean exceedance in any 90-day period). Initial Listing: 2024. This impairment is nested into the EPA approved Rivanna River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_TWN01A10 / Town Branch / Town Branch and tributary from the headwaters downstream to its confluence with the Rivanna River.	4A	Escherichia coli (E. coli)	2024	L	1.2

Town Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.2

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

James River Basin

Cause Group Code: H28R-12-BEN X-trib to Moores Creek

Cause Location: X-trib to Moores Creek from the outfall of the Ragged Mountain Reservoir downstream to Moores Creek.

Cause City/County: Albemarle County; Charlottesville

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-XMR-XMR01-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XMR01A12 / X-trib to Moores Creek / X-trib to Moores Creek from the outfall of the Ragged Mountain Reservoir downstream to Moores Creek.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	2.23

X-trib to Moores Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.23

Sources: Dam or Impoundment; Non-Point Source

James River Basin

Cause Group Code: H28R-13-BAC Pollocks Branch

Cause Location: Pollocks Branch from the headwaters downstream to its confluence with Moores Creek.

Cause City/County: Albemarle County; Charlottesville

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the E.coli bacteria WQS at Rivanna Conservation Alliance level III stations 2-PLK-PLK01-RCA and 2-PLK-PLK02-RCA. In 2024, samples collected at both stations are impaired with a geomean exceedance in any 90-day period. This impairment is nested into the EPA approved Moores Creek Bacteria TMDL. Initial listing date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_PLK01A24 / Pollocks Branch / Pollocks Branch from the headwaters downstream to its confluence with Moores Creek.	4A	Escherichia coli (E. coli)	2024	L	0.51

Pollocks Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.51

Sources: Sanitary Sewer Overflows (Collection System Failures); Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H28R-13-BEN X-trib above Ragged Mountain Reservoir

Cause Location: X-trib above Ragged Mountain Reservoir downstream to the north arm pool of the Ragged Mountain Reservoir.

Cause City/County: Albemarle County; Charlottesville

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2BXRG-XGM01-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XRG01A18 / X-trib above Ragged Mountain Reservoir (North of I-64) / X-trib above Ragged Mountain Reservoir from the headwaters downstream to the pool of Ragged Mountain Reservoir.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	0.29

X-trib above Ragged Mountain Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.29

Sources: Source Unknown

James River Basin

Cause Group Code: H28R-14-BEN Unnamed Trib to Meadow Creek X-trib

Cause Location: Unnamed tributary to Meadow Creek X-trib from the headwaters downstream to Meadow Creek X-trib near Holy Comforter School.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-XMB-INC01-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XMB01A18 / UT to Meadow Creek X-trib / UT to Meadow Creek X-trib from the headwaters downstream to Meadow Creek X-trib. (Near Holy Comforter School)	5A	Benthic Macroinvertebrates Bioassessments	2018	L	0.41

Unnamed Trib to Meadow Creek X-trib

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.41

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H28R-15-BEN Cow Branch

Cause Location: Cow Branch from the headwaters downstream to its confluence with Moores Creek.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2BXRA-CWB02-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2018

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XRA01A02 / Cow Branch / Cow Branch from the headwaters downstream to its confluence with Moores Creek.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	2.47

Cow Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.47

Sources: Source Unknown

James River Basin

Cause Group Code: H28R-17-BEN Town Branch UT

Cause Location: Town Branch UT from the headwaters downstream to its confluence with Town Branch.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2BXWN-XWN02-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2022.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H28R_XWN01A20 / Town Branch UT / Town Branch UT from the headwaters downstream to its confluence with Town Branch.	5A	Benthic Macroinvertebrates Bioassessments	2022	L	0.8

Town Branch UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.8

Sources: Source Unknown

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: H29R-03-BAC Buck Island Creek

Cause Location: Buck Island Creek from the headwaters downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-BID002.11 (two exceedances of nine samples in 2008; one STV exceedance in multiple 90-day periods but insufficient data to analyze geomean in 2024) and 2-BID005.83 (6 exceedances of 9 samples for E.coli in 2008, no new data in 2024). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H29R_BID01A00 / Buck Island Creek / Buck Island Creek from the 5 mile upper limit of the PWS designation for the Lake Monticello Service Authority Public Water Intake downstream to its confluence with the Rivanna River.	5A	Escherichia coli (E. coli)	2008	L	2.66
VAV-H29R_BID02A00 / Buck Island Creek / Buck Island Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Lake Monticello Service Authority Public Water Intake.	5A	Escherichia coli (E. coli)	2008	L	6.51

Buck Island Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.17

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H29R-03-BEN Buck Island Creek

Cause Location: Buck Island Creek from the 5 mile upper limit of the PWS designation for the Lake Monticello Service Authority Public Water Intake downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-BID-BKI01-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2010, delisted 2022, relisted 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H29R_BID01A00 / Buck Island Creek / Buck Island Creek from the 5 mile upper limit of the PWS designation for the Lake Monticello Service Authority Public Water Intake downstream to its confluence with the Rivanna River.	5A	Benthic Macroinvertebrates Bioassessments	2024	H	2.66

Buck Island Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.66

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; Non-Point Source

James River Basin

Cause Group Code: H29R-04-BAC Rivanna River

Cause Location: Rivanna River from its confluence with Moores Creek downstream to its confluence with an unnamed tributary just below the RWSA-Glenmore STP.

Cause City/County: Albemarle County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the E.coli bacteria WQS found at DEQ station 2-RVN033.65 (two or more STV exceedances in the same 90-day period with less than 10 samples in 2022, no new data 2024). Initial Listing Date: 2022.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H29R_RVN04A00 / Rivanna River / Rivanna River from its confluence with Moores Creek downstream to its confluence with an unnamed tributary just below the RWSA-Glenmore STP.	5A	Escherichia coli (E. coli)	2022	L	5.92

Rivanna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.92

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

James River Basin

Cause Group Code: H29R-04-BEN Carroll Creek

Cause Location: Carroll Creek and tributaries from the headwaters downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-CRR000.27. Additional impaired benthic data was collected at 2-CRR-CRL01-RCA (Rivanna Conservation Alliance Level III data) in 2024. Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H29R_CRR01A06 / Carroll Creek / Carroll Creek and tributaries from the headwaters downstream to its confluence with the Rivanna River.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	18.46

Carroll Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			18.46

Sources: Non-Point Source

James River Basin

Cause Group Code: H29R-05-BEN Houchins Creek

Cause Location: Houchins Creek from the headwaters (not including the Massey Creek tributary) downstream to its confluence with Buck Island Creek.

Cause City/County: Albemarle County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-HOU001.51. Initial Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H29R_HOU01A24 / Houchins Creek / Houchins Creek from the headwaters (not including the Massey Creek tributary) downstream to its confluence with Buck Island Creek.	5A	Benthic Macroinvertebrates Bioassessments	2024	L	11.04

Houchins Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			11.04

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; Non-Point Source

James River Basin

Cause Group Code: H30R-02-BEN East Prong Beaverdam Creek

Cause Location: East Prong Beaverdam Creek and tributary from the headwaters downstream to its confluence with Beaverdam Creek.

Cause City/County: Fluvanna County; Louisa County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-BEP-BVE01-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H30R_BEP01A12 / East Prong Beaverdam Creek / East Prong Beaverdam Creek and tributary from the headwaters downstream to its confluence with Beaverdam Creek.	5A	Benthic Macroinvertebrates Bioassessments	2012	H	4.7

East Prong Beaverdam Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.7

Sources: Non-Point Source

James River Basin

Cause Group Code: H31R-01-HG Rivanna River

Cause Location: Rivanna River from its confluence with Mechunk Creek downstream to its confluence with Cunningham Creek.

Cause City/County: Fluvanna County

Use(s): Fish Consumption

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

Cause Description: Exceedances of the Mercury fish tissue value of 0.30 parts per million (ppm) occurred in samples collected on 10/24/2018 at station 2-RVN023.01: Largemouth Bass at 0.74 ppm (1 fish sample) and Smallmouth Bass at 0.32 ppm (2 fish composite sample). Initial listing date: 2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H31R_RVN02A00 / Rivanna River / Rivanna River from its confluence with Mechunk Creek downstream to its confluence with Cunningham Creek.	5A	Mercury in Fish Tissue	2020	L	8.39

Rivanna River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			8.39

Sources: Source Unknown

James River Basin

Cause Group Code: H31R-02-BEN Carys Creek

Cause Location: Carys Creek from the headwaters downstream to the confluence with a major tributary upstream of the Rivanna River.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-CRY-CYC01-RCA (Rivanna Conservation Alliance level III data). Additional impaired data collected in 2024 at DEQ station 2-CRY000.69. Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H31R_CRY01A08 / Carys Creek / Carys Creek from the headwaters downstream to its confluence with the Rivanna River.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	2.21

Carys Creek

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

Sources: Non-Point Source

James River Basin

Cause Group Code: H31R-03-BEN X-trib to Boston Creek

Cause Location: X-trib to Boston Creek from the headwaters downstream to its confluence with Boston Creek. (Lake Monticello)

Cause City/County: Albemarle County; Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-XYX-XYX01-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H31R_XYX01A10 / X-trib to Boston Creek (Lake Monticello) / X-trib to Boston Creek from the headwaters downstream to its confluence with Boston Creek. (Lake Monticello)	5A	Benthic Macroinvertebrates Bioassessments	2010	L	2.29

X-trib to Boston Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.29

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H31R-04-BEN X-trib to Rivanna River

Cause Location: X-trib to the Rivanna River from the headwaters downstream to its confluence with the Rivanna River.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-XRN-XZZ01-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H31R_XRN01A10 / X-trib to the Rivanna River / X-trib to the Rivanna River from the headwaters downstream to its confluence with the Rivanna River.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	1

X-trib to Rivanna River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H31R-05-BAC Rivanna River

Cause Location: Rivanna River from its confluence with Mechunk Creek downstream to its confluence with Cunningham Creek.

Cause City/County: Fluvanna County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-RVN015.97 (10 exceedances of 66 samples in 2016; insufficient data with no STV exceedances but insufficient data to analyze geomean in 2024). Additional data in 2024 collected at Rivanna Conservation Alliance Level III E.coli stations 2-RVN-RVN10-RCA (impaired with two or more STV hits in the same 90-day period with < 10 samples) and 2-RVN-RVN12-RCA (impaired with two or more STV exceedances in the same 90-day period represented by 10+ samples). Initial Listing Date: 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H31R_RVN02A00 / Rivanna River / Rivanna River from its confluence with Mechunk Creek downstream to its confluence with Cunningham Creek.	5A	Escherichia coli (E. coli)	2016	L	8.39

Rivanna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.39

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H31R-05-BEN Rivanna River

Cause Location: Rivanna River from its confluence with Carys Creek downstream to its confluence with the James River.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station 2-RVN-RVN05-RCA (Rivanna Conservation Alliance Level III data). Initial Listing Date: 2022.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H31R_RVN01A00 / Rivanna River / Rivanna River from its confluence with Carys Creek downstream to its confluence with the James River.	5A	Benthic Macroinvertebrates Bioassessments	2022	L	8.89

Rivanna River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.89

Sources: Source Unknown

James River Basin

Cause Group Code: H31R-06-BAC Roundabout Creek

Cause Location: Roundabout Creek from the headwaters downstream to its confluence with the Rivanna River.

Cause City/County: Albemarle County; Fluvanna County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2BRNB000.63 (6 exceedances of 12 samples in 2018, no new data 2024) Initial Listing Date: 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H31R_RNB01A18 / Roundabout Creek / Roundabout Creek from the headwaters downstream to its confluence with the Rivanna River.	5A	Escherichia coli (E. coli)	2018	L	3.47

Roundabout Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.47

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H32L-01-CHLA Fluvanna Ruritan Lake

Cause Location: Fluvanna Ruritan Lake

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This lake is impaired for nutrients with two years of monitoring data (2021 and 2022) exhibiting exceedances of the Chlorophyll-a WQS. Initial listing date: 2022

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32L_00 / Fluvanna Ruritan Lake / Fluvanna Ruritan Lake	5A	Chlorophyll-a	2022	L	51.13

Fluvanna Ruritan Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		51.13	

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H32L-01-DO Fluvanna Ruritan Lake

Cause Location: Fluvanna Ruritan Lake

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This lake is impaired due to excursions of the Dissolved Oxygen WQS at station: 2-CFK004.34 (15 excursions of 69 samples in the 2024 cycle). Initial Listing Date: 2012

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32L_00 / Fluvanna Ruritan Lake / Fluvanna Ruritan Lake	5A	Dissolved Oxygen	2012	L	51.13

Fluvanna Ruritan Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		51.13	

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H32L-01-PH Fluvanna Ruritan Lake

Cause Location: Fluvanna Ruritan Lake (Total Impaired Size: 51.13 Acres)

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This lake is impaired due to excursions of the pH WQS at station: 2-CFK004.34 (15 excursions of 69 samples). Current Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32L_00 / Fluvanna Ruritan Lake / Fluvanna Ruritan Lake	5A	pH	2024	L	51.13

Fluvanna Ruritan Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		51.13	

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H32R-02-BAC Middle Fork Cunningham Creek

Cause Location: Middle Fork Cunningham Creek and tributary from the headwaters downstream to its confluence with Cunningham Creek.

Cause City/County: Fluvanna County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at stations: 2-CNM002.25 (6 exceedances of 18 samples in 2008, no new data in 2024) and 2-CNM004.16 (2 exceedances of 12 samples in 2008, no new data in 2024). The impaired waters in this assessment unit are addressed through the implementation of the Cunningham Creek Watershed Plan. Initial Listing Cycle: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_CNM01A00 / Cunningham Creek Middle Fork / Middle Fork Cunningham Creek from its confluence with an unnamed tributary originating near Antioch downstream to its confluence with Cunningham Creek.	5R	Escherichia coli (E. coli)	2006	L	3.41
VAV-H32R_CNM02A04 / Cunningham Creek Middle Fork / Middle Fork Cunningham Creek and tributary from the headwaters downstream to its confluence with an unnamed tributary originating near Antioch.	5R	Escherichia coli (E. coli)	2008	L	4.03

Middle Fork Cunningham Creek

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

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H32R-02-BEN Middle Fork Cunningham Creek

Cause Location: Middle Fork Cunningham Creek from its confluence with an unnamed tributary originating near Antioch downstream to its confluence with Cunningham Creek.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station 2-CNM002.25. Additional impaired benthic data collected at stations 2-CNM-CNM07-RCA (Rivanna Conservation Alliance Level III data 2024) and 2-CNM000.09 (2020). These impaired waters are addressed through the implementation of the Cunningham Creek Watershed Plan. Initial Listing Cycle: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_CNM01A00 / Cunningham Creek Middle Fork / Middle Fork Cunningham Creek from its confluence with an unnamed tributary originating near Antioch downstream to its confluence with Cunningham Creek.	5R	Benthic Macroinvertebrates Bioassessments	2010	L	3.41

Middle Fork Cunningham Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.41

Sources: Non-Point Source

James River Basin

Cause Group Code: H32R-03-BAC Middle Fork Cunningham Creek X-trib

Cause Location: Middle Fork Cunningham Creek X-trib from the headwaters downstream to its confluence with the Middle Fork Cunningham Creek.

Cause City/County: Fluvanna County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-XPA000.57 (2 exceedances of 12 samples in 2008, no new data 2024). These impaired waters are addressed through the implementation of the Cunningham Creek Watershed Plan. Initial listing cycle: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_XPA01A06 / X-trib to the Middle Fork Cunningham Creek / X-trib to the Middle Fork Cunningham Creek (including major tributary) from the headwaters downstream to its confluence with the Middle Fork Cunningham Creek.	5R	Escherichia coli (E. coli)	2008	L	3.77

Middle Fork Cunningham Creek X-trib

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.77

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H32R-04-BEN X-trib to North Fork Cunningham Creek

Cause Location: X-trib to North Fork Cunningham Creek from the headwaters downstream to its confluence with the North Fork Cunningham Creek.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at Rivanna Conservation Alliance level III biological station: 2-XCF-XCF01-RCA. These impaired waters are addressed through the implementation of the Cunningham Creek Watershed Plan. Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_XCF01A10 / X-trib to North Fork Cunningham Creek / X-trib to North Fork Cunningham Creek from the headwaters downstream to its confluence with the North Fork Cunningham Creek.	5R	Benthic Macroinvertebrates Bioassessments	2010	L	0.59

X-trib to North Fork Cunningham Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.59

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H32R-05-BAC Cunningham Creek North Fork

Cause Location: North Fork Cunningham Creek from the Fluvanna Ruritan Lake outfall downstream to its confluence with Cunningham Creek.

Cause City/County: Albemarle County; Fluvanna County

Use(s): Recreation

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

Cause Description: Recreational use is not supported due to exceedances of the e-coli WQS at 2-CFK001.31 (6 exceedances of 36 samples in 2020, no new data 2024). These impaired waters are addressed through the implementation of the Cunningham Creek Watershed Plan.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_CFK01A00 / Cunningham Creek North Fork / North Fork Cunningham Creek from the Fluvanna Ruritan Lake outfall downstream to its confluence with Cunningham Creek.	5R	Escherichia coli (E. coli)	2020	L	4.19

Cunningham Creek North Fork

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.19

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: H32R-05-BEN Cunningham Creek North Fork

Cause Location: North Fork Cunningham Creek from the Fluvanna Ruritan Lake outfall downstream to its confluence with Cunningham Creek.

Cause City/County: Albemarle County; Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station 2-CFK001.31. These impaired waters are addressed through the implementation of the Cunningham Creek Watershed Plan. Initial Listing Cycle: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_CFK01A00 / Cunningham Creek North Fork / North Fork Cunningham Creek from the Fluvanna Ruritan Lake outfall downstream to its confluence with Cunningham Creek.	5R	Benthic Macroinvertebrates Bioassessments	2012	L	4.19

Cunningham Creek North Fork

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.19

Sources: Municipal (Urbanized High Density Area); Non-Point Source

James River Basin

Cause Group Code: H32R-06-BAC Cunningham Creek

Cause Location: Cunningham Creek from the confluence of the Middle/South Fork Cunningham Creek downstream to its confluence with the Rivanna River.

Cause City/County: Fluvanna County

Use(s): Recreation

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

Cause Description: Recreational use is not supporting due to exceedances of the bacteria WQS at stations 2-CXB000.86 (2024-no STV exceedances but insufficient data to analyze geomean) and 2-CXB004.68 (2024-one STV exceedance in one 90-day period but insufficient data to analyze geomean). These impaired waters are addressed through the implementation of the Cunningham Creek Watershed Plan. Initial listing date: 2020

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_CXB01A00 / Cunningham Creek / Cunningham Creek from the confluence of the Middle/South Fork Cunningham Creek downstream to its confluence with the Rivanna River.	5R	Escherichia coli (E. coli)	2020	L	5.62

Cunningham Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.62

Sources: Source Unknown

James River Basin

Cause Group Code: H32R-06-BEN Cunningham Creek

Cause Location: Cunningham Creek from the confluence of the Middle/South Fork Cunningham Creek downstream to its confluence with the Rivanna River.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-CXB000.86. Additional impaired benthic macroinvertebrate data collected in 2024 at Rivanna Conservation Alliance level III station 2-CXB-CXB02-RCA (co-located with the DEQ listing station). These impaired waters are to be addressed through the implementation of the Cunningham Creek Watershed Plan. Initial Listing Cycle: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_CXB01A00 / Cunningham Creek / Cunningham Creek from the confluence of the Middle/South Fork Cunningham Creek downstream to its confluence with the Rivanna River.	5R	Benthic Macroinvertebrates Bioassessments	2012	L	5.62

Cunningham Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.62

Sources: Non-Point Source

James River Basin

Cause Group Code: H32R-07-BAC South Fork Cunnigham Creek

Cause Location: South Fork Cunningham Creek from the second x-trib downstream to its confluence with Cunningham Creek.

Cause City/County: Fluvanna County

Use(s): Recreation

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

Cause Description: This segment is impaired for recreational use due to exceedances of the e-coli bacteria WQS at 2-CSF000.03 (6 exceedances of 35 samples in 2020, no new data 2024). These impaired waters are addressed through the implementation of the Cunningham Creek Watershed Plan. Initial Listing Date: 2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_CSF01A00 / Cunningham Creek South Fork / South Fork Cunningham Creek from the second x-trib downstream to its confluence with Cunningham Creek.	5R	Escherichia coli (E. coli)	2020	L	1.59

South Fork Cunnigham Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.59

Sources: Source Unknown

James River Basin

Cause Group Code: H32R-07-BEN South Fork Cunnigham Creek

Cause Location: South Fork Cunningham Creek from the second x-trib downstream to its confluence with Cunningham Creek.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-CSF000.10. These impaired waters are addressed through the implementation of the Cunningham Creek Watershed Plan. Initial Listing Cycle: 2018

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-H32R_CSF01A00 / Cunningham Creek South Fork / South Fork Cunningham Creek from the second x-trib downstream to its confluence with Cunningham Creek.	5R	Benthic Macroinvertebrates Bioassessments	2018	L	1.59

South Fork Cunnigham Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.59

Sources: Non-Point Source

James River Basin

Cause Group Code: H33L-01-CHLA Powhatan Lake

Cause Location: Upper and lower

Cause City/County: Powhatan County

Use(s): Aquatic Life

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

Cause Description: In 2014 the lake was impaired for aquatic life due to Chlorophyll a pooled violations at 2-STG000.21 and 2-STG000.91.

During the 2016 and 2018 cycle there was no new data so the segment remained impaired for Chlorophyll a.

During the 2020 cycle the segment remained impaired for Chlorophyll a. During the 2022 and 2024 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-H33L_STG01A12 / Powhatan Lakes / Upper and Lower	5A	Chlorophyll-a	2014	L	61.36

Powhatan Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		61.36	

Sources: Source Unknown

James River Basin

Cause Group Code: H33L-01-DO Powhatan Lake

Cause Location: Upper and lower

Cause City/County: Powhatan County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle the segment became a reservoir. The segment was impaired for aquatic life use due to DO violations at stations 2-STG000.21 and 2-STG000.91 with a pooled rate of 5/25.

During the 2014 cycle the segment remained impaired for aquatic life use due to DO violations at 2-STG000.21 and 2-STG000.91 with a pooled rate of 11/92.

During the 2016 and 2018 cycle there was no new data so the segment remained impaired for DO.

During the 2020 cycle the segment remained impaired for DO at 2-STG000.21(3/29) and 2-STG000.91(6/29). During the 2022 and 2024 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-H33L_STG01A12 / Powhatan Lakes / Upper and Lower	5A	Dissolved Oxygen	2012	L	61.36

Powhatan Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		61.36	

Sources: Source Unknown

James River Basin

Cause Group Code: H33R-01-BAC Solomons Creek

Cause Location: Solomons Creek from its headwaters downstream to its mouth at the James River.

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: Solomons Creek was assessed as not supporting of the Recreation Use goal in the 2010 cycle based on an E. coli exceedance rate of 7/12 at 2-SOL001.00 (Route 621.)

As this impairment is within the study area for the James River - Piedmont Region TMDL, which was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009, Solomons Creek is considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H33R_SOL01A10 / Solomons Creek / Headwaters to mouth at James River	4A	Escherichia coli (E. coli)	2010	L	4.06

Solomons Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.06

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

James River Basin

Cause Group Code: H33R-02-DO Deep Creek

Cause Location: Segment begins at the confluence of Deep Creek with Sallee Creek, and extends downstream to the Route 684 bridge.

Cause City/County: Powhatan County

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, Deep Creek from Maxey Mill Creek to the Route 684 bridge (rm 3.00) was assessed as impaired of the Aquatic Life Use because of a dissolved oxygen exceedance rate of 2/12 at 2-DCR003.00. The TMDL was due in 2020, but natural conditions are suspected.

The DO exceedance rates at other stations were acceptable in the 2010 cycle (2/26 at 2-DCR007.93 and 1/11 at 2-DCR013.89); therefore, the upstream segment was shortened to the confluence with Sallee Creek.

The exceedance rate at 2-DCR003.00 was 3/23 during the 2016 cycle.

Additional monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H33R_DCR01A98 / Deep Creek / Deep Creek from Sallee Creek to the Route 684 bridge (river mile 3.00)	5C	Dissolved Oxygen	2008	L	0.37

Deep Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.37

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

James River Basin

Cause Group Code: H33R-03-BAC Sallee Creek

Cause Location: Sallee Creek from its headwaters to its mouth at Deep Creek.

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Sallee Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at 2-SLE002.65, which is located at the Route 60 bridge.

It is considered nested in the upper James River TMDL in the James River and Tributaries - Lower Piedmont Report, which was approved by the EPA on 6/11/2008 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-H33R_SLE01A00 / Sallee Creek / Sallee Creek from its headwaters to its mouth at Deep Creek.	4A	Escherichia coli (E. coli)	2014	L	7.08

Sallee Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.08

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

James River Basin

Cause Group Code: H33R-04-BAC XAQ - Deep Creek, UT

Cause Location: The unnamed tributary XAQ from its headwaters to its mouth at Deep Creek.

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the tributary was impaired of the Recreation Use due to an E. coli exceedance rate of 2/11 at station 2BXAQ001.17, which is located at Duke Road off of Route 684.

The stream is located within the study area for the James River and Tributaries - Lower Piedmont Region Bacterial TMDL, which was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009. The impairment will be addressed during implementation; therefore, it is considered nested.

No additional monitoring has been conducted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H33R_XAQ01A16 / XAQ - Deep Creek, UT / Headwaters to mouth at Deep Creek.	4A	Escherichia coli (E. coli)	2016	L	3.18

XAQ - Deep Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.18

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

James River Basin

Cause Group Code: H33R-05-BAC Davis Creek

Cause Location: Davis Creek from its headwaters to its mouth at Muddy Creek.

Cause City/County: Cumberland County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Davis Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 2-DVS001.23, which is located at the Route 687 bridge.

No additional monitoring has been conducted.

As this area is within the study area for the James River - Piedmont Region TMDL, which was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009, Davis Creek is considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H33R_DVS01A00 / Davis Creek / Davis Creek from its headwaters to its mouth at Muddy Creek.	4A	Escherichia coli (E. coli)	2012	L	7.68

Davis Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.68

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

James River Basin

Cause Group Code: H33R-06-BAC James River

Cause Location: The James River from its confluence with Deep Creek downstream to the confluence with Big Lickinghole Creek.

Cause City/County: Goochland County; Powhatan County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the James River from the Rivanna River downstream to Big Lickinghole Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 8/48 at 2-JMS157.28, which is located at the Route 45 bridge at Cartersville.

The exceedance rate was acceptable in the 2020 cycle (4/84); however, it was 2/12 at station 2-JMS166.50 and 4/12 at 2BJMS144.63. Therefore, the segment remained impaired.

The new bacteria criteria were implemented in the 2022 cycle. 2BJMS144.63 was impaired due to two or more STV hits in the same 90-day period with < 10 samples. There was insufficient information to assess 2-JMS166.50, so the impairment at that station was carried over.

In the 2024 cycle, stations 2-JMS166.50, 2-JMS157.28, and 2-JMS152.40 were fully supporting. There was no additional data collected at station 2BJMS144.63. The impairment will be shortened to extend from Deep Creek to the downstream extent of the segment at Big Lickinghole Creek. The TMDL was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009 and the impaired segment is considered Category 4A. The partially delisted upper portion will be Category 2C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H33R_JMS01A98 / James River / The James River from its confluence with Deep Creek downstream to the confluence with Big Lickinghole Creek at river mile 143.35.	4A	Escherichia coli (E. coli)	2016	L	6.3

James River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.3

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

James River Basin

Cause Group Code: H33R-07-DO Muddy Creek

Cause Location: Muddy Creek from the confluence with Davis Creek downstream to its mouth at the James River.

Cause City/County: Cumberland County; Powhatan County

Use(s): Aquatic Life

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

Cause Description: Muddy Creek was assessed as not supporting of the Aquatic Life Use in the 2018 cycle due to a dissolved oxygen exceedance rate of 4/12 at 2-MUY01.23, which is located at the Route 684 bridge.

The exceedance rate was 6/24 in the 2022 cycle. No additional data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H33R_MUY01B00 / Muddy Creek / Muddy Creek from the confluence of Davis Creek downstream to the mouth at the James River.	5C	Dissolved Oxygen	2018	L	3.58

Muddy Creek

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

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

James River Basin

Cause Group Code: H33R-08-BAC Steger Creek

Cause Location: Steger Creek from its headwaters to the extent of backwater from Upper Powhatan Lake.

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: The upper portion of Steger Creek was impaired of the Recreation Use during the 2018 cycle due to an E. coli exceedance rate of 4/12 at monitoring station 2-STG002.00, which is located at the Route 684 bridge.

The new bacteria criteria were implemented in the 2022 cycle. Although the data from the 2018 cycle would have been assessed as insufficient for assessment under the new criteria, the impairment is carried over.

It is considered nested in the upper James River TMDL in the James River and Tributaries - Lower Piedmont report, which was approved by the EPA on 6/11/2008 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-H33R_STG02A18 / Stegers Creek / Stegers Creek from its headwaters to the backwater of upper Powhatan Lake.	4A	Escherichia coli (E. coli)	2018	L	3.11

Steger Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.11

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

James River Basin

Cause Group Code: H33R-09-BAC Gaddes Creek

Cause Location: Gaddes Creek from its headwaters to its mouth at the James River.

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: Gaddes Creek was impaired of the Recreation Use during the 2018 cycle due to an E. coli exceedance rate of 2/12 at monitoring station 2BGAD001.12, which is located at the Cosby Road (Rt. 621) bridge.

The new bacteria criteria were implemented in the 2022 cycle. Although the data from the 2018 cycle would have been assessed as insufficient for assessment if the new criteria had been effective at that time, the impairment was carried over as per guidance.

Additional monitoring in the 2024 cycle confirmed the impairment (2 or more STV exceedances in the same 90-day period represented by 10+ samples, no geomean exceedances.)

It is considered nested in the upper James River TMDL in the James River and Tributaries - Lower Piedmont report, which was approved by the EPA on 6/11/2008 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-H33R_GAD01A18 / Gaddes Creek / Headwaters to mouth at the James River	4A	Escherichia coli (E. coli)	2018	L	2.75

Gaddes Creek

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

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: H34R-01-BAC Byrd Creek

Cause Location: Segment comprises all of Byrd Creek, from its headwaters to its mouth at the Little River.

Cause City/County: Fluvanna County; Goochland County

Use(s): Recreation

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

Cause Description: Byrd Creek was initially considered fully supporting but threatened of the Recreation Use in 1998. It was later identified by the EPA for listing consideration. In the 2002 cycle, the segment was downgraded to impaired of the Recreation Use support goal based on fecal coliform standard exceedances recorded at the Route 603 bridge (2-BYR003.35); therefore the TMDL was due in 2010.

During the 2008 cycle, the impairment was converted to E. coli and the segment length was corrected.

Byrd Creek was impaired during the 2010 cycle: 2-BYR000.50 (2/10) 2-BYR003.35 (2/12) 2-BYR018.04 (1/11 - FS) 2-BYR021.58 (6/25)

Byrd Creek remained impaired during the 2020 cycle with the following violation rates: 2-BYR003.35 (0/10 - FS) 2-BYR021.58 (3/11)

The new bacteria WQS were implemented in the 2022 cycle. Although the 2020 result would have been insufficient information if it had been analyzed under the current criteria, the impairment will be carried over.

The TMDL was completed as part of the James River and Tributaries - Lower Piedmont Bacterial TMDL, which was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009. The segment is therefore considered a Category 4A water.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H34R_BYR01A98 / Byrd Creek / Byrd Creek from its headwaters at the confluence of Kent Branch and Venable Creek to its mouth at the Little River (branch of the James River) at Elk Island.	4A	Escherichia coli (E. coli)	2008	L	19.36

Byrd Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			19.36

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

James River Basin

Cause Group Code: H34R-03-BAC Venable Creek

Cause Location: Venable Creek from its headwaters to its mouth at Byrd Creek.

Cause City/County: Fluvanna County; Louisa County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Venable Creek was assessed as impaired of the Recreation Use due to an E. coli violation rate of 3/12 at the Route 601 bridge (2-VNB001.89).

Venable Creek is a tributary of Byrd Creek, which is also impaired due to bacteria. The TMDL for Byrd Creek was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009. The TMDL requires a 100% reduction in anthropogenic direct loads, 99% reductions for agriculture, residential and urban loads, and a 71% reduction in wildlife loads; therefore, Venable Creek is considered a nested water (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H34R_VNB01A08 / Venable Creek / Headwaters to mouth at Byrd Creek	4A	Escherichia coli (E. coli)	2008	L	8.07

Venable Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.07

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

James River Basin

Cause Group Code: H34R-04-BAC Phils Creek

Cause Location: Phils Creek from its headwaters to its mouth at Byrd Creek.

Cause City/County: Fluvanna County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Phils Creek was assessed as impaired of the Recreation Use due to an E. coli violation rate of 3/12 at the Route 601 bridge (2-PHL001.46).

Phils Creek is a tributary of Byrd Creek, which is also impaired due to bacteria. The TMDL for Byrd Creek was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009. The TMDL requires a 100% reduction in anthropogenic direct loads, 99% reductions for agriculture, residential and urban loads, and a 71% reduction in wildlife loads; therefore, Phils Creek is considered a nested water (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H34R_PHL01A08 / Phils Creek / Headwaters to mouth at Byrd Creek.	4A	Escherichia coli (E. coli)	2008	L	6.69

Phils Creek

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

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

James River Basin

Cause Group Code: H34R-04-BEN Phils Creek

Cause Location: Phils Creek from its headwaters to its mouth at Byrd Creek.

Cause City/County: Fluvanna County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, Phils Creek was assessed as impaired of the Aquatic Life Use due to an altered benthic community at 2-PHL003.97, which is located at the Route 629 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H34R_PHL01A08 / Phils Creek / Headwaters to mouth at Byrd Creek.	5A	Benthic Macroinvertebrates Bioassessments	2016	L	6.69

Phils Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.69

Sources: Source Unknown

James River Basin

Cause Group Code: H34R-05-BAC Mill Creek

Cause Location: Mills Creek from its headwaters to its mouth at Little Byrd Creek.

Cause City/County: Goochland County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Mills Creek was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 5/12 at the Route 609 bridge (2-MML001.31).

Mill Creek is located within the Byrd Creek watershed, which is also impaired due to bacteria. The TMDL for Byrd Creek was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009. The TMDL requires a 100% reduction in anthropogenic direct loads, 99% reductions for agriculture, residential and urban loads, and a 71% reduction in wildlife loads; therefore, Mill Creek is considered a nested water (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H34R_MML01A08 / Mill Creek / Headwaters to mouth at Little Byrd Creek	4A	Escherichia coli (E. coli)	2008	L	6

Mill Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6

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

James River Basin

Cause Group Code: H35R-01-BAC Willis River

Cause Location: Willis River from its headwaters to its confluence with Little Willis River

Cause City/County: Buckingham County; Cumberland County

Use(s): Recreation

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

Cause Description: During the 1998 cycle, Willis River from the confluence with Reynolds Creek downstream to its mouth was impaired of the Recreation Use due to fecal coliform exceedances. The impairment was addressed in the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/2002 and by the SWCB on 6/17/2004.

The Willis River from its headwaters to the confluence with the Little Willis River was first listed in the 2004 cycle (fecal coliform). It converted to an E. coli impairment in the 2016 cycle. The exceedance rates were as follows in the 2024 cycle:

2-WLS042.78 - 0/11 (IN) 2-WLS055.54 - 4/12 (2016 cycle)

NOTE: In older cycles, the Recreation Use impairments on upstream Willis River were considered addressed in the TMDL. In the 2018 cycle, the upstream impairment was changed to nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H35R_WLS01A04 / Willis River / Willis River from its headwaters to Tongue Quarter Creek	4A	Escherichia coli (E. coli)	2016	L	12.25
VAP-H35R_WLS02A04 / Willis River / Willis River from Tongue Quarter Creek to the Little Willis River confluence	4A	Escherichia coli (E. coli)	2012	L	10.34

Willis River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			22.59

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

James River Basin

Cause Group Code: H35R-02-BAC XQM - Willis River, UT

Cause Location: An unnamed tributary to the Willis River near Route 638

Cause City/County: Buckingham County

Use(s): Recreation

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: XQM, an unnamed tributary of the Willis River, was initially considered impaired of the Recreation Use due to a fecal exceedance rate of 3/9 at station 2-XQM000.03 in the 2004 cycle.

The stream is located within the study area for the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/2002 and by the SWCB on 6/17/2004.

In previous cycles, it was considered part of the TMDL, however in the 2018 cycle it was determined that the stream itself was not specifically addressed so the impairment is considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H35R_XQM01A00 / XQM - Willis River, UT / An unnamed tributary to the Willis River near Route 638	4A	Fecal Coliform	2004	L	1.68

XQM - Willis River, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			1.68

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

James River Basin

Cause Group Code: H35R-03-BAC Little Willis River

Cause Location: The Little Willis River from Perkins Creek to its mouth at the Willis River.

Cause City/County: Buckingham County; Cumberland County

Use(s): Recreation

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

Cause Description: The Little Willis River was initially considered impaired of the Recreation Use in the 2008 cycle due to an E. coli exceedance rate of 2/8 at 2-LWW004.14. The exceedance rate was 3/23 in the 2016 cycle.

The stream is located within the study area for the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/2002 and by the SWCB on 6/17/2004 and is considered nested.

No additional monitoring has been conducted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H35R_LWW01A08 / Little Willis River / Little Willis River from Perkins Creek to its mouth on the Willis River	4A	Escherichia coli (E. coli)	2008	L	6.14

Little Willis River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.14

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

James River Basin

Cause Group Code: H35R-04-BAC Whispering Creek

Cause Location: Whispering Creek from its headwaters to its mouth at the Willis River.

Cause City/County: Buckingham County; Cumberland County

Use(s): Recreation

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

Cause Description: Whispering Creek was considered impaired of the Recreation Use in the 2014 cycle due to an E. coli exceedance rate of 4/12 at 2-WSP001.95.

The stream is located within the study area for the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/2002 and by the SWCB on 6/17/2004 and is considered nested.

No additional monitoring has been conducted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H35R_WSP01A08 / Whispering Creek / Whispering Creek from its headwaters to its mouth on the Willis River	4A	Escherichia coli (E. coli)	2014	L	13.47

Whispering Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.47

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

James River Basin

Cause Group Code: H36L-02-DO Bear Creek Lake

Cause Location: Bear Creek Lake in its entirety

Cause City/County: Cumberland County

Use(s): Aquatic Life

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

Cause Description: During the 2022 cycle the segment became impaired for Dissolved Oxygen with an exceedance rate of 5/16 at station 2-BRC001.55.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36L_BRC01A06 / Bear Creek Lake / Bear Creek Lake at Bear Creek Lake State Park	5A	Dissolved Oxygen	2022	L	41.11

Bear Creek Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		41.11	

Sources: Dam or Impoundment

James River Basin

Cause Group Code: H36R-01-BAC Willis River

Cause Location: Willis River from the confluence of Reynolds Creek to its mouth.

Cause City/County: Cumberland County

Use(s): Recreation

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

Cause Description: During the 1998 cycle, Willis River from the confluence with Reynolds Creek downstream to its mouth was impaired of the Recreation Use due to fecal coliform exceedances. The impairment was addressed in the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/2002 and by the SWCB on 6/17/2004.

During the 2020 cycle, the E. coli exceedance rate was 8/35 at 2-WLS004.27.

There was insufficient information to assess the new E. coli criteria in the 2024 cycle (no STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean); therefore, the impairment is carried over.

NOTE: In previous cycles, the Recreation Use impairments on upstream Willis River were considered addressed in the TMDL. In addition, fact sheet H36R-01-BAC extended from the northern Cumberland State Forest boundary to the mouth. In the 2018 cycle, the length of this fact sheet was shortened to match the original TMDL segment (also see fact sheet H36R-07-BAC) and the upstream areas were changed to nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_WLS01A00 / Willis River / The Willis River from the Reynolds Creek confluence to its mouth at the James River. Sections 10 & 10c apply to various areas because a portion of the AU is within the Cumberland State Forest.	4A	Escherichia coli (E. coli)	2006	L	14.88

Willis River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			14.88

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

James River Basin

Cause Group Code: H36R-02-BAC Randolph Creek

Cause Location: Randolph Creek from the headwaters to the upstream limit of Sports Lake.

Cause City/County: Buckingham County; Cumberland County

Use(s): Recreation

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

Cause Description: The upper portion of Randolph Creek was considered impaired of the Recreation Use in the 2002 cycle due to fecal coliform exceedances at hog farm special study stations PL-21A and PL-21B.

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

During the 2022 cycle, the stream remained impaired due to 2 or more STV hits in the same 90-day period with $<$ 10 samples at station 2-RND004.39.

There was insufficient information to assess E. coli at 2-RND004.39 in the 2024 cycle (one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean.); therefore the impairment is carried over.

In previous cycles, the Recreation Use impairment on Randolph Creek was considered addressed in the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/20025 and by the SWCB on 6/17/2004. In the 2018 cycle, the impairment was changed to nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_RND01A00 / Randolph Creek / Randolph Creek from the headwaters to the upstream limit of Sports Lake.	4A	Escherichia coli (E. coli)	2006	L	11.81

Randolph Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.81

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

James River Basin

Cause Group Code: H36R-02-BEN Randolph Creek

Cause Location: Randolph Creek from the headwaters to the upstream limit of Sports Lake.

Cause City/County: Buckingham County; Cumberland County

Use(s): Aquatic Life

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

Cause Description: The upper portion of Randolph Creek was considered impaired of the Aquatic Life Use in the 2008 cycle based on the results of benthic monitoring at 2-RND003.57, a 2001 probabilistic monitoring station.

The habitat assessment indicated sediment impacts.

No additional monitoring has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_RND01A00 / Randolph Creek / Randolph Creek from the headwaters to the upstream limit of Sports Lake.	5A	Benthic Macroinvertebrates Bioassessments	2008	L	11.81

Randolph Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			11.81

Sources: Source Unknown

James River Basin

Cause Group Code: H36R-04-BAC Hatcher Creek

Cause Location: Hatcher Creek from the headwaters to its mouth at the Willis River

Cause City/County: Buckingham County; Cumberland County

Use(s): Recreation

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

Cause Description: Hatcher Creek was considered impaired of the Recreation Use in the 2010 cycle due to E. coli exceedances at 2-HCH004.81.

The stream is located within the study area for the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/2002 and by the SWCB on 6/17/2004, and is considered nested.

The exceedance rate was 2/12 during the 2016 cycle.

Additional monitoring was conducted in the 2024 cycle; the creek remained impaired due to a geomean exceedance in a 90-day period.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_HCH01A04 / Hatcher Creek / Hatcher Creek from the headwaters to its mouth at the Willis River	4A	Escherichia coli (E. coli)	2010	L	10.18

Hatcher Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.18

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

James River Basin

Cause Group Code: H36R-05-BAC Reynolds Creek

Cause Location: Reynolds Creek from its headwaters to its mouth at the Willis River

Cause City/County: Cumberland County

Use(s): Recreation

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

Cause Description: Reynolds Creek was impaired of the Recreation Use in the 2012 cycle due to an E. coli exceedance rate of 3/12 at 2-RLD000.48.

No additional monitoring has been conducted.

The stream is located within the study area for the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/2002 and by the SWCB on 6/17/2004 and is considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_RLD01A06 / Reynolds Creek / Reynolds Creek from its headwaters to the Cumberland State Forest Boundary	4A	Escherichia coli (E. coli)	2012	L	4.15
VAP-H36R_RLD01C10 / Reynolds Creek / Reynolds Creek from the Cumberland State Forest Boundary to the mouth at the Willis River	4A	Escherichia coli (E. coli)	2012	L	2.70

Reynolds Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.85

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

James River Basin

Cause Group Code: H36R-05-BEN Reynolds Creek

Cause Location: Reynolds Creek from its headwaters to its mouth at the Willis River

Cause City/County: Cumberland County

Use(s): Aquatic Life

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

Cause Description: Reynolds Creek was impaired of the Aquatic Life Use in the 2014 cycle due to monitoring at 2-RLD000.48 in 2009 and 2012.

This stream is in the Cumberland State Forest. It is characterized by marginal bank stability, excessive sediment deposition, and marginal epifaunal substrate. Biologist notes from 2009 and 2012 indicate very unstable habitat, mostly consisting of leaf packs and woody debris that were covered in sediment. Heavy local watershed erosion was also noted. In 2012 there was noted beaver activity affecting habitat availability.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_RLD01A06 / Reynolds Creek / Reynolds Creek from its headwaters to the Cumberland State Forest Boundary	5A	Benthic Macroinvertebrates Bioassessments	2014	L	4.15
VAP-H36R_RLD01C10 / Reynolds Creek / Reynolds Creek from the Cumberland State Forest Boundary to the mouth at the Willis River	5A	Benthic Macroinvertebrates Bioassessments	2014	L	2.70

Reynolds Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.85

Sources: Source Unknown

James River Basin

Cause Group Code: H36R-06-BEN Bigger Creek

Cause Location: Bigger Creek from its headwaters to the mouth on Reynolds Creek.

Cause City/County: Cumberland County

Use(s): Aquatic Life

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

Cause Description: Bigger Creek is impaired of the Aquatic Life Use based on monitoring at 2-BIO000.45 in 2009 and 2014. This site is in the Cumberland State Forest and had marginal bank stability, pronounced sediment deposition, and suboptimal epifaunal substrate.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_BIO01A08 / Bigger Creek / Bigger Creek from its headwaters to the Cumberland State Forest Boundary.	5A	Benthic Macroinvertebrates Bioassessments	2016	L	1.20
VAP-H36R_BIO01C10 / Bigger Creek / Bigger Creek from the Cumberland State Forest Boundary to the mouth on Reynolds Creek	5A	Benthic Macroinvertebrates Bioassessments	2016	L	3.24

Bigger Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.44

Sources: Source Unknown

James River Basin

Cause Group Code: H36R-07-BAC Willis River

Cause Location: Willis River from the southern boundary of the Cumberland State Forest downstream to the confluence of Reynolds Creek.

Cause City/County: Cumberland County

Use(s): Recreation

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

Cause Description: During the 1998 cycle, Willis River from the confluence with Reynolds Creek downstream to its mouth was impaired of the Recreation Use due to fecal coliform exceedances. The impairment was addressed in the Willis River Fecal Coliform TMDL, which was approved by the EPA on 5/31/2002 and by the SWCB on 6/17/2004.

In older cycles, all of the Recreation Use impairments on upstream Willis River were considered addressed in the TMDL. In addition, fact sheet H36R-01-BAC extended from the southern Cumberland State Forest boundary to the mouth. In the 2018 cycle, the length of this fact sheet was shortened to match the original TMDL segment and the upstream areas were changed to nested. This impairment now extends from the southern boundary of the Cumberland State Forest downstream to Reynolds Creek.

The E. coli exceedance rates were as follows in the 2020 cycle: 2-WLS025.32 - 11/35 (IM) 2BWLS017.93 - 1/1 (W) 2-WLS030.32 - 5/11 (IM)

There was insufficient information to assess E.coli during the 2024 cycle (one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean at station 2-WLS017.38); therefore, the impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_WLS01B08 / Willis River / The Willis River from the southern boundary of the Cumberland State Forest downstream to its confluence with Reynolds Creek. The AU winds in and out of the Cumberland State Forest. Section 10c within forest, Section 10 outside it.	4A	Escherichia coli (E. coli)	2008	L	18.13

Willis River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			18.13

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

James River Basin

Cause Group Code: H36R-07-BEN Bonbrook Creek

Cause Location: The mainstem of Bonbrook Creek.

Cause City/County: Cumberland County

Use(s): Aquatic Life

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

Cause Description: During the 2018 cycle, Bonbrook Creek was impaired of the Aquatic Life Use based on benthic macroinvertebrate sampling at 2-BRK001.00. This site is in the Cumberland State Forest and exhibited marginal bank stability, pronounced sediment deposition, and marginal epifaunal substrate.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_BRK01A08 / Bonbrook Creek / Bonbrook Creek from its headwaters to its mouth on the Willis River, excluding portion within the Cumberland State Forest.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	4.12
VAP-H36R_BRK01C10 / Bonbrook Creek / Bonbrook Creek within the Cumberland State Forest Boundary	5A	Benthic Macroinvertebrates Bioassessments	2018	L	3.58

Bonbrook Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.7

Sources: Source Unknown

James River Basin

Cause Group Code: H36R-08-DO Bear Creek

Cause Location: Bear Creek from its headwater to the extent of backwater from Bear Creek Lake.

Cause City/County: Cumberland County

Use(s): Aquatic Life

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

Cause Description: During the 2018 cycle, upper Bear Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/26 at DCR station 2-BRC-BC-2-DCR.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H36R_BRC01A18 / Bear Creek / Bear Creek from its headwaters to the backwater of Bear Creek Lake. Part of the stream is in Cumberland State Forest (Section 10c and 10)	5C	Dissolved Oxygen	2018	L	3.68

Bear Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.68

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

James River Basin

Cause Group Code: H37R-01-BAC Big Lickinghole, Little Lickinghole, and White Hall Creeks

Cause Location: The mainstems of Big Lickinghole Creek downstream of Old Miss Branch, Little Lickinghole Creek, and White Hall Creek.

Cause City/County: Goochland County

Use(s): Recreation

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

Cause Description: The creeks were initially considered impaired of the Recreation Use support goals during the 2002 cycle based on water quality monitoring performed at the confluence of Big Lickinghole Creek and Little Lickinghole Creek (2-BLG002.60).

During the 2008 cycle, TMDL monitoring for E. coli was conducted throughout the watershed. Although several stations on the creeks had acceptable violation rates, including the original listing station 2-BLG002.60 which had a violation rate of 2/23, the original segmentation was maintained. The impairment converted to E. coli. It was determined that a portion of Little Lickinghole Creek that had been included in the original impairment is actually called White Hall Creek. Since a TMDL station on White Hall Creek showed impairment, the stream continued to be included in the segment.

The TMDL was completed during the 2010 cycle as part of the James River and Tributaries - Lower Piedmont Region TMDL, which was adopted by the EPA on 6/11/2008 and by the SWCB on 4/28/2009 (Category 4A.)

The following were the violation rates on the streams during the 2010 cycle. 2-BLG002.60 - 2/23 2-BLG006.41 - 3/12 (IM) 2-BLG008.60 - 1/12 2-BLG011.41 - 0/1 2-BLG012.33 - 0/12 2-LIH005.28 - 4/24 (IM) 2-WHC000.46 - 2/12 (IM)

Based on the acceptable violation rates on Big Lickinghole Creek at the upstream stations, the portion of the stream upstream of Old Miss Branch were delisted and classified as Category 2C.

The segment remained impaired in the 2014 cycle based on an E. coli exceedance rate of 3/12 at 2-LIH005.28. Monitoring in the 2016 cycle at station 2-WHC000.46 was acceptable (0/11); therefore, further monitoring was recommended.

Monitoring at 2-BLG002.60 during the 2020 cycle continued to show impairment (3/12).

New bacteria criteria were implemented in the 2022 cycle. Monitoring was conducted at 2-BLG002.60, 2-LIH005.28, and 2-BLG006.41, however all three stations had insufficient information for assessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H37R_BLG01A98 / Big Lickinghole Creek/Little Lickinghole Creek/White Hall Creek / Big Lickinghole (BLG), Little Lickinghole (LIH) and White Hall Creeks (WHC), excluding BLG upstream of Old Miss Branch.	4A	Escherichia coli (E. coli)	2008	L	22.53

Big Lickinghole, Little Lickinghole, and White Hall Creeks

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			22.53

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

James River Basin

Cause Group Code: H37R-02-BAC Tarred Rat Creek

Cause Location: The mainstem of Tarred Rat Creek.

Cause City/County: Goochland County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Tarred Rat Creek was monitored for E. coli as a part of the Big Lickinghole and Little Lickinghole Creeks' TMDL. The creek was assessed as not supporting of the Recreation Use based on an E. coli exceedance rate of 3/11 at the Route 687 bridge (2-TRT001.23).

The TMDL was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009. The Big and Little Lickinghole Creeks require a 100% reduction in anthropogenic direct loads, 99% reductions in agricultural, residential, and urban loads, and a 53% reduction in wildlife loads. Due to the large reductions, implementation is expected to address the Tarred Rat Creek impairment as well; 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-H37R_TRT01A08 / Tarred Rat Creek / Headwaters to mouth at Little Lickinghole Creek	4A	Escherichia coli (E. coli)	2008	L	3.31

Tarred Rat Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.31

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

James River Basin

Cause Group Code: H38R-01-BAC Little Creek

Cause Location: Little Creek below its confluence with Cheneys Creek.

Cause City/County: Goochland County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Little Creek below its confluence with Cheneys Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 2/11 at 2-LLI000.58, which is located off Route 607.

The stream is within the study area for the James River - Lower Piedmont Region Bacterial TMDL which was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009; 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-H38R_LLI01A12 / Little Creek / Cheneys Creek to mouth at James River	4A	Escherichia coli (E. coli)	2012	L	0.65

Little Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.65

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

James River Basin

Cause Group Code: H38R-02-BAC Mohawk Creek

Cause Location: Mohawk Creek from its headwaters to its mouth at the James River.

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Mohawk Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at 2-MOH001.73, which is located at Route 617.

The stream is within the study area for the James River - Lower Piedmont Region Bacterial TMDL which was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009; 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-H38R_MOH01A12 / Mohawk Creek / Headwaters to mouth at James River	4A	Escherichia coli (E. coli)	2012	L	4.69

Mohawk Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.69

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

James River Basin

Cause Group Code: H38R-03-BAC Beaverdam Creek

Cause Location: Segment comprises all of Beaverdam Creek.

Cause City/County: Goochland County; Louisa County

Use(s): Recreation

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

Cause Description: Beaverdam Creek was considered impaired of the Recreation Use goal during the 2004 cycle based on a fecal coliform violation rate of 4/21 at the first bridge downstream of Route 6 (2-BDC000.79).

During the 2008 cycle, additional monitoring was conducted and the impairment converted to E. coli. The exceedance rate was 6/22 at 2-BDC000.79 and 2/12 at the Route 639 bridge (2-BDC003.52) during the 2010 cycle.

The TMDL was completed as part of the James River and Tributaries - Lower Piedmont Region Bacterial TMDL which was approved by the EPA on 6/11/2008 and by the SWCB on 4/29/2009. The impairment is considered Category 4A.

Additional monitoring was conducted during the 2020 cycle at 2-BDC000.79; the exceedance rate was 3/11.

The new E. coli criteria were implemented in the 2022 cycle. No monitoring has been conducted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H38R_BDC01A98 / Beaverdam Creek / Beaverdam Creek from its headwaters to the James River.	4A	Escherichia coli (E. coli)	2008	L	8.74

Beaverdam Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.74

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

James River Basin

Cause Group Code: H38R-04-BAC Fine Creek

Cause Location: Fine Creek from its headwaters to its mouth at the James River.

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: Fine Creek was impaired of the Recreation Use in the 2018 cycle due to an E. coli exceedance rate of 5/38 at 2-FIN000.81.

The TMDL was developed as part of the James River and Tributaries - Lower Piedmont Region Bacterial TMDL. The TMDL was approved by the EPA on 6/11/2008 and by the SWCB on 4/29/2009. Therefore, the segment is considered Category 4A.

The exceedance rate was 6/38 during the 2020 cycle.

New E. coli criteria were implemented in the 2022 cycle. There was insufficient information to assess in the 2024 cycle (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
VAP-H38R_FIN01A98 / Fine Creek / Fine Creek from its headwaters to its mouth.	4A	Escherichia coli (E. coli)	2018	L	10.46

Fine Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.46

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

James River Basin

Cause Group Code: H38R-06-BAC Courthouse Creek

Cause Location: Segment comprises all of Courthouse Creek from its headwaters to the confluence with Beaverdam Creek.

Cause City/County: Goochland County; Louisa County

Use(s): Recreation

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

Cause Description: Courthouse Creek was initially assessed as impaired of the Recreation Use in the 2006 cycle due to E. coli exceedances at the Route 634 bridge (2-CTS003.23.)

During the 2008 cycle, the exceedance rate was 3/22 at 2-CTS003.23 and 6/12 at station 2-CTS007.27, which is located at the Route 633 bridge.

The TMDL for Beaverdam Creek, to which Courthouse Creek flows, was completed as part of the James River and Tributaries - Lower Piedmont Region Bacterial TMDL. The TMDL was approved by the EPA on 6/11/2008 and by the SWCB on 4/28/2009. Because the Beaverdam Creek impairment requires a 100% reduction in anthropogenic direct sources, 99% reductions in agricultural, residential, and urban sources, and a 77% reduction in wildlife sources within the watershed, it is believed that the implementation will also address the Courthouse Creek impairment. 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-H38R_CTS01A06 / Courthouse Creek / Headwaters to mouth at Beaverdam Creek	4A	Escherichia coli (E. coli)	2006	L	10.34

Courthouse Creek

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

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

James River Basin

Cause Group Code: H38R-07-DO Branch Creek

Cause Location: Branch Creek from its headwaters to its mouth at Fine Creek.

Cause City/County: Powhatan County

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, Branch Creek was assessed as impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/10 at the Route 615 bridge (2-BNH001.76).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H38R_BNH01A08 / Branch Creek / Headwaters to mouth at Fine Creek	5C	Dissolved Oxygen	2008	L	5.51

Branch Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			5.51

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

James River Basin

Cause Group Code: H38R-09-HG James River

Cause Location: James River from Mohawk Creek downstream to river mile 137

Cause City/County: Goochland County; Powhatan County

Use(s): Fish Consumption

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

Cause Description: During the 2024 cycle, the James River from the confluence with Mohawk Creek downstream to rivermile 137 was impaired of the Fish Consumption Use based on 2021 fish tissue sampling. The mercury tissue value was exceeded in American eel, blue catfish, and flathead catfish.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H38R_JMS02A04 / James River / James River from the confluence with Mohawk Creek to river mile 137.00	5A	Mercury in Fish Tissue	2024	L	3.75

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			3.75

Sources: Atmospheric Deposition - Toxics; Source Unknown

James River Basin

Cause Group Code: H39R-01-PH Broad Branch

Cause Location: Broad Branch from its headwaters to the dam above Route 623.

Cause City/County: Goochland County

Use(s): Aquatic Life

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

Cause Description: In 2006, Broad Branch was assessed as not supporting the Aquatic Life Use due to three high pH exceedances in the summer of 2003 at 2-BOD003.31, which is located downstream of a pond draining a golf course.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_BOD02A06 / Broad Branch / Broad Branch from its headwaters to the dam upstream of Route 623.	5A	pH	2006	L	2.64

Broad Branch

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			2.64

Sources: Golf Courses; Natural Sources; Source Unknown

James River Basin

Cause Group Code: H39R-02-BAC Tuckahoe Creek and Major Tributaries

Cause Location: Various streams within the Tuckahoe Creek watershed

Cause City/County: Goochland County; Hanover County; Henrico County

Use(s): Recreation

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

Cause Description: Tuckahoe Creek from Route 6 to its mouth at the James River was fully supporting but threatened of the Swimmable Use during the 1998 cycle due to fecal coliform exceedances at 2-TKO004.69. The creek was mistakenly included on Attachment A Part 1 of the Consent Decree.

In 2002, the portion of Tuckahoe Creek from the Route 6 bridge upstream to the confluence with Little Tuckahoe Creek, Little Tuckahoe Creek, and the upper portion of Deep Run were added to the impaired waters list. The TMDLs (13.75 total miles) were due by 2014.

Pre-TMDL monitoring in the watershed was conducted of the impaired- and previously threatened segments during the year 2004 cycle. Broad Branch was added as an impairment.

Tuckahoe Creek upstream of Little Tuckahoe Creek was impaired in the 2006 cycle based on monitoring at 2-TKO010.24.

During the 2008 cycle, several of the impairments converted to E. coli.

In the 2010 cycle, the exceedance rate at 2-TKO004.69 fell to 4/40; therefore, Tuckahoe Creek from Little Tuckahoe Creek downstream to its mouth was partially delisted (8.98 miles). Upper Deep Run remained impaired of the Recreation Use due to an E. coli violation rate of 4/10 at both stations 2-DPR002.46 and 2-DPR004.38 during the 2010 cycle; there has been no additional monitoring and the impairment is carried over.

During the 2014 cycle, there was no additional monitoring conducted at Broad Branch; therefore, the fecal coliform impairment was carried over. E. coli monitoring confirmed the lower Deep Run impairment with an exceedance rate of 5/12 at 2-DPR001.00. The exceedance rate on the upper portion of Tuckahoe Creek was 4/12 at 2-TKO010.64. Tuckahoe Creek from Little Tuckahoe Creek downstream to its mouth was relisted in the 2014 cycle based on an exceedance rate of 3/23 at 2-TKO004.69. Little Tuckahoe Creek remains impaired for E. coli with exceedances at 2-LIY001.73 and is assessed as Cat. 4A; the exceedance rate was 6/11 during the 2014 cycle.

The "Bacteria TMDL for Tuckahoe Creek, Little Tuckahoe Creek, Anderson, Broad, Georges, and Readers Branches, and Deep Run Henrico, Goochland, and Hanover Counties, Virginia" was approved by the EPA on 9/20/2004 and by the SWCB on 7/31/2008. The report allocates E. coli between nonpoint source, municipal (MS4) urban runoff, and a municipal discharger. The TMDL includes the entire watershed. All bacteria-impaired segments are assessed as Cat. 4A.

In the 2020 cycle, monitoring was conducted at 2-LIY001.73. Little Tuckahoe Creek remained impaired (7/11.) New bacteria criteria were implemented in the 2022 cycle. No additional monitoring was conducted; however, the stream would remain impaired if the data were re-analyzed due to two or more STV hits in the same 90-day period with <10 samples.

Note: 2-TKO010.24 is unsafe for resampling. Station 2-TKO010.64 will be considered its replacement station moving forward.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_DPR01A00 / Deep Run / Deep Run from its headwaters to the pond at river mile 1.47.	4A	Escherichia coli (E. coli)	2002	L	4.17
VAP-H39R_DPR02A00 / Deep Run / Deep Run from the dam at river mile 1.47 to the confluence with Tuckahoe Creek.	4A	Escherichia coli (E. coli)	2012	L	1.50

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_LIY01A00 / Little Tuckahoe Creek / Little Tuckahoe Creek from its headwaters to the confluence with Tuckahoe Creek.	4A	Escherichia coli (E. coli)	2002	L	6.02
VAP-H39R_TKO01A98 / Tuckahoe Creek / Tuckahoe Creek from the headwaters to the confluence with Little Tuckahoe Creek.	4A	Escherichia coli (E. coli)	2006	L	7.70
VAP-H39R_TKO03A98 / Tuckahoe Creek / Confluence with Little Tuckahoe Creek to mouth at James River.	4A	Escherichia coli (E. coli)	2014	L	8.97

Tuckahoe Creek and Major Tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			28.36

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_BOD01A00 / Broad Branch / Broad Branch from the dam upstream of Route 623 to the confluence with Tuckahoe Creek.	4A	Fecal Coliform	2004	L	2.42
VAP-H39R_BOD02A06 / Broad Branch / Broad Branch from its headwaters to the dam upstream of Route 623.	4A	Fecal Coliform	2004	L	2.64

Tuckahoe Creek and Major Tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			5.06

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Industrial Point Source Discharge; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H39R-02-DO Tuckahoe Creek Watershed

Cause Location: Various streams within the Tuckahoe Creek watershed

Cause City/County: Goochland County; Henrico County

Use(s): Aquatic Life

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

Cause Description: There have been widespread dissolved oxygen exceedances on separate segments within the watershed.

The Tuckahoe Creek Natural Conditions Assessment report was completed in November 2005 to determine the source of the dissolved oxygen impairments. The report recommends delisting Deep Run and Little Tuckahoe Creek, reclassifying Tuckahoe Creek from Little Tuckahoe Creek to its mainstem as Class VII waters due to swamp conditions, and assessing multiple streams within the watershed as Category 4C waters due to natural low flow conditions. A portion of Tuckahoe Creek was delisted in the 2006 cycle due to acceptable dissolved oxygen exceedance rates.

Tuckahoe Creek was reclassified as Class VII swampwaters during the 2010 cycle.

Additional field data was collected in the 2016 cycle at 2-XUT000.62. The dissolved oxygen exceedance rate was acceptable (1/11); therefore, it was partially delisted. The Class VII portion of Tuckahoe Creek was delisted in the 2016 cycle. 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 impairment has been removed.

The report attributes the low dissolved oxygen in Stony Run to natural low-flow conditions and recommends the segment be assessed as a Cat. 4C water. Additional monitoring was conducted at 2-SNJ000.19 in the 2016 cycle; however, there was insufficient data for assessment (1/9). One additional sample was collected at 2-SNJ001.41 (DO 0/1.) The exceedance rate was acceptable during the 2018 cycle (1/21 at 2-SNJ000.19); therefore, Stony Run was partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_BOD01A00 / Broad Branch / Broad Branch from the dam upstream of Route 623 to the confluence with Tuckahoe Creek.	4C	Dissolved Oxygen	NA	NA	2.42
VAP-H39R_BOD02A06 / Broad Branch / Broad Branch from its headwaters to the dam upstream of Route 623.	4C	Dissolved Oxygen	NA	NA	2.64
VAP-H39R_GER01A02 / Georges Branch / Headwaters to mouth at Tuckahoe Creek	4C	Dissolved Oxygen	NA	NA	1.87
VAP-H39R_RDR01A02 / Readers Branch / Headwaters to mouth at Little Tuckahoe Creek	4C	Dissolved Oxygen	NA	NA	3.14
VAP-H39R_TKE01A04 / East Branch Tuckahoe Creek / Eastern Branch Tuckahoe Creek from the confluence with Tuckahoe Creek to the confluence with the James River (Kanawha Canal) near Boshers Dam.	4C	Dissolved Oxygen	NA	NA	3.48
VAP-H39R_XHP01A04 / XHP - UT to XCZ (Tuckahoe Creek, UT) / Mainstem from headwaters to mouth at XCZ	4C	Dissolved Oxygen	NA	NA	1.73

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_XUR01A04 / XUR - Tuckahoe Creek, UT / Headwaters to mouth	4C	Dissolved Oxygen	NA	NA	2.66

Tuckahoe Creek Watershed

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			17.94

Sources: Golf Courses; Natural Sources; Source Unknown

James River Basin

Cause Group Code: H39R-04-BAC Rattlesnake Creek

Cause Location: The mainstem of Rattlesnake Creek from its headwaters to its mouth at the James River.

Cause City/County: Chesterfield County; Richmond

Use(s): Recreation

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

Cause Description: During the 2010 cycle, Rattlesnake Creek was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 4/11 at station 2-RTL000.04, which is located at Riverside Drive.

The creek is within the study area for the James River and Tributaries - City of Richmond TMDL, which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. Although the impairment was not specifically addressed, it will be included in the implementation phase of the TMDL and is therefore considered nested (Category 4A.)

In the 2020 cycle, monitoring at Alliance for the Chesapeake Bay station 2BRTL-RSC02-ACB confirmed the impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_RTL01A08 / Rattlesnake Creek / Headwaters to mouth at James River	4A	Escherichia coli (E. coli)	2010	L	2.23

Rattlesnake Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.23

Sources: Municipal Point Source Discharges; Non-Point Source; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H39R-05-BEN Powhite Creek

Cause Location: Powhite Creek from its headwaters to its mouth at the James River.

Cause City/County: Chesterfield County; Richmond

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, Powhite Creek was assessed as not supporting of the Aquatic Life Use goal due to impairment of the benthic community at station 2-PWT001.97, which is a freshwater probabilistic monitoring station.

The station was replaced by 2-PWT001.23 because the location is a more appropriate stream type (non-swampy). Monitoring at 2-PWT001.23 in 2012-2013 and 2021 also indicated impairment, as did 2016 monitoring at 2-PWT001.40.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_PWT01A98 / Powhite Creek / The mainstem of Powhite Creek.	5A	Benthic Macroinvertebrates Bioassessments	2008	H	8.13

Powhite Creek

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

Sources: Source Unknown

James River Basin

Cause Group Code: H39R-06-BAC Reedy Creek

Cause Location: Segment comprises Reedy Creek from its headwaters to its mouth at the James River.

Cause City/County: Richmond

Use(s): Recreation

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

Cause Description: Reedy Creek was initially listed as threatened of the Recreation Use during the year 1998 cycle due to fecal coliform exceedances. The segment was downgraded to impaired in the year 2002 assessment based on exceedances at Riverside Drive in the City of Richmond (2-RDD000.19). The impairment converted to E. coli in the 2006 cycle.

Additional E. coli monitoring was conducted in preparation for the TMDL. During the 2010 cycle, the segment remained impaired with the following violation rates: 2-RDD000.19 - 10/34 2-RDD000.99 - 5/12 2-RDD001.57 - 22/24 2-RDD002.61 - 5/12 2-RDD003.61 - 5/12

The Reedy Creek impairment was addressed in the James River and Tributaries - City of Richmond TMDL, which was approved by the EPA on 11/4/2010. The stream is considered Category 4A.

In addition, 2-RDD000.76 was impaired in the 2020 cycle (4/22.) The creek remained impaired during the 2022 cycle due to two or more STV exceedances in a 90-day period at stations 2-RDD-RC3-ACB, 2-RDD-RC4-ACB, and 2-RDD-J21-ACB, as well as geometric mean exceedances at 2-RDD-J21-ACB. Citizen monitoring at 2-RDD-J21-JRA during the 2024 cycle indicates continued impairment (geometric mean exceedance in a 90-day period.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_RDD01A00 / Reedy Creek / Reedy Creek from its headwaters to the tributary upstream of Roanoke Street.	4A	Escherichia coli (E. coli)	2006	L	2.38
VAP-H39R_RDD01B10 / Reedy Creek / Reedy Creek from the tributary upstream of Roanoke Street to Roanoke Street.	4A	Escherichia coli (E. coli)	2006	L	0.36
VAP-H39R_RDD01C10 / Reedy Creek / Reedy Creek from Roanoke Street to the James River.	4A	Escherichia coli (E. coli)	2006	L	1.09

Reedy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.83

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H39R-06-PCB Reedy Creek

Cause Location: Reedy Creek from Roanoke Street to the James River.

Cause City/County: Richmond

Use(s): Fish Consumption

Causes(s)/VA Category: Polychlorinated biphenyls (PCBs)/5A

Cause Description: During the 2020 cycle, lower Reedy Creek was impaired of the Fish Consumption Use due to two exceedances of the human health water quality standard for PCBs at 2-RDD000.19-S.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_RDD01C10 / Reedy Creek / Reedy Creek from Roanoke Street to the James River.	5A	Polychlorinated biphenyls (PCBs)	2020	H	1.09

Reedy Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:			1.09

Sources: Source Unknown

James River Basin

Cause Group Code: H39R-06-PH Reedy Creek

Cause Location: Reedy Creek from the tributary upstream of Roanoke Street downstream to Roanoke Street.

Cause City/County: Richmond

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, the portion of Reedy Creek around station 2-RDD000.99 was assessed as impaired of the Aquatic Life Use due to elevated pH levels.

The source of the pH impairment was considered unknown. However, the pH exceedances were 9.6 and 9.8 SU, which is substantially higher than at other stations on Reedy Creek and may be due to pooled water in the channelized stream.

The segment length was adjusted in the 2014 cycle to end at Roanoke Street because sampling at all other stations within Reedy Creek remain acceptable, including ACB station 2-RDD-RC1-ACB which is just downstream.

No additional pH data has been collected at 2-RDD000.99.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_RDD01B10 / Reedy Creek / Reedy Creek from the tributary upstream of Roanoke Street to Roanoke Street.	5A	pH	2010	L	0.36

Reedy Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.36

Sources: Source Unknown

James River Basin

Cause Group Code: H39R-07-BAC XZE - James River, UT

Cause Location: The tributary from its headwaters to its mouth at the James River.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2010 cycle, the tributary was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 4/11 at station 2-XZE000.19, which is located at a private drive downstream of Tarrington.

The stream is located within the study area for the James River - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. The impairment will be addressed during the implementation phase of 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-H39R_XZE01A10 / XZE - James River, UT / Headwaters to mouth at James River	4A	Escherichia coli (E. coli)	2010	L	1.3

XZE - James River, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.3

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

James River Basin

Cause Group Code: H39R-08-BAC James River

Cause Location: Segment begins at the Boulevard Bridge at river mile 113.20 and extends downstream to the fall line of the James River.

Cause City/County: Richmond

Use(s): Recreation

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

Cause Description: The James River was initially assessed not supporting of the Recreation use support goal in 1998 based on the results of a summer special study in the fall zone. The special study was designed to monitor the effects of summertime rain and combined sewer overflow (CSO) events on water quality in the James River and to monitor the effects of Richmond's CSO abatement efforts. The special study data used representative conditions before completion of CSO abatement projects.

New bacteria criteria were implemented in the 2022 cycle. The segment remained impaired at stations 2-JMS110.37, 2-JMS111.17, and 2-JMS112.33 due to two or more STV hits in the same 90-day period with < 10 samples. There was insufficient information to assess several other stations.

There was insufficient information to assess those and other DEQ stations in the 2024 cycle, however citizen monitoring stations 2CJMS-J20-JRA and 2CJMS-J22-JRA also showed impairment due to two STV exceedances in a 90-day period (geometric mean was acceptable.)

The James River - City of Richmond Bacterial TMDL was approved by the EPA on 11/4/2010; therefore, the segment is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_JMS03A98 / James River / The James River from the Boulevard Bridge to the fall line at approximately the railroad trestle above Mayos Bridge.	4A	Escherichia coli (E. coli)	2006	L	5.13
VAP-H39R_JMS03B14 / James River - South Channel / The south channel of the James River from the Belle Island dam to the Brown's Island dam. State Scenic River	4A	Escherichia coli (E. coli)	2006	L	0.95

James River

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

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

James River Basin

Cause Group Code: H39R-08-DO XAB - Salles Creek, UT

Cause Location: The tributary from its headwaters to its mouth at Salles Creek.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, the unnamed tributary was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances at 2-SAL001.93, which is located at Route 711.

The violation rate was 3/19 during the 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_XAB01A10 / XAB - Salles Creek, UT / Headwaters to mouth at Salles Creek	5A	Dissolved Oxygen	2010	L	0.1

XAB - Salles Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.1

Sources: Source Unknown

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Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: H39R-08-PH XAB - Salles Creek, UT

Cause Location: The tributary from its headwaters to its mouth at Salles Creek.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, the unnamed tributary was assessed as not supporting of the Aquatic Life Use due to pH exceedances at 2-SAL001.93, which is located at Route 711. The exceedance rate was 9/19 during the 2012 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_XAB01A10 / XAB - Salles Creek, UT / Headwaters to mouth at Salles Creek	5A	pH	2010	L	0.1

XAB - Salles Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.1

Sources: Source Unknown

James River Basin

Cause Group Code: H39R-09-DO James River - South Channel

Cause Location: The south channel of the James River around Belle Isle.

Cause City/County: Richmond

Use(s): Aquatic Life

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

Cause Description: In the 2012 cycle, the James River from the Boulevard Bridge downstream to the fall line was assessed as not supporting of the Aquatic Life Use because of low dissolved oxygen at 2-JMS111.48. The station is located on the south channel of the James River below the Canoe Run CSO outfall.

All other stations within the segment had acceptable exceedance rates. Therefore, the south channel was separated during the 2014 cycle. The impairment is limited to the south channel between the Belle Island Dam and the Brown's Island dam. The north channel was partially delisted.

The exceedance rate was 9/58 at 2-JMS111.48 during the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_JMS03B14 / James River - South Channel / The south channel of the James River from the Belle Island dam to the Brown's Island dam. State Scenic River	5A	Dissolved Oxygen	2012	L	0.95

James River - South Channel

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.95

Sources: Combined Sewer Overflows; Source Unknown

James River Basin

Cause Group Code: H39R-10-BAC Bernards Creek

Cause Location: The mainstem of Bernards Creek.

Cause City/County: Chesterfield County; Powhatan County

Use(s): Recreation

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

Cause Description: Bernards Creek was initially assessed as impaired of the Recreation Use during the 2004 cycle based on fecal coliform exceedances at the Route 711 bridge (2-BOR001.73).

During the 2008 cycle, E. coli monitoring at 2-BOR001.73 was acceptable (1/11), however monitoring at the Route 607 bridge (2-BOR003.61) had an exceedance rate of 2/12 and the impairment was converted to E. coli.

In the 2014 cycle, exceedance rates were 4/27 at 2-BOR001.73 and 3/3 at downstream station 2-BOR000.02.

The TMDL was approved by the EPA on 11/4/2010. Bernards Creek is considered a Category 4A water.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_BOR01A02 / Bernards Creek / Headwaters to mouth at James River	4A	Escherichia coli (E. coli)	2008	L	8.13

Bernards Creek

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

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

James River Basin

Cause Group Code: H39R-10-DO Bernards Creek

Cause Location: The mainstem of Bernards Creek.

Cause City/County: Chesterfield County; Powhatan County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, Bernards Creek was impaired of the Aquatic Life Use due to dissolved oxygen exceedances at 2-BOR001.73, which is located at the Route 711 bridge. Monitoring near the mouth was acceptable (0/3 at 2-BOR000.02).

The exceedance rate was 4/27 during the 2016 cycle.

Upstream monitoring was conducted in 2020 at station 2-BOR003.61; the station was acceptable (0/9). The dissolved oxygen impairment will be carried over; however, additional monitoring is suggested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_BOR01A02 / Bernards Creek / Headwaters to mouth at James River	5A	Dissolved Oxygen	2014	L	8.13

Bernards Creek

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

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

James River Basin

Cause Group Code: H39R-10-PH Bernards Creek

Cause Location: The mainstem of Bernards Creek.

Cause City/County: Chesterfield County; Powhatan County

Use(s): Aquatic Life

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

Cause Description: Bernards Creek was impaired of the Aquatic Life Use during the 2022 cycle due to a pH exceedance rate of 2/9 at station 2-BOR003.61.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_BOR01A02 / Bernards Creek / Headwaters to mouth at James River	5C	pH	2022	L	8.13

Bernards Creek

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

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

James River Basin

Cause Group Code: H39R-11-HG James River

Cause Location: The James River from the rivermile 128.14 near the confluence with Norwood Creek downstream to the confluence with Tuckahoe Creek.

Cause City/County: Goochland County; Powhatan County

Use(s): Fish Consumption

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

Cause Description: The segment was assessed as not supporting of the Fish Consumption Use in the 2010 cycle due to mercury exceedances in redbreast sunfish and quillback carpsucker in 2003 and smallmouth bass in 2005. The monitoring occurred at station 2-JMS127.50, which is located at the end of Route 652 at Watkins Landing.

Additional monitoring occurred in 2021 Mercury exceeded in quillback (IN) and the impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_JMS02B04 / James River / The James River from river mile 128.14 to the confluence with Tuckahoe Creek.	5A	Mercury in Fish Tissue	2010	L	4.37

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			4.37

Sources: Atmospheric Deposition - Toxics; Source Unknown

James River Basin

Cause Group Code: H39R-12-BAC Salles Creek

Cause Location: The mainstem of Salles Creek from its headwaters to its mouth at the James River.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2010 cycle, Salles Creek was assessed as not supporting of the Recreation Use due to E. coli violations at station 2-SAL000.12, which is located at the Chesterfield County sewer line.

During the 2012 cycle, the violation rate was 9/22.

The creek is within the study area for the James River and Tributaries - City of Richmond TMDL, which was approved by the EPA on 11/4/2010. Although the impairment was not specifically addressed, it will be included in the implementation phase of the TMDL 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-H39R_SAL01A08 / Salles Creek / Headwaters to mouth at James River	4A	Escherichia coli (E. coli)	2010	L	1.96

Salles Creek

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

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

James River Basin

Cause Group Code: H39R-13-BAC Genito Creek

Cause Location: Genito Creek from its headwaters to its mouth at the James River.

Cause City/County: Goochland County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Genito Creek was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 2/10 at the Route 6 bridge (2-GEN000.69). The exceedance rate was 4/12 during the 2014 cycle.

Genito Creek is located within the study area for the James River - City of Richmond Bacterial TMDL which was approved by the EPA on 11/4/2010. Although the impairment was not specifically addressed, all bacterial impairments within the study area will be addressed during implementation; 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-H39R_GEN01A00 / Genito Creek / Genito Creek from its headwaters to the James River, including the West Fork Genito Creek.	4A	Escherichia coli (E. coli)	2008	L	6.81

Genito Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.81

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

James River Basin

Cause Group Code: H39R-13-BEN Stony Run

Cause Location: Stony Run from its headwaters to the extent of backwater at the pond.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, upper Stony Run was assessed as impaired of the Aquatic Life Use due to impairment of the benthic community at 2-SNJ001.77 (downstream of Church Road). Additional sampling in 2012 and 2019/2020 confirmed the impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_SNJ01A04 / Stony Run / Headwaters to extent of backwater of pond	5A	Benthic Macroinvertebrates Bioassessments	2008	L	1.01

Stony Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.01

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H39R-14-BAC Jones Creek

Cause Location: Jones Creek from its headwaters downstream to its mouth at the extent of backwater of Woodberry Pond.

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Jones Creek was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 3/11 at 2-JOH004.04, which is located at Route 628.

The stream is located within the study area for the James River - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. The impairment will be addressed during the implementation phase of 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-H39R_JOH01A08 / Jones Creek / Headwaters downstream to mouth at Woodberry Pond.	4A	Escherichia coli (E. coli)	2012	L	8.2

Jones Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.2

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

James River Basin

Cause Group Code: H39R-15-BEN XYT - Stony Run, UT

Cause Location: The unnamed tributary from its headwaters to its mouth at Stony Run.

Cause City/County: Henrico 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 impairment of the benthic communities at stations 2-XYT000.04 and 2-XYT000.29, which were located downstream and upstream of the Barrington pipeline spill.

Station 2-XYT000.29 was re-sampled in the 2022 cycle and remained impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_XYT01A08 / XYT - Stony Run, UT / Headwaters to mouth at Stony Run.	5A	Benthic Macroinvertebrates Bioassessments	2008	H	1.27

XYT - Stony Run, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.27

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H39R-16-HG James River

Cause Location: The tidal James River from the fall line near Mayos Bridge downstream to river mile 108.76.

Cause City/County: Richmond

Use(s): Fish Consumption

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

Cause Description: During the 2010 cycle, the James River from the Boulevard Bridge to the fall line at approximately the railroad trestle above Mayos Bridge was assessed as not supporting of the Fish Consumption Use due to the following mercury exceedances:

2-JMS109.98 - 1 sp. (striped bass) in 2004 2-JMS110.00 - 3 sp (largemouth bass, channel catfish, and striped bass) in 2003, & 2 sp (striped bass and blueback herring) in 2006

Monitoring in 2005 showed zero exceedances. Recent monitoring in 2021 only indicated a mercury fish tissue exceedance in largemouth bass. Although the remaining species were acceptable, the segment remains impaired.

Note: The fall line was subsequently determined to be slightly upstream of those locations. In the 2022 cycle, the impairment was moved from riverine AUs VAP-H39R_JMS03A98 and -JMS03B14 to tidal AU VAP-G01E_JMS01A02. The upper segments were considered delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01E_JMS01A02 / James River / The James River from the fall line near Mayos Bridge to river mile 108.76. State Scenic River JMSTFu	5A	Mercury in Fish Tissue	2022	L	0.239

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:	0.239		

Sources: Atmospheric Deposition - Toxics; Source Unknown

James River Basin

Cause Group Code: H39R-18-BAC XHP - Tuckahoe Creek, UT

Cause Location: Headwaters to mouth at tributary XCZ

Cause City/County: Goochland County

Use(s): Recreation

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

Cause Description: Tributary XHP has been assessed as not supporting of the Recreation Use since the 2006 cycle based on E. coli exceedances at 2-XHP000.42.

The "Bacteria TMDL for Tuckahoe Creek, Little Tuckahoe Creek, Anderson, Broad, Georges, and Readers Branches, and Deep Run Henrico, Goochland, and Hanover Counties, Virginia" was approved by the EPA on 9/20/2004 and by the SWCB on 7/31/2008. The report allocates E. coli between nonpoint source and urban runoff. The allocation includes the entire watershed. 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-H39R_XHP01A04 / XHP - UT to XCZ (Tuckahoe Creek, UT) / Mainstem from headwaters to mouth at XCZ	4A	Escherichia coli (E. coli)	2006	L	1.73

XHP - Tuckahoe Creek, UT

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

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H39R-19-DO Deep Run

Cause Location: Deep Run from the dam at river mile 1.47 to its mouth at Tuckahoe Creek.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: Deep Run was impaired of the Aquatic Life Use during the 2012 cycle due to a dissolved oxygen exceedance rate of 2/12 at 2-DPR001.00, which is located at the Route 6 bridge.

Additional monitoring was conducted in the 2022 cycle. The stream remained impaired (2/11).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_DPR02A00 / Deep Run / Deep Run from the dam at river mile 1.47 to the confluence with Tuckahoe Creek.	5C	Dissolved Oxygen	2012	L	1.5

Deep Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.5

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

James River Basin

Cause Group Code: H39R-20-BAC Norwood Creek

Cause Location: Norwood Creek from the confluence with Woodberry Pond to its mouth at the James River

Cause City/County: Powhatan County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Norwood Creek from Dutoy Creek to mouth was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 2/13 at 2-NWD002.27, which is located at Route 711. Monitoring at station 2-NWD005.84 was acceptable.

In the 2014 cycle, there were E. coli exceedances as well at station 2-NWD005.84 (3/12). The impairment was extended upstream to Woodberry Pond dam.

The stream is located within the study area for the James River - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. The impairment will be addressed during the implementation phase of the TMDL; therefore, it is considered nested (Category 4A.)

The stream was re-sampled in 2018; however, there was insufficient information to assess it using the new bacteria criteria.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_NWD01B12 / Norwood Creek / Mainstem of Norwood Creek from Woodberry Pond dam to mouth.	4A	Escherichia coli (E. coli)	2012	L	6.36

Norwood Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.36

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

James River Basin

Cause Group Code: H39R-21-BAC XAB - Salles Creek, UT

Cause Location: The unnamed tributary in its entirety.

Cause City/County: Chesterfield County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, an unnamed tributary of Salles Creek was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 3/18 at 2-SAL001.93, which is located on the UT at Route 711.

The stream is located within the study area for the James River - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. The impairment will be addressed during the implementation phase of 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-H39R_XAB01A10 / XAB - Salles Creek, UT / Headwaters to mouth at Salles Creek	4A	Escherichia coli (E. coli)	2012	L	0.1

XAB - Salles Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.1

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

James River Basin

Cause Group Code: H39R-22-BAC Manchester Canal

Cause Location: Manchester Canal

Cause City/County: Richmond

Use(s): Recreation

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

Cause Description: During the 2012 cycle, the Manchester Canal was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 2/2 at station 2-MAN000.19 which is located at Stockton Street.

The stream is located within the study area for the James River - City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010. The impairment will be addressed during the implementation phase of 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-H39R_MAN01A12 / Manchester Canal (aka Walker Creek) / Manchester Canal	4A	Escherichia coli (E. coli)	2012	L	0.86

Manchester Canal

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.86

Sources: Agriculture; Discharges from Municipal Separate Storm Sewer Systems (MS4); Municipal Point Source Discharges; Non-Point Source; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H39R-23-BAC Michauk Creek

Cause Location: Michauk Creek from its headwaters to its mouth at Bernards Creek

Cause City/County: Chesterfield County; Powhatan County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Michauk Creek was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 4/12 at station 2-MCU002.95, which is located at Rt. 5147.

The stream is located within the Bernards Creek Watershed, which was addressed in the James River - City of Richmond Bacterial TMDL. The TMDL was approved by the EPA on 11/4/2010. The impairment will be addressed during the implementation phase of 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-H39R_MCU01A12 / Michauk Creek / Headwaters to mouth at Bernards Creek	4A	Escherichia coli (E. coli)	2012	L	4.48

Michauk Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.48

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

James River Basin

Cause Group Code: H39R-25-BAC XCK - Reedy Creek, UT (aka Crooked Branch)

Cause Location: Headwaters to its mouth at Reedy Creek

Cause City/County: Richmond

Use(s): Recreation

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

Cause Description: During the 2014 cycle, the unnamed tributary (aka Crooked Branch) was impaired of the Recreation Use due to E. coli exceedances at 2-CKD-CB1-ACB, which is located 500 feet downstream of Crutchfield Street. The station is sampled by the Alliance for the Chesapeake Bay.

Reedy Creek was addressed in the James River and Tributaries - City of Richmond TMDL, which was approved by the EPA on 11/4/2010. The tributary is considered nested.

The exceedance rate was 7/18 during the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_XCK01A14 / XCK - Reedy Creek, UT (aka Crooked Branch) / Headwaters to mouth at Reedy Creek	4A	Escherichia coli (E. coli)	2014	L	1.25

XCK - Reedy Creek, UT (aka Crooked Branch)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.25

Sources: Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H39R-26-BAC Dover Creek

Cause Location: Headwaters to the extent of backwater of Dover Lake

Cause City/County: Goochland County

Use(s): Recreation

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

Cause Description: During the 2020 cycle, upper Dover Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at 2-DOV003.96, which is located at the Rt. 644 bridge.

Dover Creek is located within the study area for the James River - City of Richmond Bacterial TMDL which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. Although the impairment was not specifically addressed, all bacterial impairments within the study area will be addressed during implementation; therefore, it is proposed for nesting (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. No additional monitoring has been conducted. Although the 2020 data would have been considered insufficient information had the new criteria been in place at the time, the impairment will be carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_DOV01A00 / Dover Creek / Dover Creek from its headwaters to the upstream limit of Dover Lake.	4A	Escherichia coli (E. coli)	2020	L	4.77

Dover Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.77

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

James River Basin

Cause Group Code: H39R-26-BEN Dover Creek

Cause Location: Headwaters to the extent of backwater of Dover Lake

Cause City/County: Goochland County

Use(s): Aquatic Life

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

Cause Description: During the 2020 cycle, upper Dover Creek was impaired of the Aquatic Life Use due to an altered benthic community at 2-DOV003.55, a 2017 freshwater probabilistic monitoring station.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_DOV01A00 / Dover Creek / Dover Creek from its headwaters to the upstream limit of Dover Lake.	5A	Benthic Macroinvertebrates Bioassessments	2020	H	4.77

Dover Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.77

Sources: Source Unknown

James River Basin

Cause Group Code: H39R-27-BEN Deep Run

Cause Location: Deep Run from its headwaters to the extent of backwater at the pond.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, upper Deep Run was impaired of the Aquatic Life Use due to an altered benthic community at 2-DPR003.75, which is located at the northern edge of Deep Run Park. It was re-sampled in 2019/2020 and remained impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_DPR01A00 / Deep Run / Deep Run from its headwaters to the pond at river mile 1.47.	5A	Benthic Macroinvertebrates Bioassessments	2016	H	4.17

Deep Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.17

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H39R-28-BEN Stony Run

Cause Location: Stony Run from the dam of the pond downstream to the mouth at Deep Run.

Cause City/County: Henrico County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, lower Stony Run was impaired of the Aquatic Life Use due to an altered benthic community at 2-SNJ000.19, which is located at Falcon Bridge Road.

Additional level II benthic assessment by the citizen group HAWQS in the 2024 cycle also indicates potential impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_SNJ02A04 / Stony Run / Dam of pond downstream to the mouth at Deep Run.	5A	Benthic Macroinvertebrates Bioassessments	2016	H	1.36

Stony Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.36

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: H39R-29-BAC XBH - Reedy Creek, UT

Cause Location: Headwaters to its mouth at Reedy Creek

Cause City/County: Richmond

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the unnamed tributary was impaired of the Recreation Use due to an E. coli exceedance rate of 12/13 at 2BXBH-UT1-ACB, which is located at Bassett Avenue and West 46th Street. The station is sampled by the Alliance for the Chesapeake Bay.

The exceedance rate increased to 17/18 during the 2020 cycle.

Reedy Creek was addressed in the James River and Tributaries - City of Richmond TMDL, which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. The impairment is considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_XBH01A14 / XBH - Reedy Creek, UT / Headwaters to mouth at Reedy Creek	4A	Escherichia coli (E. coli)	2016	L	0.11

XBH - Reedy Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.11

Sources: Discharges from Municipal Separate Storm Sewer Systems (MS4); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: H39R-30-DO Dover Creek

Cause Location: Dover Creek from the Dover Creek Lake dam to the mouth at the Little River.

Cause City/County: Goochland County

Use(s): Aquatic Life

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

Cause Description: During the 2018 cycle, lower Dover Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/10 at 2-DOV000.42, which is located at the Route 6 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_DOV01B00 / Dover Creek / Dover Creek from the Dover Creek Lake dam to the mouth at the Little River.	5A	Dissolved Oxygen	2018	L	0.93

Dover Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.93

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

James River Basin

Cause Group Code: H39R-32-BAC Roberts Branch

Cause Location: Headwaters to mouth at Bernards Creek

Cause City/County: Chesterfield County; Powhatan County

Use(s): Recreation

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

Cause Description: During the 2020 cycle, Roberts Branch was impaired of the Recreation Use due to an E. coli exceedance rate of 5/12 at 2-ROB000.31.

Roberts Branch is located within the Bernard Creek watershed in the James River - City of Richmond Bacterial TMDL which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. Although the impairment was not specifically addressed, all bacterial impairments within the study area will be addressed during implementation; therefore, it is considered nested (Category 4A).

When the data is re-analyzed using the new bacteria criteria, which were implemented in the 2022 cycle, the stream remains impaired because 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
VAP-H39R_ROB01A08 / Roberts Branch / Headwaters to mouth at Bernards Creek	4A	Escherichia coli (E. coli)	2020	L	2.35

Roberts Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.35

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

James River Basin

Cause Group Code: H39R-33-BAC Westham Creek

Cause Location: Headwaters to mouth

Cause City/County: Henrico County

Use(s): Recreation

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

Cause Description: During the 2020 cycle, Westham Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 6/12 at 2-WTM000.49, which is located at River Road.

Westham Creek is located within the Lower James River study watershed in the James River - City of Richmond Bacterial TMDL which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. Although the impairment was not specifically addressed, all bacterial impairments within the study area will be addressed during implementation; 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-H39R_WTM01A20 / Westham Creek / Headwaters to mouth	4A	Escherichia coli (E. coli)	2020	L	2.52

Westham Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.52

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

James River Basin

Cause Group Code: H39R-34-TEMP Stony Run - Lake Loreine

Cause Location: The entirety of the pond

Cause City/County: Henrico County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: Lake Loreine is a private pond on Stony Run. During the 2022 cycle, the pond was sampled by a citizen monitoring group. The temperature exceeded the maximum water quality standard in 4 out of 14 samples at station 2BSNJ-LL1-HAWQS.

The exceedance rate was 7/38 in the 2024 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_SNJ01B22 / Stony Run - Lake Loreine / Extent of pond	5A	Temperature	2022	L	0.31

Stony Run - Lake Loreine

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			0.31

Sources: Dam or Impoundment

James River Basin

Cause Group Code: H39R-35-HG James River

Cause Location: The mainstem James River from William's Island Dam downstream to the fall line

Cause City/County: Richmond

Use(s): Fish Consumption

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

Cause Description: During the 2024 cycle, the James River from William's Island Dam downstream to the fall line was impaired of the Fish Consumption Use due to the following mercury fish tissue value exceedances:

2-JMS115.29 - 2021: 3 species (blue catfish (2 samples), flathead catfish (2 samples), largemouth bass)
2-JMS111.17 - 2021: 2 species (flathead catfish, largemouth bass)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-H39R_JMS02A98 / James River / The James River from the William's Island dam to the Boulevard Bridge.	5A	Mercury in Fish Tissue	2024	L	3.36
VAP-H39R_JMS03A98 / James River / The James River from the Boulevard Bridge to the fall line at approximately the railroad trestle above Mayos Bridge.	5A	Mercury in Fish Tissue	2024	L	5.13
VAP-H39R_JMS03B14 / James River - South Channel / The south channel of the James River from the Belle Island dam to the Brown's Island dam. State Scenic River	5A	Mercury in Fish Tissue	2024	L	0.95

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			9.44

Sources: Atmospheric Deposition - Toxics; Source Unknown

James River Basin

Cause Group Code: I01R-01-TEMP Jackson River

Cause Location: Jackson River from river mile 85.4 downstream to river mile 65.6. This cause group was shortened in 2022 based on a review of WQS and a partial delist of the temperature impairment.

Cause City/County: Bath County; Highland County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to exceedances of the temperature WQS at station: 2-JKS058.60 (8 exceedances of 35 samples in 2024) and 2-JKS074.27 (5 exceedances of 37 samples in 2024). Initial Listing Date: 2004. This impairment is believed to be due to natural causes.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I01R_JKS01A22 / Jackson River / Jackson River from its confluence with Castle Run downstream to river mile 65.6.	5C	Temperature	2004	L	5.14
VAV-I01R_JKS02A00 / Jackson River / Jackson River from river mile 85.4, downstream to its confluence with Castle Run.	5C	Temperature	2010	L	14.88

Jackson River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			20.02

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

James River Basin

Cause Group Code: I01R-02-TEMP Bolar Run

Cause Location: Bolar Run from the upper Bolar Spring downstream to its confluence with the Jackson River. This impaired segment was shortened following review of WQS and an upstream mountainous zone assessment unit was de-listed.

Cause City/County: Bath County; Highland County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to exceedances of the temperature WQS at station: 2-BOL000.97 (3 exceedances of 12 samples for temperature in 2008, 0 exceedances of 3 samples for temperature in 2010, no new data in 2024). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I01R_BOL01A04 / Bolar Run / Bolar Run from the upper Bolar Spring downstream to its confluence with the Jackson River.	5C	Temperature	2006	L	2.1

Bolar Run

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

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

James River Basin

Cause Group Code: I01R-03-BAC Jackson River

Cause Location: Jackson River from river mile 85.4 downstream to the upper end of Lake Moomaw.

Cause City/County: Bath County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station JKS058.60 (four exceedances of 35 samples in 2018; no STV exceedances but insufficient data to analyze geomean in 2024). Additional data collected at station 2-JKS074.27 (two exceendances of 12 samples) in the 2020 cycle. Initial Listing Date: 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I01R_JKS01A00 / Jackson River / Jackson River from 65.6 river miles above the James River, downstream to the upper end of Lake Moomaw.	5A	Escherichia coli (E. coli)	2018	L	8.36
VAV-I01R_JKS01A22 / Jackson River / Jackson River from its confluence with Castle Run downstream to river mile 65.6.	5A	Escherichia coli (E. coli)	2018	L	5.14

Jackson River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.5

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I02R-02-BAC Back Creek

Cause Location: Back Creek from the headwaters downstream to its confluence with East Back Creek.

Cause City/County: Highland County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-BCC026.08 (2 exceedances of 12 samples in 2010, no new data 2024), Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I02R_BCC03A00 / Back Creek / Back Creek from a point 37.1 miles upstream of the Jackson River downstream to its confluence with East Back Creek.	5A	Escherichia coli (E. coli)	2010	L	10.92
VAV-I02R_BCC04A10 / Back Creek / Back Creek from the headwaters downstream to a point 37.1 miles upstream of the Jackson River.	5A	Escherichia coli (E. coli)	2010	L	4.14

Back Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			15.06

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I02R-03-TEMP Little Back Creek

Cause Location: Little Back Creek from the headwaters downstream to its confluence with Back Creek.

Cause City/County: Bath County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: Little Back Creek is assessed as impaired for aquatic life use due to excursions of the natural trout WQS for temperature (3 exceedances of 12 samples in 2022, no new data 2024) at station 2-LTB000.01. Initial Listing Date: 2022

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I02R_LTB01A00 / Little Back Creek / Little Back Creek from the headwaters downstream to its confluence with Back Creek.	5A	Temperature	2022	L	15.01

Little Back Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			15.01

Sources: Source Unknown

James River Basin

Cause Group Code: I04R-01-TEMP Falling Spring

Cause Location: Falling Spring Creek mainstem from its mouth to confluence of an unnamed tributary located at 37°52'48" / 79°54'52" (JU10).

Cause City/County: Alleghany County

Use(s): Aquatic Life

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

Cause Description: The 2018 data window finds the initial Aquatic Life Use listing for exceedances of the Class VI 20°C Natural Trout Waters criterion. The impairment is categorized '4C' (Impaired or threatened for one or more designated uses but does not require a TMDL because the water is a suspected swampwater awaiting applicable aquatic life criteria or because the impairment is determined to be caused by natural conditions. This category also includes impairments not caused by a pollutant) due to the influence from a thermal cave. Coldwater springs enter this stream which support the presence of trout further downstream.

2-FAS002.75 (Upstream of Hydro Diversion) - Two of eleven temperature observations exceed the Class VI Natural Trout Waters criterion within the 2018 data window. Excursions are: 21°C (8/13/15) and 21°C (9/1/15). Note that retroactive application of round-to-even approach results in the omission of the 8/26/15 20.4°C observation which is no longer considered an excursion.

2-FAS002.67 (Downstream of Hydro Diversion) - Two of eleven temperature observations exceed the Class VI Natural Trout Waters criterion within the 2018 data window. Excursions are: 21°C (8/13/15), and 21°C (9/1/15). Note that retroactive application of round-to-even approach results in the omission of the 8/26/15 20.2°C observation which is no longer considered an excursion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I04R_FAS01A00 / Falling Spring Creek / Falling Spring Creek mainstem from its mouth to confluence of an unnamed tributary located at 37.88, -79.9144 (JU10).	4C	Temperature	NA	NA	5.1

Falling Spring

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			5.1

Sources: Natural Sources

James River Basin

Cause Group Code: I04R-02-TEMP Jackson River

Cause Location: Jackson River mainstem from the Covington water intake upstream to the end of the WQS designated public water supply (PWS) section (JU11).

Cause City/County: Alleghany County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: The initial 2020 Aquatic Life Use listing of the Jackson River is based on temperature readings collected during Boatable Probabilistic sampling events.

2-JKS028.69 (North of Intervale) The initial 303(d) listing is based on two temperature measurements exceeding the 20 C Class VI natural trout criterion at 21 C (8/24/15) and 21 C (8/22/17).

2-JKS026.01 (Filtration Plant) Two temperature observations exceed the Class VI natural trout criterion of 20°C at 21 C (7/2/20) and 22 C (8/11/20) during the 2022 data window.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I04R_JKS03A00 / Jackson River / Jackson River mainstem from the Covington water intake upstream to the end of the WQS designated public water supply (PWS) section (JU11).	5A	Temperature	2020	L	5.15

Jackson River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			5.15

Sources: Source Unknown

James River Basin

Cause Group Code: I07R-02-TEMP Jerrys Run

Cause Location: Jerrys Run mainstem from the C&O Railroad Crossing upstream to its headwaters (JU13).

Cause City/County: Alleghany County

Use(s): Aquatic Life

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

Cause Description: The 2022 data window finds the initial Aquatic Life Use 303(d) listing on Jerrys Run for temperature. 2-JED008.07 (Along USFS Rd 69) - The 2022 data window finds three of 6 temperature in excess of the Class VI 20 C criterion at 22°C (7/29/20) and 21 C (8/12/20, 9/2/20).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I07R_JED01B22 / Jerrys Run / Jerrys Run mainstem from the C&O Railroad Crossing upstream to the junction of Routes 60 and 782 (JU13).	5C	Temperature	2022	L	4.03
VAW-I07R_JED02A02 / Jerrys Run / Jerrys Run mainstem and tributaries from the junction of Routes 60 and 782 upstream to its headwaters (JU13).	5C	Temperature	2022	L	3.79

Jerrys Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			7.82

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

James River Basin

Cause Group Code: I09L-01-TEMP Douthat Lake

Cause Location: Douthat Lake located in Douthat State Park

Cause City/County: Bath County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: This lake is impaired due to exceedances of the Class VI Natural Trout Waters temperature WQS at station: 2-WLN007.36 (21 exceedances of 77 samples for temperature in 2022, no new data in 2024). Initial listing date: 2022

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I09L_WLN01A00 / Douthat Lake / Douthat Lake located in Douthat State Park	5A	Temperature	2022	L	46.68

Douthat Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:		46.68	

Sources: Source Unknown

James River Basin

Cause Group Code: I09R-01-BEN Jackson River

Cause Location: Jackson River mainstem from the Westvaco main processing outfall downstream to the confluence of Karnes Creek.

Cause City/County: Alleghany County; Covington

Use(s): Aquatic Life

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

Cause Description: The Jackson River General Standard - Benthic TMDL was approved on 7/21/10 (EPA) and 12/9/10 (SWCB). Federal IDs: 38981, 39001, 39017, 39022, 39003, 39004, 39002, 39005, 39006, 38996, 38997, 38995, 38998, 38999. The original 1996 VAW-I04R and VAW-I09R impairments were combined in 2002. The 1996/1998 originally 303(d) Listed impairments were 24.18 miles. Partial delist of 9.81 miles from Karnes Creek mouth downstream to Cowpasture R and Jackson R confluence based on VSCI scores >60 at station 2-JKS006.67. Ten VSCI scores (2007) from four surveys have an average of 64.10. Benthic trend analysis shows improving conditions at 2-JKS006.67 (+10 points) 1994-2010. Nutrient data and trends are detailed in previous cycle fact sheets but are not included here due to character limitations.

2-JKS023.61 (City Park, Gage) Continued benthic macroinvertebrate community impairment is based on four VSCI scores with an average of 36 (2017, 2020-22). Biologist notes: The invertebrate community at this site has been dominated by taxa that are tolerant of environments with low dissolved oxygen and high levels of organic pollution. The VSCI scores display a negative alteration in the taxonomic diversity and pollution sensitivity of the benthic community.

2-JKS020.41 (Upper Horse Shoe at Rayon Terrace) Two VSCI surveys (2007 Probabilistic Station) result in average score of 48.13.

2-JKS018.68 (Rt. 18 Bridge) Biologist assessed this station as 'Reserve Judgment' during the 2024 cycle. Four fall VSCI scores average 63 (2017, 2020-22). Additional data collection is needed to confirm that the benthic community continues a trend of improvement.

2-JKS013.29 (Lowmoor cave) Four fall VSCI scores (2017, 2020-22) show continued impairment with an average score of 59. Biologist notes: Decreases in pollution sensitive scrapers such as mayfiles and also increases in pollution tolerant midge taxa and net spininng caddisflies resulted in lower VSCI scores for 2021 and 2022 samples.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I04R_JKS01A00 / Jackson River / Jackson River mainstem from the WestRock (Westvaco) main processing outfall downstream to Dunlap Creek mouth at the watershed boundary with I09R (JU11).	4A	Benthic Macroinvertebrates Bioassessments	1996	L	0.48
VAW-I09R_JKS03B10 / Jackson River / Jackson River mainstem from upstream of the Lowmoor community downstream to near the mouth of Karnes Creek (JU21).	4A	Benthic Macroinvertebrates Bioassessments	1996	L	3.37
VAW-I09R_JKS04A00 / Jackson River / Jackson River mainstem from the Covington STP outfall downstream to just above the Lowmoor community (JU21).	4A	Benthic Macroinvertebrates Bioassessments	1996	L	5.92

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I09R_JKS04B14 / Jackson River / Jackson River mainstem from the Potts Creek confluence downstream to the Covington STP outfall (JU21).	4A	Benthic Macroinvertebrates Bioassessments	1996	L	0.32
VAW-I09R_JKS05A00 / Jackson River / Jackson River mainstem from downstream of the Fudge's Bridge to the Potts Creek confluence with the Jackson River (JU21).	4A	Benthic Macroinvertebrates Bioassessments	1996	L	3.01
VAW-I09R_JKS06A00 / Jackson River / Jackson River mainstem from the watershed boundary (I04R) at the mouth of Dunlap Creek downstream to just below the Lexington Avenue Bridge (JU21).	4A	Benthic Macroinvertebrates Bioassessments	1996	L	1.66

Jackson River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			14.76

Sources: Industrial Point Source Discharge; Municipal (Urbanized High Density Area); Municipal Point Source Discharges

James River Basin

Cause Group Code: I09R-01-PCB Jackson River

Cause Location: The Jackson River from the Covington water intake downstream to just above the Lowmoor community.

Cause City/County: Alleghany County; Covington

Use(s): Fish Consumption

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

Cause Description: The 2008 Integrated Report (IR) produces the initial 12.63 mile 303(d) Impaired Waters Listing of these waters for not meeting the Fish Consumption Use due to Polychlorinated Biphenyls in fish tissue. A Total Maximum Daily Load study is currently under development for these impairments.

2-JKS023.88 (Covington City Park) 2005 fish tissue collections find exceedances above the former WQS based PCB TV of 54 ppb (VDH 50) from a single species. Two carp are found with tissue values of 66.4 (68.0 cm) and 71.3 ppb (61.31 cm). Application of the new WQS of 20 ppb adds three additional carp sizes (63.9 cm) exceeding at 28.81 ppb, (63.2 cm) at 35.96 and (51-58 cm) at 37.48 ppb.

2-JKS023.61 (near Covington City Park at Gage) reports anecdotal data in support of the fish tissue impairment. The 2020 data window includes 2017 fish tissue collections where Carp exceeds the WQS based PCB TV of 20 ppb from a three fish composite (56.0-66.0 cm) at 29 ppb. One water column PCB sample exceeded the former 640 pg/L criterion at 810 pg/L (9/17/18, wet weather) but when new criterion are retroactively applied during the 2024 data window, there are no excursions. Median is 290 pg/L from 280 pg/L (7/19/17), 300 pg/L (2/8/18), 810 pg/L (9/17/18), and 190 pg/L (12/7/18) and less than the 580 pg/L human health criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I04R_JKS01A00 / Jackson River / Jackson River mainstem from the WestRock (Westvaco) main processing outfall downstream to Dunlap Creek mouth at the watershed boundary with I09R (JU11).	5A	PCBs in Fish Tissue	2008	H	0.48
VAW-I04R_JKS02A00 / Jackson River / Jackson River mainstem from the Covington water intake downstream to Westvaco main processing outfall (JU11).	5A	PCBs in Fish Tissue	2008	H	1.28
VAW-I09R_JKS04A00 / Jackson River / Jackson River mainstem from the Covington STP outfall downstream to just above the Lowmoor community (JU21).	5A	PCBs in Fish Tissue	2008	H	5.92
VAW-I09R_JKS04B14 / Jackson River / Jackson River mainstem from the Potts Creek confluence downstream to the Covington STP outfall (JU21).	5A	PCBs in Fish Tissue	2008	H	0.32
VAW-I09R_JKS05A00 / Jackson River / Jackson River mainstem from downstream of the Fudge's Bridge to the Potts Creek confluence with the Jackson River (JU21).	5A	PCBs in Fish Tissue	2008	H	3.01
VAW-I09R_JKS06A00 / Jackson River / Jackson River mainstem from the watershed boundary (I04R) at the mouth of Dunlap Creek downstream to just below the Lexington Avenue Bridge (JU21).	5A	PCBs in Fish Tissue	2008	H	1.66

Jackson River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			12.67

Sources: Source Unknown

James River Basin

Cause Group Code: I09R-02-BAC Jackson River

Cause Location: Jackson River mainstem from the Covington water intake downstream to just below the Lexington Avenue Bridge.

Cause City/County: Alleghany County; Covington

Use(s): Recreation

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

Cause Description: The original 3.38 mile waters were 1998 303(d) listed for fecal coliform (FC) bacteria and delisted for bacteria October 2005 as approved by the U.S. EPA (Fed. ID - NA) where only one exceedance from 24 observations are reported via the 2006 Integrated Report (IR) for escherichia coli (E. coli) bacteria.

The bacteria impairment returned with the 2008 Integrated Report (IR) based on E. coli excursions at 2-JKS023.61. Data within the 2010 data window results in an additional extension of the impairment from stations 2-JKS018.68 and 2-JKS015.60. The impairment extends a total of 12.63 miles.

2-JKS023.61 (Covington City Park) - The 2022 data window finds one Statistical Threshold Value (STV) exceedance (>410 CFU/100 mL) in one or multiple 90-day periods but insufficient data to analyze geomean from 6 excursions in 42 total samples.

2-JKS018.68 (Rt. 8 Bridge at Covington) The 2022 data window finds E.coli impaired based on 2 or more STV hits in the same 90-day period with < 10 samples from 3 excursions out of 35 samples.

2-JKS015.60 (K-Mart Parking Lot, SE corner) The 2022 data window finds one STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean based on two excursions out of 17 samples.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I04R_JKS01A00 / Jackson River / Jackson River mainstem from the WestRock (Westvaco) main processing outfall downstream to Dunlap Creek mouth at the watershed boundary with I09R (JU11).	5A	Escherichia coli (E. coli)	2008	L	0.48
VAW-I04R_JKS02A00 / Jackson River / Jackson River mainstem from the Covington water intake downstream to Westvaco main processing outfall (JU11).	5A	Escherichia coli (E. coli)	2008	L	1.28
VAW-I09R_JKS04A00 / Jackson River / Jackson River mainstem from the Covington STP outfall downstream to just above the Lowmoor community (JU21).	5A	Escherichia coli (E. coli)	2010	L	5.92
VAW-I09R_JKS04B14 / Jackson River / Jackson River mainstem from the Potts Creek confluence downstream to the Covington STP outfall (JU21).	5A	Escherichia coli (E. coli)	2010	L	0.32
VAW-I09R_JKS05A00 / Jackson River / Jackson River mainstem from downstream of the Fudge's Bridge to the Potts Creek confluence with the Jackson River (JU21).	5A	Escherichia coli (E. coli)	2010	L	3.01
VAW-I09R_JKS06A00 / Jackson River / Jackson River mainstem from the watershed boundary (I04R) at the mouth of Dunlap Creek downstream to just below the Lexington Avenue Bridge (JU21).	5A	Escherichia coli (E. coli)	2008	L	1.66

Jackson River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.67

Sources: Municipal (Urbanized High Density Area); Sanitary Sewer Overflows (Collection System Failures); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: I09R-03-BAC Jackson River

Cause Location: Jackson River mainstem from the US 60 crossing downstream to the Jackson River confluence with the Cowpasture River.

Cause City/County: Alleghany County

Use(s): Recreation

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

Cause Description: The 5.27 mile 2020 303(d) listing of the Jackson River is a result of Escherichia coli data in exceedance of the 235 cfu/100 ml Escherichia coli (E.coli) instantaneous criterion. This section was previously listed (2012 IR) and delisted (2014 IR).

2-JKS000.38 (Rt. 727 Bridge Iron Gate) - The 2022 data window finds insufficient Information due to one Statistical Threshold Value (STV) exceedance in one or multiple 90-day periods but insufficient data to analyze geomean from 3 samples >410 cfu/100 ml out of 35 total samples.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I09R_JKS01A00 / Jackson River / Jackson River mainstem from the Clifton Forge STP outfall downstream to the Jackson River confluence with the Cowpasture River (JU24).	5A	Escherichia coli (E. coli)	2020	L	3.54
VAW-I09R_JKS02A00 / Jackson River / Jackson River mainstem from the US 60 crossing downstream to the Clifton Forge STP outfall (JU24).	5A	Escherichia coli (E. coli)	2020	L	1.74

Jackson River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.28

Sources: Sanitary Sewer Overflows (Collection System Failures); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I09R-04-TEMP Karnes Creek

Cause Location: Karnes Creek from its mouth on Jackson River upstream to its headwaters.

Cause City/County: Alleghany County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: This initial Aquatic Life Use impairment for temperature on Karnes Cr. is based on data collection during the 2022 data window. 2-KAR001.59 (Private bridge off Rt. 616) - Temp 'IM' from two excursions of the Class VI temperature criterion at 21 C (8/5/19) and 22 C (7/15/19).

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I09R_KAR01A00 / Karnes Creek / Karnes Creek mainstem from its mouth on the Jackson River upstream to the beginning of the WQS natural trout water designation (JU22).	5A	Temperature	2022	L	1.41
VAW-I09R_KAR02A02 / Karnes Creek / Karnes Creek mainstem from the WQS designated beginning of natural trout waters upstream to its headwaters (JU22).	5A	Temperature	2022	L	6.68

Karnes Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			8.09

Sources: Source Unknown

James River Basin

Cause Group Code: I11R-01-BAC Potts Creek

Cause Location: Potts Creek mainstem from its confluence on the Jackson River upstream to an unnamed tributary draining Kimberlin Flat; PWS end (JU20).

Cause City/County: Alleghany County

Use(s): Recreation

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

Cause Description: This initial 5.09 mile 2018 303(d) Listing is a result of escherichia coli (E.coli) samples in excess of the WQS 235 cfu/10 ml instantaneous criterion. The Recreational Use is not being met in this section of Potts Creek.

2-POT000.12 (Rt. 18 Bridge near Covington, VA) - The Recreation Use impairment carries during the 2022 data window. One STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I11R_POT01A00 / Potts Creek / Potts Creek mainstem from its confluence on the Jackson River upstream to an unnamed tributary draining Kimberlin Flat; PWS end (JU20).	5A	Escherichia coli (E. coli)	2018	L	5.1

Potts Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.1

Sources: Source Unknown

James River Basin

Cause Group Code: I12R-01-BAC Cowpasture River

Cause Location: Cowpasture River from the headwaters downstream to its confluence with Shaws Fork.

Cause City/County: Bath County; Highland County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station 2-CWP075.64 (two exceendances of 12 samples in 2016; two E.coli STV hits in the same 90-day period with less than 10 samples in 2024). Initial Listing Date: 2016

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I12R_CWP02A10 / Cowpasture River / Cowpasture River from the headwaters downstream to its confluence with Shaws Fork.	5A	Escherichia coli (E. coli)	2016	L	8.31

Cowpasture River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.31

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I13R-01-BAC Bullpasture River

Cause Location: Bullpasture River from the headwaters downstream to just below its confluence with Davis Run.

Cause City/County: Bath County; Highland County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria standard at station 2-BLP015.32 (one E.coli STV exceedance in one or multiple 90-day periods but insufficient data to analyze geomean in 2024). Initial Listing Cycle: 2006.
In 2024 this impaired segment was shortened as the downstream section of the Bullpasture River, just below the confluence with Davis Run downstream to its confluence with the Cowpasture River, was delisted and removed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I13R_BLP02A10 / Bullpasture River / Bullpasture River from the headwaters downstream to just below its confluence with Davis Run.	4A	Escherichia coli (E. coli)	2006	L	11.94

Bullpasture River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.94

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

James River Basin

Cause Group Code: I13R-02-TEMP Bullpasture River

Cause Location: Bullpasture River from the headwaters downstream to just below its confluence with the Davis Run.

Cause City/County: Bath County; Highland County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: This segment is impaired due to exceedances of the temperature WQS at stations: 2-BLP015.32 (3 exceedances of 20 samples in 2012; seven exceedances of 35 samples in 2024). Initial Listing Cycle: 2012

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I13R_BLP02A10 / Bullpasture River / Bullpasture River from the headwaters downstream to just below its confluence with Davis Run.	5A	Temperature	2012	L	11.94

Bullpasture River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			11.94

Sources: Source Unknown

James River Basin

Cause Group Code: I14R-01-BEN Pheasanty Run

Cause Location: Pheasanty Run from the Coursey Springs Fish Farm discharge downstream to its confluence with the Cowpasture River.

Cause City/County: Bath County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to a severely impaired benthic assessment collected in 1998. In order to delist this segment a reference condition for limestone springs must be developed. The segment remains impaired in the current cycle and is included in the EPA approved Trout Farm Watersheds Benthic TMDL. Initial Listing Date: 1998

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I14R_PTY01A00 / Pheasanty Run / Pheasanty Run from the Coursey Springs Fish Farm discharge downstream to its confluence with the Cowpasture River.	4A	Benthic Macroinvertebrates Bioassessments	1998	L	0.42

Pheasanty Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.42

Sources: Aquaculture (Permitted)

James River Basin

Cause Group Code: I14R-04-PH Laurel Run

Cause Location: Laurel Run from the headwaters downstream to its confluence with Dry Run.

Cause City/County: Bath County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to excursions of the pH WQS at station: UVA VT10 in the 2006 cycle (level III data in 2006). In the 2020 cycle level II data collected at the same station had zero excursions of 16 samples but the data quality is insufficient to determine aquatic life use support. No new data was collected in 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I14R_LAA01A02 / Laurel Run / Laurel Run from the headwaters downstream to its confluence with Dry Run.	5A	pH	2006	L	2.04

Laurel Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			2.04

Sources: Atmospheric Deposition - Acidity

James River Basin

Cause Group Code: I15R-01-BAC Stuart Run

Cause Location: Stuart Run from the headwaters downstream to its confluence with the Cowpasture River. (Start Mile: 18.3 End Mile: 0.00 Total Impaired Size: 18.3 Miles)

Cause City/County: Bath County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station 2-STU000.29 (2 exceedances of 12 samples for e-coli) in 2018. Remains Impaired in 2024 with two E.coli STV hits in the same 90-day period with < 10 samples at station 2-STU000.29. Initial Listing Date: 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I15R_STU01A00 / Stuart Run / Stuart Run from the headwaters downstream to its confluence with the Cowpasture River.	5A	Escherichia coli (E. coli)	2018	L	18.31

Stuart Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			18.31

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I16R-01-PH Porters Mill Creek

Cause Location: Porters Mill Creek and headwater tributary from the headwaters downstream to its confluence with Mill Creek. (Start Mile: 4.85 End Mile: 0.00 Total Impaired Size: 4.85 Miles)

Cause City/County: Bath County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to excursions of the pH WQS at station VT15-UVA (10 excursions of 14 samples for pH) in 2010. No new data 2024. Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I16R_XRI01A02 / Porters Mill Creek / Porters Mill Creek and tributary from the headwaters downstream to its confluence with Mill Creek.	5A	pH	2006	L	4.85

Porters Mill Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.85

Sources: Atmospheric Deposition - Acidity

James River Basin

Cause Group Code: I17R-02-PH North Branch Simpson Creek

Cause Location: North Branch Simpson Creek from the headwaters downstream to its confluence with Simpson Creek (JU36).

Cause City/County: Alleghany County

Use(s): Aquatic Life

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

Cause Description: The 3.93 mile extent of North Branch Simpson Creek is 303(d) listed for Aquatic Life Use during the 2022 cycle based on pH data collections. 2-SPO002.00 (Along North Br Trail) - the 2022 data window finds pH 'IM' from two of two excursions of the Class VI Natural Trout Waters pH 6.0 criterion at 4.8 (3/4/20) and 4.0 (6/1/20). Regional Biologist notes: The watershed is 100% national forest and used for hiking and hunting. The low pH (avg. 4.4) appears to be natural as the specific conductance is very low (avg. 12.0) due to low buffering capacity. Total habitat scores averaged 198 and are some of the highest recorded in BRRO.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I17R_SPO01A08 / North Branch Simpson Creek / North Branch Simpson Creek from the headwaters downstream to its confluence with Simpson Creek (JU36).	5C	pH	2022	L	3.94

North Branch Simpson Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.94

Sources: Source Unknown

James River Basin

Cause Group Code: I18R-04-BEN Big Creek

Cause Location: Big Creek from it confluence with the James River upstream to its headwaters (JU37).

Cause City/County: Botetourt County

Use(s): Aquatic Life

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

Cause Description: The initial Big Creek 303(d) Aquatic Life Use Impairment is based on benthic macroinvertebrate community sampling conducted at station 2ABGK002.63 during 2021.

2ABGK002.63 (Downstream of Rt. 696, Buhrman Rd) The 2024 data window finds benthic macroinvertebrate community impairment from two 2021 Virginia Stream Condition Index (VSCI) scores: 63 (Spring) and 54 (Fall). Biologist comments: Both spring and fall samples were dominated by midge larvae indicating a stressed benthic macroinvertebrate community despite the presence of several sensitive mayfly, caddisfly, and stonefly (EPT) taxa. The Spring sample had more diversity and higher numbers of sensitive taxa. This station was sampled as a randomly chosen site in the Probabilistic Monitoring network in 2021. The average VSCI score was 58.5. The watershed appears to be mostly forested land cover but is also impacted by logging. The habitat scores at the station indicated impacts from sediment deposition, eroded and unstable stream banks and lack of a riparian buffer on one side of the channel.

A Total Maximum Daily Load (TMDL) or TMDL alternative has not been completed but will determine stressor(s) to the benthic macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I18R_BGK01A08 / Big Creek / Big Creek from it confluence with the James River upstream to its headwaters (JU37).	5A	Benthic Macroinvertebrates Bioassessments	2024	L	6.11

Big Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.11

Sources: Source Unknown

James River Basin

Cause Group Code: I19R-01-BAC Craig Creek

Cause Location: Craig Creek mainstem from the mouth of Turnpike Creek extending downstream to the Rt. 311 crossing located downstream of the Abbott community.

Cause City/County: Craig County

Use(s): Recreation

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

Cause Description: The 2004 initial Listing basis is three of 27 fecal coliform (FC) samples exceeding the former 400 cfu/100 ml WQS instantaneous criterion. The maximum reported is 1100 cfu/100 ml with the remaining values at 900 and 500. These 2004 7.91 mile 303(d) Listed waters remain impaired for bacteria. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters.

2-CRG062.29- (Rt. 311 Bridge nearest New Castle) No new data since the 2018 data window where nine of 23 E.coli samples exceed the 235 cru/100 ml instantaneous criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I19R_CRG02A02 / Craig Creek / Craig Creek mainstem from downstream of Abbott and the Rt. 311 crossing upstream to the confluence of Trout Creek (JU43).	4A	Escherichia coli (E. coli)	2004	L	6.56
VAW-I19R_CRG02A14 / Craig Creek / Craig Creek mainstem from Trout Creek upstream to the confluence of Turnpike Creek (JU41).	4A	Escherichia coli (E. coli)	2004	L	1.36

Craig Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.92

Sources: Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wildlife Other than Waterfowl

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Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: I21R-01-BAC Johns Creek

Cause Location: Johns Creek mainstem from Simpson Branch downstream to near Lovers Leap near New Castle.

Cause City/County: Craig County

Use(s): Recreation

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

Cause Description: The 2020 assessment cycle 303(d) lists Johns Creek based on Escherichia coli (E.coli) data collected at 2-JOB000.39. The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters (NESTED).

2-JOB000.39 (At New Castle Gage, Rt. 615 Bridge) -Two excursions of the 235 cfu/100 ml instantaneous criterion for E.coli are recorded from 12 observations during the 2020 data window. Exceedances are 313 and 465 cfu/100 ml.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I21R_JOB01A00 / Johns Creek / Johns Creek mainstem from near Lovers Leap upstream of New Castle downstream to its mouth on Craig Creek (JU45).	4A	Escherichia coli (E. coli)	2020	L	2.21

Johns Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.21

Sources: Livestock (Grazing or Feeding Operations); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wet Weather Discharges (Non-Point Source)

James River Basin

Cause Group Code: I21R-02-BAC Johns Creek

Cause Location: Johns Creek mainstem from the confluence of Dicks Creek upstream to the mouth of Eliber Springs Branch Class V.

Cause City/County: Craig County

Use(s): Recreation

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

Cause Description: The 2020 data window lists 4.42 miles of Johns Creek for excursions of the Escherichia coli (E.coli) Water Quality Standard. The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters (NESTED).

2-JOB029.50 (Rt. 632 Bridge) - No additional data during the 2022 cycle. E.coli is listed during the 2020 assessment window from four exceedances of the 235 cfu/100 ml instantaneous criterion out of 12 total samples.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I21R_JOB04A02 / Johns Creek / Johns Creek mainstem from the confluence of Dicks Creek upstream to the mouth of Eliber Springs Branch Class V (JU44).	4A	Escherichia coli (E. coli)	2020	L	4.43

Johns Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.43

Sources: Livestock (Grazing or Feeding Operations); Unspecified Domestic Waste; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: I21R-02-TEMP Johns Creek

Cause Location: Johns Creek mainstem from the confluence of Dicks Creek upstream to the mouth of Eliber Springs Branch Class V.

Cause City/County: Craig County

Use(s): Aquatic Life

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

Cause Description: The 2020 data window includes a 4.42 mile temperature impairment on Johns Creek due to exceedances of the Class V 21 degree Celsius criterion.

2-JOB029.50 (Rt. 632 Bridge) Temperature exceeds the Class V 21 C criterion in three of 12 samples at 22 (6/14/17), 24 (7/17/17), and 23 (8/16/17) during the 2020 data window.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I21R_JOB04A02 / Johns Creek / Johns Creek mainstem from the confluence of Dicks Creek upstream to the mouth of Eliber Springs Branch Class V (JU44).	5C	Temperature	2020	L	4.43

Johns Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			4.43

Sources: Loss of Riparian Habitat; Natural Sources; Rural (Residential Areas)

James River Basin

Cause Group Code: I21R-03-PH Dicks Creek

Cause Location: Dicks Creek mainstem from the confluence of Little Oregon Creek upstream to the confluence of Big and Little Double Creeks (JU44).

Cause City/County: Craig County

Use(s): Aquatic Life

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

Cause Description: The initial pH impairment is found during the 2024 303(d)/305(b) Integrated Report data window based on data collected at the following station 2-DCK003.94 on Dicks Creek. 2-DCK003.94 - pH 'IM' from 2 observations less than the minimum pH criterion of 6.0 SU at 5.3 SU (3/20/21) and 5.4 SU (4/5/21). Specific conductance ranges from 14.8-35.8 uS/cm. Relevant Biologist notes: The watershed is dominated by forest land cover. There are no point sources in the watershed and non-point source pollution appears minimal. The instream habitat is exceptional and riparian vegetation provides good canopy cover and stable stream banks.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I21R_DCK01A06 / Dicks Creek / Dicks Creek mainstem from the confluence of Little Oregon Creek upstream to the confluence of Big and Little Double Creeks (JU44).	5C	pH	2024	L	4.02

Dicks Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.02

Sources: Natural Sources

James River Basin

Cause Group Code: I22R-01-BAC Barbours Creek

Cause Location: Barbours Creek from just downstream of the Rt. 617 and 611 junction at the mouth of Valley Branch on downstream to its mouth on Craig Creek. (New Castle Quad).

Cause City/County: Craig County

Use(s): Recreation

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The 7.15 mile bacteria impairment initially 303(d) Listed in 2004 remains. The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters.

2-BAR000.60- (Rt. 614 Bridge) E.coli exceeds the 235 cfu/100 ml instantaneous criterion in two of 11 samples within the 2018 and 2020 data windows. Excursions are 359 cfu/100 ml and 368 cfu/100 ml. The 2004 IR reports the maximum fecal coliform (FC) of 1100 cfu/100 ml and a second at 500; both exceed the former WQS instantaneous criterion of 400 cfu/100 ml from 18 samples.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I22R_BAR01A00 / Barbours Creek / Barbours Creek from its mouth on Craig Creek upstream to the I23 Watershed Boundary located just downstream of the Rt. 617 and 611 junction at the mouth of Valley Branch JU47.	4A	Fecal Coliform	2004	L	7.16

Barbours Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			7.16

Sources: Livestock (Grazing or Feeding Operations); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste

James River Basin

Cause Group Code: I22R-01-PH Mill Creek

Cause Location: Mill Creek mainstem from ~2.0 miles upstream of its mouth on Craig Creek upstream to its headwaters and above the upstream most pond.

Cause City/County: Craig County

Use(s): Aquatic Life

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

Cause Description: 2-MIU002.97 (Upstream of Upper pond and downstream of former iron mine) Three 2010-2011 observations each of pH are in excess of the WQS acidic minimum criterion of 6.0 Standard Units (SU) at 5.2, 5.4 and 4.4 SU. This is a 2012 initial Listing. There are no additional data and the Aquatic Life Use remains impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I22R_MIU02A02 / Mill Creek / Mill Creek mainstem from ~2.0 miles upstream of its mouth on Craig Creek upstream to its headwaters and above the upstream most pond (JU48).	5A	pH	2012	L	4.24

Mill Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.24

Sources: Mine Tailings

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Appendix 4 - Fact Sheets for
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James River Basin

Cause Group Code: I22R-01-TEMP Barbours Creek

Cause Location: Barbours Creek from its mouth on Craig Creek upstream to the I23 Watershed Boundary located just downstream of the Rt. 617 and 611 junction at the mouth of Valley Branch.

Cause City/County: Craig County

Use(s): Aquatic Life

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

Cause Description: The original 7.15 mile temperature impairment continues with the 2014 Integrated Report (IR). The 2006 IR extended the impairment 6.29 miles (2-BAR010.10 - I23R) from the initial 2002 303(d) Listing (2-BAR000.60 - I22R). The 6.29 mile upstream extension is de-listed with the 2012 Integrated Report with station 2-BAR010.10 recording no exceeding Class VI temperatures of the 20 C WQS criterion from 15 observations.

2-BAR000.60- (Rt. 614 Bridge) 2022 data window adds one more excursion at 21 C (7/27/20).

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I22R_BAR01A00 / Barbours Creek / Barbours Creek from its mouth on Craig Creek upstream to the I23 Watershed Boundary located just downstream of the Rt. 617 and 611 junction at the mouth of Valley Branch JU47.	5C	Temperature	2002	L	7.16

Barbours Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			7.16

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

James River Basin

Cause Group Code: I22R-02-BAC Craig Creek

Cause Location: Craig Creek from an unnamed tributary downstream of Abbott and the Rt. 311 crossing downstream to Barbours Creek confluence with Craig Creek.

Cause City/County: Craig County

Use(s): Recreation

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

Cause Description: The initial bacteria impairment on Craig Creek in this section was 303(d) listed in 2012. During the 2020 data window, the impairment is extended upstream based on data collection at station 2-CRG053.15. The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters.

2-CRG053.15 (Rt 311 Bridge nearest New Castle) - The 2020 data window finds two of 12 samples in exceedance of the 235 cfu/100 ml instantaneous Escherichia coli (E.coli) criterion.

2-CRG048.53 (Below New Castle STP) - Data collection associated with this station ID was actually collected at the following two station locations as described below.

2ACRG049.51 (Rt. 616 Bridge above confluence with Johns Cr.) - There is no new data since E.coli exceedances were found in two of 12 samples within the 2018 data window. Values in excess of the 235 cfu/100 ml instantaneous criterion are 355 and 638 cfu/100 ml.

2ACRG048.20 (Off Rt. 615 below New Castle STP) - Note that this station was historically coded incorrectly as 2-CRG048.53. The 2012 initial 303(d) Listing results from E.coli exceedances from two of 12 samples within the 2012 data window. Values in excess of the 235 cfu/10 ml instantaneous criterion are 320 and 700 cfu/100 ml. A downstream station 2-CRG042.34 (Rt. 614 Bridge) records a single exceedance of greater than 2000 cfu/100 ml from 24 samples within the 2014 data window. The exceedance indicates potential for impairment although not impaired via Guidance.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I19R_CRG01A14 / Craig Creek / Craig Creek mainstem from the confluence of Johns Creek, the watershed boundary, upstream to an unnamed tributary downstream of Abbott and the Route 311 crossing (JU43).	4A	Escherichia coli (E. coli)	2020	L	8.14
VAW-I22R_CRG05A02 / Craig Creek / Craig Creek mainstem from the confluence of Mill Creek upstream to the Barbours Creek mouth (JU48).	4A	Escherichia coli (E. coli)	2012	L	5.38
VAW-I22R_CRG05B14 / Craig Creek / Craig Creek mainstem from the confluence of Barbours Creek upstream to the Johns Creek mouth (JU46).	4A	Escherichia coli (E. coli)	2012	L	6.06

Craig Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			19.58

Sources: Livestock (Grazing or Feeding Operations); Municipal (Urbanized High Density Area); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I22R-03-BEN Crawford Branch

Cause Location: Crawford Branch mainstem from its headwaters downstream to its confluence with Craig Creek

Cause City/County: Botetourt County

Use(s): Aquatic Life

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

Cause Description: A Level 3 US Forest Service site 6570 located approximately 0.19 miles from the Crawford Branch mouth on Craig Creek finds the benthic community impaired. A single 1999 MAIS survey score is 11 (Poor/Fair or moderately impaired); there are no additional data beyond the 2004 Integrated Report (IR). Comments provided by the US Forest Service recommends not listing this site as drought conditions produced results indicating impairment thus Category 4C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I22R_CRD01A04 / Crawford Branch / Crawford Branch headwaters downstream to its mouth on Craig Creek (JU50).	4C	Benthic Macroinvertebrates Bioassessments	NA	NA	1.87

Crawford Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.87

Sources: Drought-related Impacts; Natural Sources

James River Basin

Cause Group Code: I22R-04-BAC Little Patterson Creek

Cause Location: Little Patterson Creek from just upstream of the Rt. 684 (Sugar Tree Hollow Rd.) crossing downstream to its confluence with Patterson Creek.

Cause City/County: Botetourt County

Use(s): Recreation

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

Cause Description: The 2004 Integrated Report (IR) initially 303(d) Lists the 4.24 mile fecal coliform (FC) bacteria impairment. Escherichia coli replaces the fecal coliform impairment with the 2012 IR. The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters.

Station 2-LIP001.00 (Rt. 682 Bridge - Sugartree Hollow Rd.) Seven of 12 escherichia coli (E.coli) samples exceed the 235 cfu/100 ml instantaneous criterion within the 2018 data window.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I22R_LIP01A04 / Little Patterson Creek / Little Patterson Creek from just upstream of the Rt. 684 (Sugar Tree Hollow Rd.) crossing downstream to its confluence with Patterson Creek (JU49).	4A	Escherichia coli (E. coli)	2012	L	4.25

Little Patterson Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.25

Sources: Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I22R-05-BAC Craig Creek

Cause Location: Craig Creek mainstem from the mouth of Wilson Branch downstream to the Craig Creek confluence with the James River.

Cause City/County: Botetourt County

Use(s): Recreation

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

Cause Description: This 2016 303(d) initial Listing is due to impairment of the Recreational Use based on escherichia coli (E.coli) bacteria excursions of the WQS instantaneous criterion. The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters.

2-CRG016.90 (Rt. 817 pull off from Rt. 615) 2018 data window, three of 22 E.coli samples exceed the instantaneous criterion of 235 cfu/100 ml.

2-CRG001.20 (Rt. 818 Bridge) The 2022 data window finds E.coli insufficient from one Statistical Threshold Value (STV) exceedance in one or multiple 90-day periods but insufficient data to analyze geomean based on 1 excursion of the 410 cfu/100 ml STV out of 32 samples.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I22R_CRG01A00 / Craig Creek / Craig Creek mainstem from its mouth on the James River upstream to the mouth of Roaring Run (JU50).	4A	Escherichia coli (E. coli)	2016	L	5.96
VAW-I22R_CRG02A00 / Craig Creek / Craig Creek mainstem from the mouth of Roaring Run upstream to the mouth of Stony Run (JU50).	4A	Escherichia coli (E. coli)	2016	L	6.24
VAW-I22R_CRG02B10 / Craig Creek / Craig Creek from Lemons Branch (Silent Dell community) downstream to the Stony Run confluence (Horton community) near the USGS gaging station (JU48).	4A	Escherichia coli (E. coli)	2016	L	4.68
VAW-I22R_CRG03A14 / Lower Craig Creek / Craig Creek mainstem from Wilson Branch downstream to the Lemons Branch mouth (JU48).	4A	Escherichia coli (E. coli)	2016	L	10.71

Craig Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			27.59

Sources: Livestock (Grazing or Feeding Operations); Loss of Riparian Habitat; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I23R-01-PH Cove Branch

Cause Location: Cove Branch mainstem from its confluence with Barbours Creek upstream to its headwaters (JU47).

Cause City/County: Craig County

Use(s): Aquatic Life

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

Cause Description: This 2018 data window initial pH listing is based on data collection during at station 2-CVA002.15. The benthic macroinvertebrate community was sampled in order to validate initial 2008 data window findings by the U.S. Forest Service and results in a de-list for benthic macroinvertebrate communities within the 2018 data window. The pH measurements collected result in this 6.04 mile listing.

2-CVA002.15 (Cove Branch at Potts Arm Trail Crossing, Craig Co.) - There are no new data since the 2018 data window where four of four pH measurements are below the pH 6.0 SU water quality criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I23R_CVA01A02 / Cove Branch / Cove Branch mainstem from its confluence with Barbours Creek upstream to its headwaters (JU47).	4C	pH	NA	NA	6.04

Cove Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			6.04

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

James River Basin

Cause Group Code: I24R-01-BAC Lapsley Run

Cause Location: Lapsley Run from its confluence with the James River upstream to its headwaters.

Cause City/County: Botetourt County

Use(s): Recreation

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

Cause Description: The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters. Lapsley Run was 303(d) listed in 2016 for the Recreational Use based on Escherichia coli (E.coli) data collection.

2-LAP001.20 (Rt. 726 Bridge) One E.coli sample collected during the 2022 data window finds E.coli insufficient due to no Statistical Threshold Value (STV) exceedances but insufficient data to analyze geomean.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I24R_LAP01A08 / Lapsley Run / Lapsley Run from its confluence with the James River upstream to its headwaters (JU51).	4A	Escherichia coli (E. coli)	2008	L	9.01

Lapsley Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.01

Sources: Livestock (Grazing or Feeding Operations); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste

James River Basin

Cause Group Code: I25R-01-BAC Catawba Creek

Cause Location: Catawba Creek from the confluence of Buchanan Branch downstream to the mouth on the James River (JU53) .

Cause City/County: Botetourt County

Use(s): Recreation

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

Cause Description: The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters. Three Catawba Creek stations find non-supporting fecal coliform (FC) bacteria results through the 2008 - 2012 data windows. In previous cycles, two of the stations below (2-CAT000.34 & 2-CAT023.83) have sufficient escherichia coli (E.coli) data to assess. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters]. This impaired segment is extended downstream to the mouth of Catawba Creek based on collections at 2-CAT000.34. The 2018 data window extended the E.coli impairment upstream 3.23 miles.

2014 E.coli data are sufficient to partially delist the lower portion of Catawba Creek from the Town of Fincastle POTW downstream to the confluence of Catawba Creek with the James River (11.71 miles). Station 2-CAT000.34 (Bridge near Salisbury Furnace) records two of 24 E.coli samples exceeding the WQS instantaneous criterion with a exceedance rate of 8.30%. The remaining waters exhibit impairment for the Recreational Use.

The original 2002 FC bacteria impairment was extended both upstream and downstream with the 2004 assessment. The extension downstream is from the Fincastle POTW to the Catawba Creek confluence with the James River (11.71 miles); now delisted. The upstream extension is from the confluence of Little Catawba Creek downstream to the Roanoke Cement outfalls on Catawba Creek (0.81 miles). The original 2002 11.87 mile impairment began at the Roanoke Cement Co. water intake on Catawba Creek extending downstream to the Town Branch confluence with Catawba Creek.

2-CAT027.64 (Hogan Hollow Rd.) - The 2018 IR finds 13 of 17 Escherichia coli samples in excess of the 235 cfu/100 ml instantaneous criterion.

2-CAT023.83- (Rt. 779 Bridge near Gage) 2022 data window find E.coli insufficient. Nine E.coli samples exceed the 235 cfu/100 ml instantaneous criterion within the 2018 data window.

2-CAT014.63- (Rt. 606 Bridge, Botetourt Co.) The 2008 IR finds FC exceeds the former WQS criterion in four of 14 observations with additional data through May 2003.

2-CAT000.34 (Bridge near Salisbury Furnace, Botetourt Co.) The 2020 assessment cycle finds two of 12 E.coli samples in exceedance of the 235 cfu/100 ml instantaneous criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I25R_CAT01A00 / Catawba Creek / Catawba Creek mainstem from Slate Branch downstream to its mouth on the James River (JU53).	4A	Escherichia coli (E. coli)	2020	L	7.48
VAW-I25R_CAT02A00 / Catawba Creek / Catawba Creek mainstem from the Town of Fincastle POTW downstream to the mouth of Slate Branch (JU53).	4A	Escherichia coli (E. coli)	2020	L	4.24
VAW-I25R_CAT03A00 / Catawba Creek / Catawba Creek mainstem from the mouth of Lees Creek downstream to the Town of Fincastle POTW (JU53).	4A	Escherichia coli (E. coli)	2010	L	6.66

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I25R_CAT03A14 / Catawba Creek / Catawba Creek mainstem from the mouth of Stone Coal Creek downstream to the Lees Creek confluence (JU52).	4A	Escherichia coli (E. coli)	2010	L	4.26
VAW-I25R_CAT03B04 / Catawba Creek / Catawba Creek from the Roanoke Cement intake downstream to the mouth of Stone Coal Creek (JU52).	4A	Escherichia coli (E. coli)	2010	L	1.42
VAW-I25R_CAT04A04 / Catawba Creek / Catawba Creek from the Roanoke Cement Outfalls downstream to the Roanoke Cement Intake (JU52).	4A	Escherichia coli (E. coli)	2010	L	0.33
VAW-I25R_CAT04B04 / Catawba Creek / Catawba Creek from the mouth of Little Catawba Creek downstream to the Roanoke Cement outfalls (JU52).	4A	Escherichia coli (E. coli)	2010	L	0.81
VAW-I25R_CAT04C04 / Catawba Creek / Catawba Creek from the Roanoke intake downstream to the mouth of Little Catawba Creek (JU52).	4A	Escherichia coli (E. coli)	2018	L	2.07
VAW-I25R_CAT04D12 / Catawba Creek / Catawba Creek mainstem from Buchanan Branch downstream to the Roanoke intake; public water supply (PWS) designation (JU52).	4A	Escherichia coli (E. coli)	2018	L	1.16

Catawba Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			28.43

Sources: Livestock (Grazing or Feeding Operations); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wet Weather Discharges (Non-Point Source); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I25R-01-BEN Catawba Creek

Cause Location: Catawba Creek from Buchanan Branch downstream to the mouth of Little Catawba Creek (JU52).

Cause City/County: Botetourt County

Use(s): Aquatic Life

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

Cause Description: The impaired waters were partially delisted for 9.16 miles with the 2012 assessment; 3.23 miles remain impaired. The James River and Tributaries, Botetourt and Craig Counties Benthic (Sediment) TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Aquatic Life Use impaired waters.

These remaining waters were considered for delist with additional macroinvertebrate data collection. Both upstream (2-CAT028.98) and downstream (2-CAT025.14) sites indicate non-impaired conditions. Additional sites were sampled (2-CAT026.29 & 2-CAT027.64) within the 2018 data window indicating Aquatic Life Use impairment. A Total Maximum Daily Load study was initiated in 2017 to address the Recreational and Aquatic Life Use impairments.

2-CAT027.64 (Hogan Hollow Rd. (Rt. 737) Botetourt Co.) Benthic macroinvertebrate community impairment is based on two 2017 Virginia Stream Condition Index (VSCI) scores: 64.3 (Spring) and 53.4 (Fall); and two 2016 VSCI scores: Spring 54.4, Fall 61.3. Biologist notes: This station was surveyed as a follow up monitoring station to previous Probabilistic Monitoring and for TMDL development. The VSCI scores indicate that the benthic assemblage in this reach of Catawba Creek is most negatively affected by water quality in the spring.

2-CAT026.55 (Off Rt. 779 North of Catawba) This 2008 initial 303(d) Listing for General Standard (Benthic) impairment is based on two 2003 VSCI surveys scoring spring 36.4 and fall 56.9. More taxa including a higher percentage of mayflies were collected in the fall sample. Also, fewer midge larvae (Chironomidae) were present in the fall sample helping to improve the benthic community score. The land use adjacent to and immediately upstream of the station is open pasture. The riparian zone is impacted by the pastures and bank erosion due to cattle access as well as poor bank vegetative protection.

2-CAT026.29 (Off Rt. 779 upstream of Haymaker Br) This station was established as part of the 2016 Probabilistic monitoring network. The 2018 data window finds Aquatic Life use impaired from two 2016 VSCI scores: Spring 57.7, Fall 55.5. The average VSCI score at this station was 56.59. The benthic assemblage in this reach of Catawba Creek has a mix of macroinvertebrates that are both tolerant and sensitive to pollution but is dominated by tolerant taxa.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I25R_CAT04C04 / Catawba Creek / Catawba Creek from the Roanoke intake downstream to the mouth of Little Catawba Creek (JU52).	4A	Benthic Macroinvertebrates Bioassessments	2008	L	2.07
VAW-I25R_CAT04D12 / Catawba Creek / Catawba Creek mainstem from Buchanan Branch downstream to the Roanoke intake; public water supply (PWS) designation (JU52).	4A	Benthic Macroinvertebrates Bioassessments	2008	L	1.16

Catawba Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.23

Sources: Clean Sediments; Crop Production (Crop Land or Dry Land); Livestock (Grazing or Feeding Operations); Loss of Riparian Habitat; Non-Point Source; Post-development Erosion and Sedimentation; Silviculture Harvesting

James River Basin

Cause Group Code: I25R-02-BAC Haymaker Branch

Cause Location: Haymaker Branch mainstem from its confluence with Catawba Creek upstream to its headwaters. This drainage lies wholly within the WQS public water supply (PWS) designation (JU52).

Cause City/County: Botetourt County

Use(s): Recreation

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

Cause Description: The 2020 data window finds the initial Recreational Use listing for Haymaker Branch. The James River and Tributaries, Botetourt and Craig Counties Bacteria TMDL is EPA approved 7/12/19 and SWCB approved 6/27/19 and addresses these Recreational Use impaired waters (NESTED 2022 cycle).

2-HAM000.37 (Along Rhodes Ln. [Rt. 663]) - The 2022 data window adds a datapoint and applies the new E.coli criterion to find impairment due to 2 or more Statistical Threshold Value (STV) hits in the same 90-day period with < 10 samples.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I25R_HAM01A02 / Haymaker Branch / Haymaker Branch mainstem from its confluence with Catawba Creek upstream to its headwaters. This drainage lies wholly within the WQS public water supply (PWS) designation (JU52).	4A	Escherichia coli (E. coli)	2020	L	1.37

Haymaker Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.37

Sources: Livestock (Grazing or Feeding Operations); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste

James River Basin

Cause Group Code: I26R-01-BAC Looney Creek Drainage

Cause Location: The Looney Creek portion of the overall impairment begins at the confluence of Mill and Back Creek (37.498181 / -79.727131) on Looney Creek northeast of Lithia, Virginia, (Montvale Quad) at river mile 2.48. The original 1998 impairment (2.48 miles) ends at the mouth of Looney Creek on the James River. Note: Bacteria collections on Mill Creek (8.29 miles) and Ellis Run (1.60 miles) cause expansion of the original 1998 impairment to include portions of the aforementioned creeks for a total of 12.37 miles. The TMDL Study encompassed these additional drainages and are described in a separate Fact Sheet (I26R-02-BAC).

Cause City/County: Botetourt County

Use(s): Recreation

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

Cause Description: The Looney Creek Bacteria TMDL Load Duration Study is U.S. EPA approved on 06/21/04 [Fed ID: 20103] and SWCB approved 12/02/04 (formerly VAW-I26R-01). The TMDL Implementation Plan is SWCB approved 4/28/09. Fecal coliform (FC) bacteria exceedances cause the original 1998 2.66 mile Recreational Use impairment in Looney Creek.

2-LMC000.40 (Rt. 625 Bridge) The 2022 data window finds E.coli Insufficient from one STV exceedance in one or multiple 90-day periods; insufficient data to analyze geomean.

In conducting the TMDL Study two tributary streams within the watershed find the Recreational Use impaired for bacteria (E.coli) as well (2004 Assessment-fecal coliform). Nested bacteria impairments on Ellis Run and Mill Creek are described in a separate fact sheet (I26R-02-BAC).

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I26R_LMC01A00 / Looney Creek / Looney Creek mainstem from the confluence of Mill and Back Creeks downstream to its mouth on the James River (JU55).	4A	Escherichia coli (E. coli)	1998	L	2.66

Looney Creek Drainage

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

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

James River Basin

Cause Group Code: I26R-01-BEN Mill Creek, UT (XUL)

Cause Location: Mill Creek, UT (XUL) from just downstream of the Rt. 11 crossing upstream to its headwaters.

Cause City/County: Botetourt County

Use(s): Aquatic Life

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

Cause Description: The 2010 data window finds the initial 303(d) listing on the Unnamed Tributary to Mill Creek (XUL) from benthic macroinvertebrate community data collected in 2008.

2-XUL001.67 (Downstream of Rt. 799 (Ammen Rd.) crossing) There are no additional data beyond the 2016 and 2018 data windows which include more recent Virginia Stream Condition Index (VSCI) surveys (2013-14) with an average score of 55.2. Biologist notes: Initial impairment listing is due to two 2008 VSCI surveys of 33.9 (spring sample) and 50.9 (fall sample). This is a small second order tributary to Mill Creek. The average Virginia Stream Condition Index (VSCI) score for all samples was 42.4 indicating a benthic community with many organisms that are tolerant of pollution. Biologist notes that habitat scores indicate a stream reach with badly eroded stream banks, poor vegetative protection on the banks and in the riparian zone and excessive deposits of sand and fine sediment on the stream bottom.

Anecdotal Information: 1-XUL000.10 (Upstream of Rt. 11) Ten out of 10 specific conductance observations are considered high probability of stress to aquatic life. Biologist notes: This station was surveyed as follow up to a probmon station (2-XUL001.67) sampled in 2008. The average VSCI score for this assessment cycle is 60.6 which is above the VSCI impairment threshold value of 60. Spring VSCI scores are improving compared to historical data. VSCI scores improved due to higher abundances of mayflies such as Maccaffertium and a decrease in abundances of tolerant midge (Chironomidae) taxa.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I26R_XUL01A10 / Mill Creek, UT (XUL) / Mill Creek, UT (XUL) from just downstream of the Rt. 11 crossing upstream to its headwaters (JU55).	5A	Benthic Macroinvertebrates Bioassessments	2010	L	5.37

Mill Creek, UT (XUL)

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.37

Sources: Livestock (Grazing or Feeding Operations); Loss of Riparian Habitat; Wet Weather Discharges (Non-Point Source)

James River Basin

Cause Group Code: I26R-02-BAC Ellis Run and Mill Creek

Cause Location: Ellis Run mainstem from the Rt. 645 crossing downstream to its confluence with Back Creek (1.60 miles). And Mill Creek mainstem (8.29 miles) from just downstream of the Rt. 11 crossing on downstream to the Mill Creek confluence with Back Creek.

Cause City/County: Botetourt County

Use(s): Recreation

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

Cause Description: The Looney Creek Bacteria TMDL Load Duration Study is U.S. EPA approved on 06/21/04 [Fed ID: 20103] and SWCB approval on 12/02/04 (formerly VAW-I26R-01). The TMDL Implementation Plan received SWCB approval 4/28/2009. Fecal coliform (FC) bacteria exceedances cause the original 1998 2.48 mile recreational use impairment in Looney Creek. Additional sample collection associated with TMDL development finds recreational impairment on Ellis Run and Mill Creeks. These bacteria impairments were not specifically addressed by the approved TMDL but are nested within the overall TMDL Watershed. Allocation scenario development is for the entire drainage to provide pollutant reductions for all watersheds contributing to the bacteria impairment. The entirety of the approved TMDL and allocations can be viewed at http://www.deq.virginia.gov.

Ellis Run (1.69 miles) and Mill Creek (8.89 miles), tributaries to Back Creek and Looney Creek, originally listed in 2004 for fecal coliform (FC) bacteria remain impaired for the Recreational Use with escherichia coli (E.coli) replacing fecal coliform.

2-ELS000.08- (Rt. 643 Bridge) The 2018 Integrated Report (IR) finds five of 18 E.coli samples exceeded the instantaneous criterion.

2-MIA000.79- (Junction of Routes 11 & 722) The 2018 Integrated Report (IR) finds three of 18 E.coli samples exceed the 235 cfu/100 ml instantaneous criterion.

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I26R_ELS01A02 / Ellis Run / Ellis Run mainstem from the Rt. 645 crossing downstream to its confluence with Back Creek (JU55).	4A	Escherichia coli (E. coli)	2004	L	1.69
VAW-I26R_MIA01A04 / Mill Creek / Mill Creek mainstem from just downstream of the Rt. 11 crossing on downstream to the Mill Creek confluence with Back Creek (JU55).	4A	Escherichia coli (E. coli)	2004	L	8.90

Ellis Run and Mill Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.59

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

James River Basin

Cause Group Code: I27R-02-HG James River

Cause Location: James River from the Jennings Creek mouth downstream to its confluence with Cedar Creek.

Cause City/County: Botetourt County; Rockbridge County

Use(s): Fish Consumption

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

Cause Description: The 2022 data window finds the initial 303(d) Impaired Waters listing for this section of the James River for Mercury (Hg) in fish tissue. 2-JMS298.70 (near Alpine Landing above Natural Bridge Station)- Exceedance of the Mercury (Hg) WQS based tissue value (TV) of 0.3 ppm is found in one species from the 2019 collections: Carp (3 fish) at 0.31 ppm. The 2020 IR records one exceedance of the Mercury (Hg) WQS based tissue value (TV) of 0.3 ppm from one species during 2017 collections: Flathead Catfish (1 fish) at 0.36 ppm.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I27R_JMS01A00 / James River / James River from the Jennings Creek mouth downstream to the confluence of Big Hollow Branch (JU58).	5A	Mercury in Fish Tissue	2022	L	7.98
VAW-I28R_JMS01A08 / James River / James River from its confluence with Big Hollow Branch downstream to its confluence with Cedar Creek (JU58).	5A	Mercury in Fish Tissue	2022	L	1.55

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			9.53

Sources: Source Unknown

James River Basin

Cause Group Code: I27R-02-PCB James River

Cause Location: James River mainstem near Iron Gate (at the confluence of Jackson River and Cowpasture River) downstream to Balcony Falls Dam (historically located at 37.623, -79.444) near the Maury River.

Cause City/County: Botetourt County; Rockbridge County

Use(s): Fish Consumption

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

Cause Description: The 2022 data window extends the James River PCB in fish tissue impairment from the initial 2020 data window 303(d) Impaired Waters Listing based on fish tissue data collection and a 2020 VDH fish consumption advisory. The initial 2020 fish tissue listing included a 9.52 mile segment of the James River (from the Jennings Creek mouth downstream to its confluence with Cedar Creek) and was based on data collected in 2017. The updated fish tissue 303(d) Impaired Waters listing is 59.3 miles in length and extends the listing both upstream and downstream from the initial 2020 303(d) listing.

2020 VDH Fish Consumption Advisory for Upper James River from the head of the James near Iron Gate (at the confluence of Jackson River and Cowpasture River) to Balcony Falls Dam downstream of Glasgow (near the Maury River); Carp: no more than 2 meals / month.

2-JMS345.73 (Route 220- 1st Bridge below Cowpasture) 2019 collections resulted in one species analyzed for PCBs. Carp exceeds DEQ's screening value of 18 ppb at the following concentrations: 39.75 ppb (3 fish composite [70.7-81.7 cm]), 61.60 ppb (3 fish composite [75.7-90.1 cm]), 191.10 ppb (3 fish composite [85.0-90.2 cm]), and 62.80 ppb (3 fish composite [76.8-81.9 cm]). One of the samples (Carp) exceeds the VDH "Lower" level of concern of 100 ppb.

2-JMS298.70 (near Alpine Landing above Natural Bridge Station) There is no new data collected since the 2020 data window which resulted in PCB in fish tissue impairment based on 2017 collections. Three species analyzed for PCBs: Carp exceeded WQS TV of 20 ppb and VDH "lower" level of concern of 100 ppb from a 3 fish composite [74.6-80.0 cm]) at 101.805 ppb and 3 fish composite [77.3-79.5 cm]) at 170.358 ppb. Flathead Catfish exceeds WQS TV of 20 ppb from 1 fish [96 cm]) at 32.705 ppb. Remaining species analyzed was Smallmouth Bass (6 fish composite [32.3-41.2 cm]) at 0.00 ppb).

Historical information can be found in previous IR Factsheets.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I28R_JMS01A00 / James River / James River from its confluence with Cedar Creek downstream to its confluence with the Maury River.	5A	PCBs in Fish Tissue	2022	L	6.73
VAW-I18R_JMS01A00 / James River / James River mainstem from the confluence of Craig Creek upstream to the confluence of Stull Run (JU40).	5A	PCBs in Fish Tissue	2022	H	7.77
VAW-I18R_JMS02A00 / James River / James River mainstem from the confluence of Stull Run upstream to the confluence of the Jackson and Cowpasture Rivers (JU37).	5A	PCBs in Fish Tissue	2022	H	7.63
VAW-I24R_JMS01A00 / James River / James River mainstem from the Craig Creek mouth downstream to the Catawba Creek mouth (JU51).	5A	PCBs in Fish Tissue	2022	H	5.11
VAW-I24R_JMS01A10 / James River / James River from the Catawba Creek confluence downstream to the mouth of Looney Creek (JU54).	5A	PCBs in Fish Tissue	2022	H	15.40

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAW-I27R_JMS01A00 / James River / James River from the Jennings Creek mouth downstream to the confluence of Big Hollow Branch (JU58).	5A	PCBs in Fish Tissue	2020	H	7.98
VAW-I27R_JMS02A14 / James River / James River from the Looney Cr. mouth downstream to the confluence of Jennings Creek (JU56).	5A	PCBs in Fish Tissue	2022	H	7.15
VAW-I28R_JMS01A08 / James River / James River from its confluence with Big Hollow Branch downstream to its confluence with Cedar Creek (JU58).	5A	PCBs in Fish Tissue	2020	H	1.55

James River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			59.32

Sources: Source Unknown

James River Basin

Cause Group Code: I28R-01-BAC Cedar Creek

Cause Location: Cedar Creek from the headwaters downstream to its confluence with the James River.

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due exceedances of the e-coli WQS at station: 2-CEC003.60 (2 exceedances of 6 samples in 2010, 15 exceedences of 36 samples in 2020, no new data 2024). Additional impaired data collected at 2-CEC000.04 (2 or more STV hits in the same 90-day period with < 10 samples in 2024). Initial Listing Date: 2002 (fecal coliform)/ 2010 (E.coli). This impairment is included in the EPA approved Cedar Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I28R_CEC01A00 / Cedar Creek / Cedar Creek from a point 6.4 miles upstream of the James River downstream to its confluence with the James River.	4A	Escherichia coli (E. coli)	2010	L	6.88
VAV-I28R_CEC02A10 / Cedar Creek / Cedar Creek from the headwaters downstream to a point 6.4 miles upstream of the James River.	4A	Escherichia coli (E. coli)	2010	L	5.23

Cedar Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.11

Sources: Agriculture; Crop Production (Crop Land or Dry Land); Livestock (Grazing or Feeding Operations); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Rural (Residential Areas); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I28R-02-BAC Elk Creek

Cause Location: Elk Creek from the headwaters downstream to its confluence with the James River. (Start Mile: 4.00 End Mile: 0.00 Total Impaired Size: 4.00 Miles)

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: Elk Creek is impaired due to exceedances of the Escherichia coli (E.coli) WQS at station: 2-ELK001.37 (2 exceedances of 10 samples in 2014, no new data 2024). Initial Listing Date: 2014

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I28R_ELK01A00 / Elk Creek / Elk Creek from a point .6 miles upstream of the James River downstream to its confluence with the James River.	5A	Escherichia coli (E. coli)	2014	L	0.70
VAV-I28R_ELK02A10 / Elk Creek / Elk Creek from a point just upstream of the confluence with the East Fork Elk Creek downstream to a point .6 miles upstream of its confluence with the James River.	5A	Escherichia coli (E. coli)	2014	L	1.39
VAV-I28R_ELK03A10 / Elk Creek / Elk Creek from a point 3.1 miles upstream of the James River downstream to a point just upstream of its confluence with the East Fork Elk Creek.	5A	Escherichia coli (E. coli)	2014	L	1.42
VAV-I28R_ELK04A10 / Elk Creek / Elk Creek from its confluence with Hopper Creek downstream to a point 3.1 miles upstream of the James River.	5A	Escherichia coli (E. coli)	2014	L	0.48

Elk Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.99

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I29R-01-TEMP Ramseys Draft

Cause Location: Ramseys Draft from the headwaters downstream to its confluence with the Calfpasture River.

Cause City/County: Augusta County

Use(s): Aquatic Life

Causes(s)/VA Category: Temperature/5A

Cause Description: This segment is impaired due to exceedances of the temperature WQS at station: 2-RAM000.26 (two exceedances of 12 samples in 2016, two exceedances of 17 samples in 2022, no new data 2024). Initial Listing Date: 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I29R_RAM01A00 / Ramseys Draft / Ramseys Draft from the headwaters downstream to its confluence with the Calfpasture River.	5A	Temperature	2016	L	10.29

Ramseys Draft

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			10.29

Sources: Source Unknown

James River Basin

Cause Group Code: I30R-01-BAC Calfpasture River

Cause Location: Calfpasture River from its confluence with Tizzle Branch downstream to its confluence with Hamilton Branch.

Cause City/County: Augusta County; Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-CFP024.20 (Two E.coli STV hits in the same 90-day period with < 10 samples in 2024). Impairment Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I30R_CFP03A10 / Calfpasture River / Calfpasture River from its confluence with Tizzle Branch downstream to its confluence with Hamilton Branch.	5A	Escherichia coli (E. coli)	2006	L	2.84

Calfpasture River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.84

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I30R-03-BAC Hamilton Branch

Cause Location: Hamilton Branch from the headwaters downstream to its confluence with the Calfpasture River.

Cause City/County: Augusta County; Bath County; Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station 2AHAM000.02 (8 exceedances of 12 samples in 2016, no new data 2024). Initial Listing Date: 2016

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I30R_HAM01A16 / Hamilton Branch / Hamilton Branch from the headwaters downstream to its confluence with the Calfpasture River.	5A	Escherichia coli (E. coli)	2016	L	6.29

Hamilton Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.29

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I30R-03-PH Piney Branch

Cause Location: Piney Branch from the headwaters downstream to its confluence with Guys Run.

Cause City/County: Rockbridge County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to excursions of the pH WQS at station: UVA RB08. Last samples (12 excursions of 12 samples in 2010, no new data 2024). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I30R_XPI01A06 / Piney Branch / Piney Branch from the headwaters downstream to its confluence with Guys Run.	5A	pH	2006	L	2.33

Piney Branch

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

Sources: Atmospheric Deposition - Acidity

James River Basin

Cause Group Code: I30R-04-BAC Calfpasture River

Cause Location: Calfpasture River from its confluence with Mill Creek at Goshen downstream to its confluence with the Little Calfpasture River.

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment of the Calfpasture River is impaired for recreation use based on E.coli data collected at DEQ station 2-CFP001.18: two E.coli STV exceedances in the same 90-day period represented by 10+ samples, no geomean exceedances. Impairment Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I30R_CFP01A00 / Calfpasture River / Calfpasture River from its confluence with Mill Creek at Goshen downstream to its confluence with the Little Calfpasture River.	5A	Escherichia coli (E. coli)	2024	L	4.54

Calfpasture River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.54

Sources: Agriculture; Non-Point Source; Source Unknown; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I32R-01-BEN Wallace Mill Stream

Cause Location: Wallace Mill Stream from the Laurel Hill Trout Farm (formerly Castaline Trout) discharge downstream to its confluence with the Little Calfpasture River.

Cause City/County: Augusta County

Use(s): Aquatic Life

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

Cause Description: This segment remains impaired due to due moderately and severely impaired benthic assessments in 1998. No additional benthic surveys have been completed. Initial Listing Date: 1998; This segment is included in the EPA approved Trout Farm Watersheds TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I32R_XMO01A00 / Wallace Mill Stream / Wallace Mill Stream from the Laurel Hill Trout Farm (formerly Castaline Trout Farm) discharge downstream to its confluence with the Little Calfpasture River.	4A	Benthic Macroinvertebrates Bioassessments	1998	L	0.88

Wallace Mill Stream

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.88

Sources: Aquaculture (Permitted)

James River Basin

Cause Group Code: I32R-02-BEN Little Calfpasture River

Cause Location: Little Calfpasture River from the Lake Merriweather Dam downstream to its confluence with the Calfpasture River.

Cause City/County: Rockbridge County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-LCF000.02. Remains impaired at station 2-LCF000.02 in the 2024 cycle. Initial Listing Date: 1996. This impairment is included in the Little Calfpasture River Benthic TMDL, approved by the EPA in 2010. An Implementation Plan to reduce sediment was completed in June 2018. The TMDL and Implementation Plan documents are located on the DEQ website.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I32R_LCF01A00 / Little Calfpasture River / Little Calfpasture River from the Lake Merriweather Dam downstream to its confluence with the Calfpasture River.	4A	Benthic Macroinvertebrates Bioassessments	1996	L	0.81

Little Calfpasture River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			0.81

Sources: Upstream Impoundments

James River Basin

Cause Group Code: I32R-03-BAC Little Calfpasture River

Cause Location: Little Calfpasture River from the headwaters downstream to its confluence with Smith Creek.

Cause City/County: Augusta County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station 2-LCF013.93 (2 exceedances of 12 samples in 2010, no new data in 2024). Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I32R_LCF03A00 / Little Calfpasture River / Little Calfpasture River from a point 17.2 miles upstream of the Maury River downstream to its confluence with Smith Creek.	5A	Escherichia coli (E. coli)	2004	L	5.33
VAV-I32R_LCF04A10 / Little Calfpasture River / Little Calfpasture River from the headwaters downstream to a point 17.2 miles upstream of the Maury River.	5A	Escherichia coli (E. coli)	2010	L	7.03

Little Calfpasture River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.36

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: I32R-04-BAC Smith Creek

Cause Location: Smith Creek from the headwaters downstream to its confluence with the Little Calfpasture River.

Cause City/County: Augusta County

Use(s): Recreation

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

Cause Description: Smith Creek is impaired due to exceedances of the E.coli bacteria WQS at station 2-SMI000.22 (2024 cycle: 2 or more STV hits in the same 90-day period with less than 10 samples, impaired recreation use) Initial Listing Date: 2024.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I32R_SMI01A04 / Smith Creek / Smith Creek from the headwaters downstream to its confluence with the Little Calfpasture River.	5A	Escherichia coli (E. coli)	2024	L	5.77

Smith Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.77

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: I33R-01-BAC Cedar Grove Branch

Cause Location: Cedar Grove Branch from the headwaters downstream to its confluence with the Maury River.

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-CGB001.80 (7 exceedances of 18 samples in 2008, no new data in 2024). Initial Listing Date: 2004 (fecal coliform)/ 2008 (E.coli). This segment is included in the EPA approved Maury River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I33R_CGB01A00 / Cedar Grove Branch / Cedar Grove Branch from the headwaters downstream to its confluence with the Maury River.	4A	Escherichia coli (E. coli)	2008	L	4.62

Cedar Grove Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.62

Sources: Agriculture; Crop Production (Crop Land or Dry Land); Livestock (Grazing or Feeding Operations); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Rural (Residential Areas); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I33R-02-BAC Maury River

Cause Location: Maury River from its confluence with the Calfpasture River/Little Calfpasture River downstream to its confluence with Kerrs Creek. Impairment length increased in 2024 with the addition of the Maury River headwaters segment.

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-MRY029.32 (3 exceedances of 12 samples for e-coli in 2020, no new data 2024) and 2-MRY038.29 (two E.coli STV exceedances in the same 90-day period represented by 10+ samples in 2024). Initial Listing Date 2020. This impairment is included in the EPA approved Maury River, Cedar Creek, and tributaries Bacteria TMDL as a nested segment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I33R_MRY01A00 / Maury River / Maury River from the 5 mile upper limit of the PWS designation for the Lexington raw water intake downstream to its confluence with Kerrs Creek.	4A	Escherichia coli (E. coli)	2020	L	3.63
VAV-I33R_MRY01B10 / Maury River / Maury River from its confluence with Hays Creek downstream to the 5 mile upper limit of the PWS designation for the Lexington raw water intake.	4A	Escherichia coli (E. coli)	2020	L	9.36
VAV-I33R_MRY02A04 / Maury River / Maury River from its confluence with the Calfpasture River/Little Calfpasture River downstream to its confluence with Hays Creek.	4A	Escherichia coli (E. coli)	2024	L	6.23

Maury River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			19.22

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unrestricted Cattle Access; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I33R-03-BAC Kerrs Creek

Cause Location: Kerrs Creek from the headwaters downstream to its confluence with the Maury River.

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at stations: 2-KRR001.54 (4 exceedances of 12 samples in 2012, no new data 2024). Additional impaired data collected at 2-KRR008.16 (2 exceedances of 6 samples for e-coli in 2012). Initial Listing Date: 2012. This segment is included in the EPA approved Maury River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I33R_KRR01A00 / Kerrs Creek / Kerrs Creek from the 5 mile upper limit of the PWS designation for the Maury Service Authority Public Water Intake downstream to its confluence with the Maury River.	4A	Escherichia coli (E. coli)	2012	L	3.04
VAV-I33R_KRR02A00 / Kerrs Creek / Kerrs Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Maury Service Authority Public Water Intake.	4A	Escherichia coli (E. coli)	2012	L	8.83

Kerrs Creek

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

Sources: Agriculture; Crop Production (Crop Land or Dry Land); Livestock (Grazing or Feeding Operations); Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Rural (Residential Areas); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I34R-01-BAC Hays Creek/Moffatts Creek

Cause Location: Moffatts Creek from the headwaters downstream to its confluence with Hays Creek; Hays Creek from its confluence with Moffatts Creek downstream to its confluence with the Maury River

Cause City/County: Augusta County; Rockbridge County

Use(s): Recreation

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

Cause Description: These segments are impaired due to exceedances of the E.coli bacteria WQS at station: 2-HYS001.41 (7 exceedances of 18 samples in 2008, two or more E.coli STV hits in the same 90-day period with less than 10 samples in 2024). Initial Listing Date: 2004 (fecal coliform)/ 2008 (E.coli). This segment is included in the EPA approved Hays/Moffatts Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I34R_HYS01A00 / Hays Creek / Hays Creek from Brownsburg downstream to its confluence with the Maury River.	4A	Escherichia coli (E. coli)	2008	L	10.03
VAV-I34R_HYS02A10 / Hays Creek / Hays Creek from its confluence with Moffatts Creek downstream to Brownsburg.	4A	Escherichia coli (E. coli)	2008	L	1.92
VAV-I34R_MFT01A00 / Moffatts Creek / Moffatts Creek from the headwaters downstream to its confluence with Hays Creek.	4A	Escherichia coli (E. coli)	2008	L	8.85

Hays Creek/Moffatts Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			20.8

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

James River Basin

Cause Group Code: I34R-03-BAC Walker Creek

Cause Location: Walker Creek and tributaries from the headwaters downstream to its confluence with Dutch Hollow Branch.

Cause City/County: Augusta County; Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at stations: 2-WKS001.03 (6 exceedances of 30 samples in 2006, two or more STV hits in the same 90-day period with < 10 samples in 2024) and 2-WKS004.59 (4 exceedances of 12 samples in 2006, no new data 2024). Initial Listing Date: 2006. This segment is included in the EPA approved Walker Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I34R_WKS01A06 / Walker Creek / Walker Creek from the headwaters downstream to its confluence with Dutch Hollow Branch.	4A	Escherichia coli (E. coli)	2006	L	8.8

Walker Creek

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

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

James River Basin

Cause Group Code: I34R-04-BAC Otts Creek

Cause Location: Otts Creek from the Route 675 bridge crossing downstream to its confluence with Moffatts Creek.

Cause City/County: Augusta County; Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-OTS000.45 (7 exceedances of 30 samples in 2006, 24 exceedances of 48 samples in 2020, no new data 2024). Initial Listing Date: 2006. This segment is included in the EPA approved Otts Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I34R_OTS01A00 / Otts Creek / Otts Creek from the Route 675 bridge crossing downstream to its confluence with Moffatts Creek.	4A	Escherichia coli (E. coli)	2006	L	5.4

Otts Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.4

Sources: Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I35R-02-BAC Mill Creek

Cause Location: Mill Creek from the headwaters downstream to its confluence with the Maury River.

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at station: 2-MIS000.04 (2 exceedances of 12 samples for e-coli in 2014, no data in 2024). Initial Listing Cycle: 2006. This segment is nested into the EPA Approved Maury River Bacterial TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I35R_MIS01A00 / Mill Creek / Mill Creek from the headwaters downstream to its confluence with the Maury River.	4A	Escherichia coli (E. coli)	2008	L	9.14

Mill Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.14

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

James River Basin

Cause Group Code: I35R-02-BEN Mill Creek

Cause Location: Mill Creek from the headwaters downstream to its confluence with the Maury River.

Cause City/County: Rockbridge County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2-MIS000.30. Initial Listing Date: 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I35R_MIS01A00 / Mill Creek / Mill Creek from the headwaters downstream to its confluence with the Maury River.	5A	Benthic Macroinvertebrates Bioassessments	2016	H	9.14

Mill Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.14

Sources: Agriculture; Non-Point Source; Unpermitted Discharge (Industrial/commercial Wastes); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I35R-03-BAC Woods Creek

Cause Location: Woods Creek and tributary from the headwaters downstream to its confluence with the Maury River.

Cause City/County: Lexington; Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2AWDS000.10 (2022 cycle- two or more STV exceedances in the same 90-day period with < 10 samples, no new data 2024). Initial Listing Date: 2012. This segment is included in the EPA Approved (2/2/18) Woods Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I35R_WDS01A00 / Woods Creek / Woods Creek and tributary from the headwaters downstream to its confluence with the Maury River.	4A	Escherichia coli (E. coli)	2012	L	6.05

Woods Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.05

Sources: Agriculture; Livestock (Grazing or Feeding Operations); Non-Point Source; Rural (Residential Areas); Sanitary Sewer Overflows (Collection System Failures); Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I35R-03-BEN Woods Creek

Cause Location: Woods Creek and tributary (including Town Run) from the headwaters downstream to its confluence with the Maury River.

Cause City/County: Lexington; Rockbridge County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at stations: 2-WDS002.08, 2-WDS002.28, and 2ATWN000.73. Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I35R_TWN01A20 / Town Run / Town Run from the headwaters downstream to its confluence with Woods Creek.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	1.28
VAV-I35R_WDS01A00 / Woods Creek / Woods Creek and tributary from the headwaters downstream to its confluence with the Maury River.	5A	Benthic Macroinvertebrates Bioassessments	2008	L	6.05

Woods Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.33

Sources: Golf Courses; Livestock (Grazing or Feeding Operations); Municipal (Urbanized High Density Area); Non-Point Source; Residential Districts; Source Unknown

James River Basin

Cause Group Code: I36R-02-BEN Moores Creek

Cause Location: Moores Creek and tributaries from the headwaters downstream to its confluence with the South River.

Cause City/County: Rockbridge County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at stations: 2-MRC002.14 and 2-MRC003.82. Initial Listing Date 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I36R_MRC01A00 / Moores Creek / Moores Creek and tributaries from the headwaters downstream to its confluence with the South River.	5A	Benthic Macroinvertebrates Bioassessments	2006	H	9.09

Moores Creek

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

Sources: Agriculture; Non-Point Source; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: I36R-03-PH Saint Marys River

Cause Location: Saint Marys River from a point approximately 1.97 miles above its confluence with Cellar Hollow downstream to its confluence with South River.

Cause City/County: Augusta County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to excursions of the pH WQS at station: 2-SMR001.52, remains impaired in 2022 with 21 excursions of 24 samples, no new data 2024. Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I36R_SMR01A00 / Saint Marys River / Saint Marys River from a point approximately 1.97 miles above its confluence with South River downstream to its confluence with South River.	5A	pH	2006	L	1.97

Saint Marys River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.97

Sources: Atmospheric Deposition - Acidity

James River Basin

Cause Group Code: I36R-05-BEN Marl Creek X-trib

Cause Location: Tributary to Marl Creek from the headwaters at the intersection of Forest Grove and Mountain View Roads, downstream to its confluence with Marl Creek.

Cause City/County: Rockbridge County

Use(s): Aquatic Life

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

Cause Description: This tributary of Marl Creek is impaired for aquatic life use with exceedances of the State's water quality General Standard for benthic macroinvertebrates (Virginia Stream Condition Index (VSCI) < 60) at station: 2AXEM000.35. This listing station was incorrectly named 2-MRL002.62 during the 2012 cycle when first listed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I36R_XEM01A22 / Marl Creek X-trib / Tributary to Marl Creek from the headwaters at the intersection of Forest Grove and Mountain View Roads, downstream to its confluence with Marl Creek.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	1.16

Marl Creek X-trib

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.16

Sources: Agriculture; Livestock (Grazing or Feeding Operations); Non-Point Source

James River Basin

Cause Group Code: I36R-06-BAC South River

Cause Location: South River from its confluence with Moores Creek downstream to its confluence with Irish Creek.

Cause City/County: Augusta County; Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-STH011.28 (2 exceedances of 11 samples for e-coli in 2012, no new data in 2024). Initial Listing Date; 2012. This segment is nested into the EPA approved Maury River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I36R_STH02A10 / South River / South River from its confluence with the Moores Creek downstream to its confluence with Irish Creek.	4A	Escherichia coli (E. coli)	2012	L	7.96

South River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.96

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

James River Basin

Cause Group Code: I36R-07-PH South River

Cause Location: South River from its confluence with the Saint Marys River downstream to its confluence with Little Marys Creek.

Cause City/County: Augusta County; Rockbridge County

Use(s): Aquatic Life

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

Cause Description: This segment is impaired due to excursions of the pH WQS at station: 2-STH019.57 (4 excursions of 12 samples in 2018, no new data 2024). Initial Listing Date: 2018. The extent of this impaired segment was decreased in 2024, removing the downstream portion from Little Marys Creek to Moores Creek.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I36R_STH03A12 / South River / South River from its confluence with the Saint Marys River downstream to its confluence with Little Marys Creek.	5A	pH	2018	L	3.59

South River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.59

Sources: Atmospheric Deposition - Acidity

James River Basin

Cause Group Code: I37R-02-HG Maury River

Cause Location: Maury River from its confluence with the South River downstream to its confluence with Indian Gap Run.

Cause City/County: Buena Vista; Rockbridge County

Use(s): Fish Consumption

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

Cause Description: Exceedances of the Mercury fish tissue value of 0.30 parts per million (ppm) occurred in samples collected at station 2-MRY013.88 (8/21/2017)- Smallmouth bass with 0.38 ppm (2 fish composite sample) and Largemouth Bass with 0.70 ppm (6 fish composite sample). Additional data collected at 2-MRY013.88 on 6/28/2019- Smallmouth Bass with 0.54 ppm (2 fish composite sample) and 0.31 ppm (5 fish composite sample). Initial Listing Date: 2022.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I37R_MRY03A00 / Maury River / Maury River from its confluence with South River downstream to its confluence with Indian Gap Run.	5A	Mercury in Fish Tissue	2022	L	4.58

Maury River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			4.58

Sources: Source Unknown

James River Basin

Cause Group Code: I37R-02-PCB Maury River

Cause Location: Maury River from its confluence with the South River downstream to its confluence with the James River.

Cause City/County: Buena Vista; Rockbridge County

Use(s): Fish Consumption

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

Cause Description: This segment is impaired due to the Virginia Department of Health Fish Consumption Advisory for Polychlorinated Biphenyls (PCBs) on the Maury River from Buena Vista at Rt. 60 ~15 miles to the confluence of the James River, effective 12/13/04; modified 10/10/06. For more information visit https://www.vdh.virginia.gov/environmental-health/public-health-toxicology/fish-consumption-advisory/. Exceedances of the WQS based PCB fish tissue value occurred at stations: 2-MRY011.23 sampled on 7/10/2001: Yellow Bullhead Catfish at 332.69 ppb, Rock Bass at 116.77 ppb, and Redbreast Sunfish at 70.55 ppb. Recent data collected at the following DEQ stations shows continued exceedances of the WQS based PCB fish tissue value: 2-MRY013.88 sampled on 8/21/2017: Largemouth Bass at 146 ppb and 150 ppb; Carp at 90 ppb, 2-MRY001.50 sampled on 8/23/2017: Flathead Catfish at 53 ppb. Fish Tissue samples collected at 2-MRY011.23 on 8/22/2017 showed no exceedances of the PCB fish tissue value. Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I37R_MRY01A00 / Maury River / Maury River from its confluence with Buffalo Creek downstream to its confluence with the James River.	5A	PCBs in Fish Tissue	2006	H	5.11
VAV-I37R_MRY02A00 / Maury River / Maury River from its confluence with Indian Gap Run downstream to its confluence with Buffalo Creek.	5A	PCBs in Fish Tissue	2006	H	7.25
VAV-I37R_MRY03A00 / Maury River / Maury River from its confluence with South River downstream to its confluence with Indian Gap Run.	5A	PCBs in Fish Tissue	2004	H	4.58

Maury River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			16.94

Sources: Source Unknown

James River Basin

Cause Group Code: I37R-03-BAC Poague Run

Cause Location: Poague Run and tributaries from the headwaters downstream to its confluence with the Maury River. (Start Mile: 17.12 End Mile: 0.00 Total Impaired Size: 17.12)

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2-PGH002.44 (5 exceedances of 12 samples in 2012, no new data 2024 cycle). Initial Listing Date: 2014. This segment is included in the EPA approved Maury River Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I37R_PGH01A00 / Poague Run / Poague Run and tributaries from the headwaters downstream to its confluence with the Maury River.	4A	Escherichia coli (E. coli)	2014	L	17.12

Poague Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			17.12

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

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James River Basin

Cause Group Code: I38L-01-DO Lexington Reservoir

Cause Location: Lexington Reservoir

Cause City/County: Rockbridge County

Use(s): Aquatic Life

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

Cause Description: The lake is impaired due to exceedances of the Dissolved Oxygen WQS. These exceedances have been determined to be a naturally occurring in the Hypolimnion during the summer months when the lake is thermally stratified based on TSI results. This assessment unit is considered 4C-No TMDL Needed due to natural conditions.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I38L_MOR01A10 / Lexington Reservoir / Lexington Reservoir	4C	Dissolved Oxygen	NA	NA	22.6

Lexington Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		22.6	

Sources: Atmospheric Deposition - Acidity; Natural Sources

James River Basin

Cause Group Code: I38L-01-PH Lexington Reservoir

Cause Location: Lexington Reservoir

Cause City/County: Rockbridge County

Use(s): Aquatic Life

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

Cause Description: The lake is impaired due to excursions of the pH WQS at 2-MOR003.60 (18 excursions of 66 samples for pH in 2014, no new data in 2024). Initial listing date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I38L_MOR01A10 / Lexington Reservoir / Lexington Reservoir	5A	pH	2010	L	22.6

Lexington Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		22.6	

Sources: Atmospheric Deposition - Acidity; Natural Sources

James River Basin

Cause Group Code: I38R-01-BAC Buffalo Creek

Cause Location: Buffalo Creek from its confluence with North/South Fork Buffalo Creek downstream to its confluence with the Maury River.

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli bacteria WQS at stations: 2-BLD000.22 (2 exceedances of 12 samples in 2008, two or more STV hits in the same 90-day period with < 10 samples in 2024) and 2-BLD004.25 (2014 cycle- 2 exceedances of 12 samples for e-coli, no new data 2024). Additional data collected at 2-BLD011.90 (2020 cycle- 2 exceedances of 36 samples for e-coli) and 2-BLD012.56 (two or more STV hits in the same 90-day period with less than 10 samples in 2024). Initial Listing Date: 2004. This impairment is included in the EPA approved Buffalo Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I38R_BLD01A00 / Buffalo Creek / Buffalo Creek from its confluence with an unnamed tributary near Buffalo Bend downstream to its confluence with the Maury River.	4A	Escherichia coli (E. coli)	2008	L	3.96
VAV-I38R_BLD02A04 / Buffalo Creek / Buffalo Creek from its confluence with Colliers Creek downstream to its confluence with an unnamed tributary near Buffalo Bend.	4A	Escherichia coli (E. coli)	2010	L	9.14
VAV-I38R_BLD03A10 / Buffalo Creek / Buffalo Creek from its confluence with South/North Fork Buffalo Creek downstream to its confluence with Colliers Creek.	4A	Escherichia coli (E. coli)	2010	L	2.99

Buffalo Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			16.09

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

James River Basin

Cause Group Code: I38R-02-BAC Colliers Creek

Cause Location: Colliers Creek from the headwaters downstream to its confluence with Buffalo Creek.

Cause City/County: Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the E.coli WQS at station: 2-CLL001.99 (2024 cycle, Impaired- 2 or more STV hits in the same 90-day period with < 10 samples). Initial Listing Date: 2006. This segment is included in the EPA Approved Colliers Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I38R_CLL01A00 / Colliers Creek / Colliers Creek and headwater tributaries from the headwaters downstream to its confluence with Buffalo Creek.	4A	Escherichia coli (E. coli)	2010	L	15.11

Colliers Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			15.11

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

James River Basin

Cause Group Code: I38R-03-BAC South Fork Buffalo Creek

Cause Location: South Fork Buffalo Creek from the headwaters downstream to its confluence with Buffalo Creek.

Cause City/County: Botetourt County; Rockbridge County

Use(s): Recreation

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

Cause Description: This segment is impaired due to exceedances of the e-coli WQS at station: 2022 cycle- 2-BSF000.15: (4 exceedances of 12 samples in 2010, 2 or more STV exceedances in the same 90-day period with < 10 samples in 2022, no new data 2024). Initial Listing Date: 2010. This impairment is included in the EPA approved South Fork Buffalo Creek Bacteria TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-I38R_SBF01A00 / Buffalo Creek South Fork / South Fork Buffalo Creek from the headwaters downstream to its confluence with Buffalo Creek.	4A	Escherichia coli (E. coli)	2010	L	14.48

South Fork Buffalo Creek

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

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

James River Basin

Cause Group Code: J01R-01-BAC Appomattox River

Cause Location: Appomattox River from the Suanee Creek confluence to the Deep Creek confluence.

Cause City/County: Amelia County; Appomattox County; Buckingham County; Chesterfield County; Cumberland County; Powhatan County; Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A; Fecal Coliform/4A

Cause Description: NESTED 2014: 33316, 05/21/2004

During the 2016 cycle the segment remained impaired due to violations at stations 2-APP137.55 (2/14) and 2-APP127.08 (4/10).

During the 2018 cycle there was no new data. During the 2020 cycle the segment had two Level II bacteria samples that were insufficient. During the 2022 cycle there was no new data. During the 2024 cycle the segment collected new data at 2-APP050.23, 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-J01R_APP02A02 / Appomattox River / Appomattox River from Fishpond Creek to Vaughans Creek (JA03)	4A	Escherichia coli (E. coli)	2006	L	12.09
VAP-J01R_APP03A02 / Appomattox River / Appomattox River from Vaughans Creek to a point 5 miles upstream of Farmville's raw water intake.	4A	Escherichia coli (E. coli)	2006	L	6.83
VAP-J01R_APP04A02 / Appomattox River / Appomattox River from Farmville's raw water intake to a point 5 miles upstream	4A	Escherichia coli (E. coli)	2006	L	5.01
VAP-J01R_APP05A04 / Appomattox River / Farmville's raw water intake downstream to JA05/JA09 watershed boundary	4A	Escherichia coli (E. coli)	2006	L	2.66
VAP-J01R_APP05B14 / Appomattox River / Appomattox River from the JA05/JA09 watershed boundary to the confluence with Sandy River	4A	Escherichia coli (E. coli)	2014	L	6.85
VAP-J06R_APP05A02 / Appomattox River / The portion of the Appomattox River within J06.	4A	Escherichia coli (E. coli)	2006	L	21.06
VAP-J07R_APP01A98 / Appomattox River / The portion of the Appomattox River within this watershed.	4A	Escherichia coli (E. coli)	2006	L	28.83
VAP-J10R_APP01A98 / Appomattox River / The Appomattox River from river mile 53.70 downstream to the confluence of Deep Creek. The segment was extended in 2006 to incorporate VAP-J10R_APP02A04.	4A	Escherichia coli (E. coli)	2006	L	10.18

Appomattox River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			93.51

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VAP-J01R_APP01A02 / Appomattox River / Appomattox River from Suanee Creek to Fishpond Creek (JA02)	4A	Fecal Coliform	2004	L	4.73

Appomattox River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			4.73

Sources: Agriculture; Livestock (Grazing or Feeding Operations); Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Urban Runoff/Storm Sewers; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J01R-02-BAC Horsepen Creek

Cause Location: Horsepen Creek from its headwaters to the mouth at the Appomattox River

Cause City/County: Buckingham County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2016 cycle the segment was impaired for E.coli with a exceedance rate of 3/11, Horsepen Creek is included in the Appomattox Basinwide Bacteria TMDL. During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle the E.coli data was no longer in the window and E.coli Impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_HRE01A04 / Horsepen Creek / Horsepen Creek from its headwaters to the mouth at the Appomattox River	4A	Escherichia coli (E. coli)	2010	L	4.01

Horsepen Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.01

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J01R-02-BEN Horsepen Creek

Cause Location: Horsepen Creek from its headwaters to the mouth at the Appomattox River

Cause City/County: Buckingham County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2016 cycle this segment became impaired for benthics, the stream had moderate deposition of sediment and moderately unstable banks. no new data during the 2018 and 2020 cycle. During the 2022 cycle new data was collected and the segment remained impaired for Benthics. During the 2024 cycle the segment remained impaired for benthics.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_HRE01A04 / Horsepen Creek / Horsepen Creek from its headwaters to the mouth at the Appomattox River	5A	Benthic Macroinvertebrates Bioassessments	2016	H	4.01

Horsepen Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.01

Sources: Source Unknown

James River Basin

Cause Group Code: J01R-03-BAC Suanee Creek

Cause Location: Suanee Creek from its headwaters to the mouth at the Appomattox River.

Cause City/County: Appomattox County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014:33316, 05/21/2004 Station IDs:
2-SUA001.54 (Ambient) E. coli - 4/12 Violation Rate 2-SUA003.80 (Ambient) E. coli - 4/12 Violation Rate

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new E.coli data was collected and the impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_SUA01A04 / Suanee Creek / Suanee Creek from its headwaters to the mouth at the Appomattox River.	4A	Escherichia coli (E. coli)	2006	L	6.31

Suanee Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.31

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

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James River Basin

Cause Group Code: J01R-04-BAC Vaughans Creek

Cause Location: Vaughans Creek from its headwaters to the mouth at the Appomattox River.

Cause City/County: Appomattox County; Buckingham County; Cumberland County; Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 05/21/2004 Station IDs: 2-VNS000.31(Ambient) E. coli - 1/12 Violation Rate 2-VGN003.75 (Ambient) E. coli - 3/12 Violation Rate 2-VGN007.73 (Ambient) E. coli - 8/12 Violation Rate 2VGN-CVW (Clean VA Waterways Physical/Chemical Sampling) E. coli - 4/33 Violation Rate Segment is located in Appomattox River Basinwide TMDL Study Area. During the 2016 cycle the segment had E.coli exceedances at station 2-VNS000.31(1/12),2-VGN003.75(3/12), 2-VGN007.73 (8/12). During the 2018, 2020 and 2022 cycle the segment had no new data. During the 2024 cycle no new data was collected, E.coli impairment carry over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_VNS01A02 / Vaughans Creek / Vaughans Creek from its confluence with Cabin Branch to its mouth at Appomattox River	4A	Escherichia coli (E. coli)	2006	L	4.31
VAP-J01R_VNS02A10 / Vaughans Creek / Vaughans Creek from its headwaters to its confluence with Cabin Branch	4A	Escherichia coli (E. coli)	2010	L	8.61

Vaughans Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.92

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

James River Basin

Cause Group Code: J01R-05-BAC Gross Creek

Cause Location: Gross Creek from its headwaters to its mouth on the Appomattox River

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 05/21/2004 Station ID: Clean Virginia Waterways Sampling 2GSK-APP-CVW E. coli - 3/11 violation rate 2GSK-BLA-CVW E. coli - 1/8 violation rate 2GSK-GRO2-CVW E. coli - 32/43 violation rate 2GSK-GRO3-CVW E. coli - 33/42 violation rate 2GSK-GRO4-CVW E. coli - 32/46 violation rate 2GSK-GROCL-CVW E. coli - 3/11 violation rate 2GSK-GROLWA-CVW E. coli - 10/15 violation rate 2GSK-GROPUT-CVW E. coli - 28/45 violation rate

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-J01R_GSK01A08 / Gross Creek / Gross Creek from its headwaters to its mouth on the Appomattox River	4A	Escherichia coli (E. coli)	2008	L	1.91

Gross Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.91

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

James River Basin

Cause Group Code: J01R-06-BAC Gross Creek, UT

Cause Location: Unnamed Tributary to Gross Creek from its headwaters to its confluence with Gross Creek

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014:33316, 05/21/2004 Station ID: Clean Virginia Waterways Sampling 2GSK-GROFRA-CVW E. coli - 16/29 violation rate 2GSK-GROLWU-CVW E. coli - 15/33 violation rate 2GSK-GRORSA-CVW E. coli - 4/7 violation rate 2GSK-GRORSS-CVW E. coli - 0/4 violation rate

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-J01R_XZO01A08 / Gross Creek, UT / Unnamed Tributary to Gross Creek from its headwaters to its confluence with Gross Creek	4A	Escherichia coli (E. coli)	2008	L	0.64

Gross Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.64

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

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James River Basin

Cause Group Code: J01R-07-BAC Harris Creek

Cause Location: Harris Creek from its headwaters to its mouth on the Appomattox River

Cause City/County: Powhatan County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014:33316, 05/21/2004 Station ID:
2-HAR000.29 2-PUM000.29 (Ambient) (old) renamed 2-PUM000.29(old) in 2024 cycle to 2-HAR000.29 and au previously named VAP-J01R_PUM01A08 by mistake. During the 2020 and 2022 cycle there was no new E.coli data and the segment remains impaired. During the 2024 cycle no new bacteria data was collected and E.coli impairment is a carry over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_HAR01A08 / Harris Creek / Harris Creek from its headwaters to its mouth on the Appomattox River	4A	Escherichia coli (E. coli)	2008	L	6.53

Harris Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.53

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J01R-07-BEN Harris Creek

Cause Location: Harris Creek from its headwaters to its mouth on the Appomattox River

Cause City/County: Powhatan County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: Station ID: 2-HAR000.29 2-PUM000.29 (old) renamed 2-PUM000.29(old) in 2024 cycle to 2-HAR000.29 and au previously named VAP-J01R_PUM01A08 by mistake. During the 2020 cycle Benthics became impaired from 2016 data. No new data for the 2022 cycle. During the 2024 cycle the segment was re-sampled in 2021 and remained impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_HAR01A08 / Harris Creek / Harris Creek from its headwaters to its mouth on the Appomattox River	5A	Benthic Macroinvertebrates Bioassessments	2020	H	6.53

Harris Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.53

Sources: Source Unknown

James River Basin

Cause Group Code: J01R-08-BAC South Fork Appomattox River

Cause Location: South Fork Appomattox River from its headwaters to its mouth at the Appomattox River.

Cause City/County: Appomattox County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 5/21/2004

During the 2016 cycle the segment had an exceedance rate of 3/12 for E.coli and is nested in the Appomattox TMDL.

During the 2018, 2020, and 2022 cycle 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-J01R_ARS01A04 / South Fork Appomattox River / Headwaters to the mouth at the Appomattox River.	4A	Escherichia coli (E. coli)	2010	L	5.79

South Fork Appomattox River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.79

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

James River Basin

Cause Group Code: J01R-09-BAC Crane Creek

Cause Location: Crane Creek from its headwaters to its mouth on Vaughans Creek

Cause City/County: Appomattox County; Buckingham County; Cumberland County; Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 5/21/2004

During the 2016 cycle the segment was impaired for E.coli with an exceedance rate of 4/12.

During the 2018 and 2020 cycle the segment remained impaired for E.coli (10/18)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_CNE01A10 / Crane Creek / Crane Creek from its headwaters to its mouth on Vaughans Creek	4A	Escherichia coli (E. coli)	2010	L	5.19

Crane Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.19

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

James River Basin

Cause Group Code: J01R-09-BEN Crane Creek

Cause Location: Crane Creek from its headwaters to its mouth on Vaughans Creek

Cause City/County: Appomattox County; Buckingham County; Cumberland County; Prince Edward County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: Station ID: 2-CNE000.96 2008/2012-2016 Bio - IM Dairy cows have access to stream, though it is a very wooded area. Habitat consisted of numerous log jams, some good cobble riffles and some gravel riffles. The riffles weren't very embedded but sedimentation was high throughout the rest of the stream. Nitrogen concentrations in the stream were high, indicating a nutrient problem. Extreme seasonal variation in SCI scores, therefore additional monitoring is needed to accurately assess water quality in this stream reach.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_CNE01A10 / Crane Creek / Crane Creek from its headwaters to its mouth on Vaughans Creek	5A	Benthic Macroinvertebrates Bioassessments	2010	H	5.19

Crane Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.19

Sources: Unrestricted Cattle Access

James River Basin

Cause Group Code: J01R-10-BAC Fishpond Creek

Cause Location: Fishpond Creek from its headwaters to the mouth.

Cause City/County: Appomattox County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 5/21/2004

During the 2016 cycle the segment was impaired for E.coli at station 2-FSP000.53 with an exceedance rate of 17/36, this segment is nested within the Appomattox E.coli TMDL.

During the 2018 cycle the segment remained impaired for E.coli with an exceedance rate of 21/42.

No new data was collected during the 2020 cycle. During the 2022 cycle the segment remained impaired for E.coli due to exceedances at 2-FSP000.53 (9/40).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_FSP01A06 / Fishpond Creek / Fishpond Creek from its headwaters to the mouth.	4A	Escherichia coli (E. coli)	2010	L	9.5

Fishpond Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.5

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

James River Basin

Cause Group Code: J01R-11-BAC Rough Creek

Cause Location: Rough Creek from the headwaters to its mouth at the Appomattox River

Cause City/County: Appomattox County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014:33316, 05/21/2004 During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle E.coli impairment carry over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_RGH01A04 / Rough Creek / Rough Creek from the headwaters to its mouth at the Appomattox River	4A	Escherichia coli (E. coli)	2010	L	6.5

Rough Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.5

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

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James River Basin

Cause Group Code: J01R-12-BAC Ducker Creek

Cause Location: Ducker Creek from its headwaters to its mouth on the Appomattox River

Cause City/County: Buckingham County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 5/21/2004

During the 2016 cycle the segment was impaired for E. coli with an exceedance rate of 4/12 and was nested in the Appomattox TMDL.

During the 2018 cycle the segment remained impaired for E.coli with no new data.

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-J01R_DKR01A12 / Ducker Creek / From its headwaters to its mouth on the Appomattox River	4A	Escherichia coli (E. coli)	2012	L	5.74

Ducker Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.74

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

James River Basin

Cause Group Code: J01R-13-BAC Appomattox River

Cause Location: Appomattox River from its headwaters to the confluence with the South Fork Appomattox River.

Cause City/County: Appomattox County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2016 cycle the segment had an exceedance rate of 2/12 E. coli. level 3 data. No new data was collected during the 2018, 2020, 2022 and 2024 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_APP01B04 / Appomattox River / Appomattox River from its headwaters to the confluence with the South Fork Appomattox River.	4A	Escherichia coli (E. coli)	2014	L	7.9

Appomattox River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.9

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J01R-14-BAC Holiday Creek

Cause Location: Holiday Creek to the backwaters of holiday lake

Cause City/County: Appomattox County; Buckingham County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2018:33316,5/21/2004

During the 2018 cycle the segment was Impaired for E.coli with an exceedance rate of 9/35. This impairment is Nested within the Appomattox River Bacteria TMDL.

During the 2020 cycle there was no new E.coli data and the impairment remains. During the 2022 cycle the segment remained impaired for recreation due to E.coli exceedances.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_HOL01B04 / Holiday Creek / Holiday Creek from its headwaters to the backwaters of Holiday Lake.	4A	Escherichia coli (E. coli)	2018	L	6.7

Holiday Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.7

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J01R-15-BAC Gannaway Creek

Cause Location: Headwaters to Buckingham County Line

Cause City/County: Buckingham County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2020:33316,5/21/2004

During the 2020 cycle the segment was Impaired for E.coli with an exceedance rate of5/11. This impairment is Nested within the Appomattox River Bacteria TMDL. No new data during the 2022 cycle, the E.coli impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J01R_GAN02A20 / Gannaway Creek / Headwaters to Buckingham County Line	4A	Escherichia coli (E. coli)	2020	L	3.08

Gannaway Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.08

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: J02R-01-BAC Spring Creek

Cause Location: Spring Creek from Mud Creek to the Buffalo Creek Dam No. 4

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014:33328,5/21/2004 Station ID: 2-SPA006.48 (2001 FT/Sed & Appomattox River Basin TMDL Study) E.coli - 4/11 Violation Rate

No new data has been collected since 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J02R_SPA02A04 / Spring Creek / Spring Creek from Mud Creek to the Buffalo Creek Dam No. 4	4A	Escherichia coli (E. coli)	2006	L	2.39

Spring Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.39

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J02R-02-BAC Buffalo Creek

Cause Location: Buffalo Creek from the Carey Creek confluence to its mouth at the Appomattox River.

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 5/21/2004 Station IDs: 2-BFL011.03 (Ambient, Appomattox Basin wide TMDL Station) E. coli - 8/35 Violation Rate 2-BFL016.60 (Ambient) E. coli - 3/12 Violation Rate 2BFL-BUF15-CVW (Clean Virginia Waterways) E. coli - 3/35 violation rate 2BFL-BUF3-CVW (Clean Virginia Waterways) E. coli - 2/36 violation rate 2BFL-BUF0-CVW (Clean Virginia Waterways) E. coli - 7/27 violation rate

For the 2018 cycle the segment had new data at stations 2-BFL011.03 with an E.coli exceedance rate of 9/34.

During the 2020 cycle the segment was impaired at station 2-BFL016.60 with a 3/12 exceedance rate. During the 2022 cycle the segment remained impaired. During the 2024 cycle E.coli became insufficient therefore the impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J02R_BFL01A14 / Buffalo Creek / Buffalo Creek near the mouth in watershed JA09	4A	Escherichia coli (E. coli)	2014	L	0.33
VAP-J02R_BFL02A02 / Buffalo Creek / Buffalo Creek from the Spring Creek confluence to 0.4 miles above the mouth at the Appomattox River.	4A	Escherichia coli (E. coli)	2006	L	11.04
VAP-J02R_BFL03A06 / Buffalo Creek / Buffalo Creek from the Spring Creek confluence to Carey Creek.	4A	Escherichia coli (E. coli)	2014	L	4.83

Buffalo Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			16.2

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J03L-01-DO Prince Edward Lake

Cause Location: Prince Edward and Goodwin Lake State Park

Cause City/County: Prince Edward County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: During the 2018 cycle the segment had a DO impairment at station 2DSDY-PEL-1-DCR, This is Level III non agency data, the exceedance rate was 38/83, the exceedances are in the bottom of the lake.

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-J03L_SDY02A06 / Prince Edward Lake / Prince Edward and Goodwin Lake State Park	5C	Dissolved Oxygen	2018	L	26.38

Prince Edward Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		26.38	

Sources: Natural Sources

James River Basin

Cause Group Code: J03L-01-HAB Prince Edward Lake

Cause Location: Entirety of the lake

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Harmful Algal Blooms/5A

Cause Description: During the 2022 cycle the segment, the lake was impaired of the recreation use due to an VDH harmful algal bloom advisory. The 2019 advisory lasted 45 days due to elevated microcystin and cylindrospermopsin.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J03L_SDY02A06 / Prince Edward Lake / Prince Edward and Goodwin Lake State Park	5A	Harmful Algal Blooms	2022	L	26.38

Prince Edward Lake

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Harmful Algal Blooms - Total Impaired Size by Water Type:		26.38	

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: J03R-01-BAC Little Sandy Creek

Cause Location: Little Sandy Creek from headwaters to SF Road Crossing

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Station IDs: 2-LIT005.43 (Appomattox Basin wide TMDL Station) no new data for the 2018, 2020 and 2022 cycle. During the 2024 cycle no new E.coli data was collected therefore the impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J03R_LIT02A12 / Little Sandy Creek / From SF Road to headwaters	4A	Escherichia coli (E. coli)	2006	L	3.27

Little Sandy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.27

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J03R-05-BAC Sandy River

Cause Location: Sandy River from Sandy River Reservoir Dam to its mouth at Bush River

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33319, 05/21/2004 Station ID: 2-SDY003.00 (Ambient) E. coli - 3/24 Violation Rate

During the 2018, 2020, 2022 and 2024 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-J03R_SDY01A00 / Sandy River / Sandy River from Sandy River Reservoir Dam to its mouth at Bush River	4A	Escherichia coli (E. coli)	2008	L	3.44

Sandy River

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; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J03R-06-BEN Sandy River

Cause Location: Sandy River from the backwaters of Sandy River Reservoir to the Prince Edward Lake Dam.

Cause City/County: Prince Edward County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: Station ID:
2DSDY008.80 (2009 & 2012 Bio) IM - This stream had marginal bank stability, obvious sediment deposition, and marginal epifaunal substrate. 2009 biologist field notes indicate that every surface was covered in algae. The water was very sluggish and there were beaver dams upstream and downstream.

No new data has been collected since 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J03R_SDY02A12 / Sandy River / From the backwaters of Sandy River Reservoir to the Prince Edward Lake Dam	5A	Benthic Macroinvertebrates Bioassessments	2014	H	4.08

Sandy River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.08

Sources: Erosion and Sedimentation

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James River Basin

Cause Group Code: J03R-07-BEN North Branch Sandy River

Cause Location: Headwaters to the confluence with Acorn Creek

Cause City/County: Prince Edward 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 2024 cycle the segment remained impaired for benthics based off 2021 site visit.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J03R_SNN02A20 / North Branch Sandy River / Headwaters to the confluence with Acorn Creek	5A	Benthic Macroinvertebrates Bioassessments	2020	H	2.4

North Branch Sandy River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.4

Sources: Erosion and Sedimentation

James River Basin

Cause Group Code: J04R-01-BAC Bush River

Cause Location: Bush River from the confluence with Millers Creek to its mouth on the Appomattox River.

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Station ID: 2-BSR002.82 (Ambient, Appomattox Basin wide TMDL Station) E. Coli - 3/24 Violation Rate

No new data during the 2018, 2020 and 2022 cycle. During the 2024 cycle the segment remained impaired for E.coli with geometric mean and STV exceedances.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J03R_BSR03A02 / Bush River / Bush River from Sandy River to Appomattox River	4A	Escherichia coli (E. coli)	2008	L	0.81
VAP-J04R_BSR02A02 / Bush River / Bush River from the confluence with Millers Creek downstream to its confluence with Sandy River.	4A	Escherichia coli (E. coli)	2006	L	4.41

Bush River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.22

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J04R-01-BEN Bush River

Cause Location: Bush River from its headwaters to the confluence with Mountain Creek.

Cause City/County: Prince Edward County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: Station IDs: 2-BSR012.33 (2014 FPM) FS Benthic Assessment 2-BSR017.69 (2008 Bio) IM Benthic Assessment - This site was monitored in order to supplement probabilistic monitoring data from probabilistic monitoring site 2-BSR018.10, which can only be accessed via private land and cannot be revisited. Bush River has evidence of extremely high flows with very high sedimentation occurring instream. The habitat assessment scores very low for bank stability and bank vegetative protection. In the fall of 2008 a new clear-cut was noted on the right bank. The riffles had become more embedded, reducing available habitat for benthic macro invertebrates. 2-BSR018.10 (2005 Probmon) J Rating Benthic Assessment - Condition of stream drastically different seasonally, therefore an accurate assessment is not possible without additional data. This site was part of the probabilistic monitoring program and can only be accessed via private land, therefore it will not be revisited. Seasonal difference noted. Abundant algal floc dominated riffles in spring but was not present in fall.

During the 2018 and 2020 cycle there was no new data. During the 2022 cycle new benthic data was collected at station 2-BSR017.69 and determined to still be impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J04R_BSR01B10 / Bush River / Bush River from its headwaters to the confluence with Mountain Creek.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	11.49

Bush River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			11.49

Sources: Agriculture; Erosion and Sedimentation; Source Unknown

James River Basin

Cause Group Code: J04R-02-BAC Bush River, Upper

Cause Location: Bush River from its headwaters to the confluence with Mountain Creek.

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2016: 33318, 8/30/2004 Station IDs: 2-BSR017.69 (Ambient) During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle the E.coli Impairment was a Carry over due to the new data collection being insufficient.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J04R_BSR01B10 / Bush River / Bush River from its headwaters to the confluence with Mountain Creek.	4A	Escherichia coli (E. coli)	2016	L	11.49

Bush River, Upper

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.49

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J04R-02-BEN Mountain Creek

Cause Location: Mountain Creek from the dam to the mouth at Bush River

Cause City/County: Prince Edward County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/4C

Cause Description: Station ID: 2-MTC001.24 (Ambient, Bio) IM - 2008 Bio This monitoring station was characterized by sluggish flow, marginal habitat, considerable sediment deposition, and unstable banks with little vegetative protection. 2-MTC005.27 (2014 Bio) FS - This site had decent habitat but sedimentation was occurring.

During the 2018 cycle the segment was impaired for benthics at station 2-MTC001.24.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle the Benthic impairment remains and is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J04R_MTC01A10 / Mountain Creek / Mountain Creek from the dam to the mouth at Bush River.	4C	Benthic Macroinvertebrates Bioassessments	NA	NA	2.18

Mountain Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.18

Sources: Dam or Impoundment; Erosion and Sedimentation; Natural Sources

James River Basin

Cause Group Code: J04R-03-BAC Mountain Creek

Cause Location: Mountain Creek from its headwaters to its mouth on Bush River.

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2018:33316,5/21/2004

During the 2018 cycle the segment was impaired for E.coli with an exceedance rate of 3/28 at station 2-MTC001.24. The E.coli impairment is nested within the Appomattox Watershed Bacteria TMDL.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle the E.coli impairment remains and is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J04R_MTC01A10 / Mountain Creek / Mountain Creek from the dam to the mouth at Bush River.	4A	Escherichia coli (E. coli)	2018	L	2.18
VAP-J04R_MTC01B20 / Mountain Creek / Mountain Creek from the headwaters to the dam.	4A	Escherichia coli (E. coli)	2018	L	7.72

Mountain Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.9

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

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James River Basin

Cause Group Code: J05R-01-BAC Briery Creek

Cause Location: Briery Creek from the Briery Creek Lake Dam to the confluence with the Bush River.

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2018 cycle the segment remained impaired for E.coli at Both stations

During the 2020 cycle new data was collected at station 2-BRI001.00 with a E.coli exceedance rate of 13/42. During the 2022 cycle no new data was collected. During the 2024 cycle new data was collected at station 2-BRI001.00 that was insufficient, follow up monitoring recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J05R_BRI01A98 / Briery Creek / Briery Creek from the Briery Creek Lake Dam to the confluence with the Bush River.	4A	Escherichia coli (E. coli)	2006	L	10.48

Briery Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.48

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J05R-01-BEN Briery Creek

Cause Location: Briery Creek from the Briery Creek Lake Dam to the confluence with the Bush River.

Cause City/County: Prince Edward County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2018 and 2020 cycle the segment remained impaired for benthics at station 2DBRI007.10. During the 2022 cycle new benthic data was collected at station 2-BRI004.01, the segment remained impaired for benthics. During the 2024 cycle the segment remained impaired for benthics at station 2-BRI004.01 and 2DBRI007.10 based off data collected in 2021 and 2022.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J05R_BRI01A98 / Briery Creek / Briery Creek from the Briery Creek Lake Dam to the confluence with the Bush River.	5A	Benthic Macroinvertebrates Bioassessments	2008	H	10.48

Briery Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			10.48

Sources: Dam or Impoundment; Erosion and Sedimentation

James River Basin

Cause Group Code: J05R-02-BAC Tanyard Branch

Cause Location: Tanyard Branch from Route 646 downstream to its mouth at Briery Creek

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014:33332,05/21/2004 Station ID: 2-TNY000.51 (Appomattox Basinwide TMDL Station) E. coli - 2/10 Violation Rate

No new data has been collected since 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J05R_TNY01A04 / Tanyard Branch / Tanyard Branch from Route 646 downstream to its mouth at Briery Creek	4A	Escherichia coli (E. coli)	2006	L	0.46

Tanyard Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.46

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J05R-03-BEN Rice Creek

Cause Location: Rice Creek from its headwaters to its mouth on Bush River.

Cause City/County: Prince Edward County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: Station ID:
2DRCE001.21 (2009 FPM) This site was sampled as part of the Probabilistic Monitoring program and is immediately downstream of a dam. The next bridge is approximately 0.25 miles downstream.

Non-target due to proximity to dam. Will follow up at nearest bridge if accessible.

2DRCE002.44 (2012,2020 Bio) IM - This site has unstable banks and sediment deposition. Habitat availability improved somewhat in the fall. This site was monitored as a follow-up to probabilistic station 2DRCE001.21 that was located on private property and could not be revisited.

During the 2018 and 2020 cycle there was no new data. During the 2022 cycle new benthic data was collected at station 2DRCE002.44, the segment remained impaired for benthics. During the 2024 cycle the segment remained impaired for benthics.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J04R_RCE01A12 / Rice Creek / From its headwaters to its mouth on Bush River	5A	Benthic Macroinvertebrates Bioassessments	2014	H	4.59

Rice Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.59

Sources: Erosion and Sedimentation

James River Basin

Cause Group Code: J06R-01-BAC Angola Creek

Cause Location: Angola Creek from its headwaters to its mouth on the Appomattox River.

Cause City/County: Cumberland County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2020 cycle the segment was impaired for E.coli with an exceedance rate of 4/12 at station 2-ANG003.35 and 5/11 at station 2-ANG001.27. No new data was collected for the 2022 cycle. During the 2024 cycle no new data was collected and E.coli impairment was carried over. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_ANG01A00 / Angola Creek / Angola Creek from its headwaters to the confluence with an unnamed tributary downstream of Route 664.	4A	Escherichia coli (E. coli)	2006	L	4.24
VAP-J06R_ANG02A00 / Angola Creek / Angola Creek from an unnamed tributary downstream of Route 664 to the mouth at the Appomattox River.	4A	Escherichia coli (E. coli)	2006	L	2.74

Angola Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.98

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J06R-03-BAC Horsepen Creek

Cause Location: Horsepen Creek from its headwaters to the mouth at Big Guinea Creek.

Cause City/County: Cumberland County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Station ID:
2-HRP000.42 (TMDL Monitoring) E. coli -2/10 Violation Rate

No new data for the 2018, 2020 and 2022 cycle. During the 2024 cycle the E.coli impairment was carried over due to no data within the 5 year assessment window.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_HRP01A00 / Horsepen Creek / Horsepen Creek from its headwaters to the mouth at Big Guinea Creek.	4A	Escherichia coli (E. coli)	2006	L	3.99

Horsepen Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.99

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J06R-03-BEN Horsepen Creek

Cause Location: Horsepen Creek from its headwaters to the mouth at Big Guinea Creek.

Cause City/County: Cumberland County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: Station ID:
2-HRP000,42 (2007-2012 Bio) Impaired Benthic Assessment
Small, sandy stream in low area that is likely inundated often and may dry during drought. The benthic macroinvertebrate population is probably influenced by these flow fluctuations. Habitat scores were low for sediment deposition, pool variability, bank stability, bank vegetative protection and epifaunal substrate. SCI scores straddled the impairment threshold until 2012. Sediment and organic pollution are likely stressors in this stream.

No new data for the 2018 and 2020 cycle. During the 2022 cycle the segment remained impaired for benthics due to new data collected from station 2-HRP000.35. During the 2024 cycle the segment remained impaired for Benthics at station 2-HRP000.35

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_HRP01A00 / Horsepen Creek / Horsepen Creek from its headwaters to the mouth at Big Guinea Creek.	5A	Benthic Macroinvertebrates Bioassessments	2014	H	3.99

Horsepen Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.99

Sources: Source Unknown

James River Basin

Cause Group Code: J06R-04-BAC Saylers Creek

Cause Location: Saylers Creek from the Amelia/Nottoway County line to its confluence with the Appomattox River.

Cause City/County: Amelia County; Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Station IDs: 2-SYL001.26 (Ambient, Appomattox Basinwide TMDL Station) E. coli - 1/11(IN) 2SAY*-SAY7-CVW (Clean VA Waterways Bacteria Sampling) (old) E. coli - 7/36 Violation Rate

During the 2016 cycle the segment was impaired for E.coli at both stations.
During the 2018, 2020, and 2022 cycle the segment had no new data. During the 2024 cycle new data was collected at 2-SYL001.26, the segment was insufficient for E.coli, therefore the impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_SYL01A98 / Saylers Creek / Saylers Creek from the Amelia/Nottoway County line to its confluence with the Appomattox River.	4A	Escherichia coli (E. coli)	2004	L	5.13

Saylers Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.13

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J06R-05-BAC Big Guinea Creek

Cause Location: Big Guinea Creek from its headwaters to the mouth at the Appomattox River.

Cause City/County: Cumberland County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014:33316, 05/21/2004

Ambient, Appomattox Basinwide TMDL Station

During the 2018 cycle the segment remained impaired with an E.coli exceedance rate of 5/12 at station 2-BGU005.67. VAP-J06R_BGU01A98

During the 2020 cycle the segment remained impaired with an E.coli exceedance rate of 5/11 at station 2-BGU001.39. During the 2024 cycle the E.coli Impairment was carried over due to no data within the 2 year window.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_BGU01A98 / Big Guinea Creek / Big Guinea Creek from its headwaters to the mouth at the Appomattox River.	4A	Escherichia coli (E. coli)	2006	L	8.73

Big Guinea Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.73

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J06R-05-BEN Big Guinea Creek

Cause Location: Big Guinea Creek from its headwaters to the mouth at the Appomattox River.

Cause City/County: Cumberland 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 at station 2-BGU005.67. During the 2022 cycle no new data was collected. During the 2024 cycle the segment remained impaired for Benthics at station 2-BGU005.67.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_BGU01A98 / Big Guinea Creek / Big Guinea Creek from its headwaters to the mouth at the Appomattox River.	5A	Benthic Macroinvertebrates Bioassessments	2020	H	8.73

Big Guinea Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.73

Sources: Source Unknown

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: J06R-06-BAC Little Saylers Creek

Cause Location: Little Saylers Creek from headwaters to Saylers Creek

Cause City/County: Prince Edward County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014:33327, 5/21/2004 Station IDs: 2-LIU000.70 (Appomattox Basin wide TMDL Station) E. coli - 5/10 Violation Rate 2-LIU002.75 (Appomattox Basin wide TMDL Station) E. coli - 4/10 Violation Rate 2LIU-SAY5-CVW (Clean VA Waterways Sampling) E. coli - 33/56 Violation Rate 2LIU-SAY6-CVW (Clean VA Waterways Sampling) E. coli - 19/37 Violation Rate

During the 2018 and 2020 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli Impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_LIU01A02 / Little Sayler's Creek / Little Sayler's Creek from headwaters to Sayler's Creek	4A	Escherichia coli (E. coli)	2006	L	6.78

Little Saylers Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.78

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J06R-07-BAC Stock Creek

Cause Location: Stock Creek from its headwaters to the mouth at the Appomattox River

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 05/21/2004

During the 2016 cycle the segment was impaired for E. coli with an exceedance rate of 6/12.

During the 2018 cycle the segment was impaired for E.coli with an exceedance rate of 3/12.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli Impairment was carried over.
Segment located within the Appomattox Basinwide Bacteria TMDL Study Area

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_SCK01A06 / Stock Creek / Stock Creek from its headwaters to the mouth at the Appomattox River	4A	Escherichia coli (E. coli)	2006	L	8.7

Stock Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.7

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J06R-08-BAC Green Creek

Cause Location: Headwaters to its mouth at the Appomattox River

Cause City/County: Cumberland County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 05/21/2004 Station ID: 2-GRF000.98 (Ambient) E. coli - 7/12 Violation Rate During the 2018, 2020, 2022 and 2024 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-J06R_GRF01A04 / Green Creek / Headwaters to its mouth at the Appomattox River	4A	Escherichia coli (E. coli)	2008	L	5.15

Green Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.15

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: J06R-09-BAC Sandy Creek

Cause Location: Sandy Creek from its headwaters to its mouth at the Appomattox River

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2014: 33316, 05/21/2004

During the 2016 cycle the segment was impaired for E.coli with an exceedance rate of 4/12.

During the 2018, 2020 and 2022 cycle the segment had no new data. During the 2024 cycle no new data was collected and the E.coli impairment was a carry over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J06R_SND01A04 / Sandy Creek / Headwaters to its mouth at the Appomattox River	4A	Escherichia coli (E. coli)	2016	L	8.29

Sandy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.29

Sources: Agriculture; Livestock (Grazing or Feeding Operations); On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Unspecified Domestic Waste; Wastes from Pets; Wildlife Other than Waterfowl

James River Basin

Cause Group Code: J07L-01-CHLA Amelia Lake

Cause Location: Amelia Lake

Cause City/County: Amelia County

Use(s): Aquatic Life

Causes(s)/VA Category: Chlorophyll-a/5A

Cause Description: During the 2020 cycle the segment was impaired for Chlorophyll a Chla 2017=14.95/2018=44.3.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J07L_XLW01A00 / Amelia Lake / Amelia Lake in its Entirety	5A	Chlorophyll-a	2020	L	98.32

Amelia Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlorophyll-a - Total Impaired Size by Water Type:		98.32	

Sources: Agriculture

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: J07R-02-BAC Rocky Ford Creek

Cause Location: Rocky Ford Creek from it headwaters downstream to the confluence with Fighting Creek.

Cause City/County: Powhatan County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Rocky Ford Creek was initially assessed as not supporting of the Recreation use goal in the 2004 cycle based on fecal coliform violations at the Rt. 603 bridge (2-RFD002.58).

During the 2008 cycle, the E. coli exceedance rate was 4/10 and the impairment was converted to E. coli. The TMDL due date was maintained.

During the 2010 cycle there was no new data since the 2008 cycle.

During the 2012 cycle there was no new data since the 2008 cycle.

During the 2014 cycle the segment was impaired for recreation use with a E.coli exceedance rate of 6/12 at station 2-RFD002.58.

During the 2016 cycle no new data was collected so the segment remains impaired for E.coli. During the 2018 cycle the segment was impaired for E.coli with an exceedance rate of 14/24. During the 2020 cycle there was no new data. During the 2022 cycle the segment remained impaired due to E.coli exceedances. During the 2024 cycle no new data was collected, E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J07R_RFD01A00 / Rocky Ford Creek / Rocky Ford Creek from its headwaters to the confluence with Fighting Creek.	4A	Escherichia coli (E. coli)	2008	L	5.72

Rocky Ford Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.72

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J07R-03-BAC Butterwood Creek

Cause Location: The mainstem of Butterwood Creek.

Cause City/County: Powhatan County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2006 cycle, Butterwood Creek was assessed as not supporting the Recreation Use due to a fecal coliform exceedance rate of 2/10 at the Route 603 bridge (2-BTR000.50). No additional E. coli data was collected.

Butterwood Creek was assessed as not supporting the Recreation Use during the 2010 cycle due to a E.coli exceedance rate of 4/12 at the Route 603 bridge (2-BTR000.50). In the 2010 cycle the monitoring data changed from Fecal coliform to E.coli and the original listing date changed but the TMDL due date stayed the same (2018). During the 2012 cycle the segment remained impaired for recreation use since there was no new data since the 2010 cycle. During the 2014 cycle the segment remained impaired for recreation use since there was no new data since the 2010 cycle. No new data has been collected since 2010 cycle, the segment will remain impaired for recreation until further sampling is conducted. New data was collected in 2022 cycle but remained insufficient due to not enough data to analyze geometric mean, therefore it will remain impaired. During the 2024 cycle the segment had no new data, the E.coli impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J07R_BWD01A00 / Butterwood Creek / Butterwood Creek from its headwaters to its mouth at the Appomattox River.	4A	Escherichia coli (E. coli)	2010	L	5.62

Butterwood Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.62

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J08R-01-BAC Flat Creek

Cause Location: Flat Creek from Nibbs Creek to the Appomattox River.

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Flat Creek was assessed not supporting of the Recreation use support goal based on fecal coliform standard violations recorded at the Route 604 bridge (2-FLA001.95). In the current cycle, the bacteria impairment switched to E. coli.

Bacteria TMDL for Flat Creek was included in the Appomattox River development report and was approved by EPA 8/30/2004. The segment is now assessed at Cat 4A.

In 2010 cycle the segment remained impaired for E coli with an exceedance rate of 15/37. In 2012 cycle the segment remained impaired for E coli with an exceedance rate of 22/44. In 2014 cycle the segment remained impaired for E coli with an exceedance rate of 25/54. In 2016 cycle the segment remained impaired for E coli with an exceedance rate of 20/48 at station 2-FLA001.95. In the 2018 cycle the segment remained impaired for E.coli with an exceedance rate of 12/38 at station 2-FLA001.95 and 2/4 at station 2DFLA002.67. During the 2020 cycle the segment remained impaired for E.coli at station 2DFLA002.67 with an exceedance rate of 13/27. During the 2022 cycle the segment remained impaired for E.coli. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J08R_FLA01A00 / Flat Creek / Flat Creek from the confluence with Nibbs Creek to the mouth at the Appomattox River.	4A	Escherichia coli (E. coli)	2006	L	4.1

Flat Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.1

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J08R-02-BAC Flat Creek

Cause Location: Mainstem from its headwater to Nibbs

Cause City/County: Amelia County; Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: For 2008 assessment the segment was assessed as impaired for recreational use due to E. Coli exceedance rate of 3 out of 10 at route 642 bridge (2-FLA018.71).A Bacteria TMDL for a downstream portion of Flat Creek was included in the Appomattox River development report and was approved by EPA 8/30/2004. This newly impaired segment is assessed at Cat 4A.

For 2010 assessment the segment was assessed as impaired for recreational use due to E. Coli exceedance rate of 3/10 at route 642 bridge (2-FLA018.71). and 5/17 at station 2-FLA013.95, and 7/17 at station 2-FLA028.98.

For 2012 assessment the segment was assessed as impaired for recreational use due to E. Coli exceedance rate of 3/10 at route 642 bridge (2-FLA018.71). and 11/41 at station 2-FLA013.95, and 14/41 at station 2-FLA028.98.

For 2014 assessment the segment was assessed as impaired for recreational use due to E. Coli exceedance rate of 3/12 at route 642 bridge (2-FLA018.71). and 12/53 at station 2-FLA013.95, and 19/52 at station 2-FLA028.98.

For 2016 assessment the segment was assessed as impaired for recreational use due to E. Coli exceedance rate of 3/12 at route 642 bridge (2-FLA018.71). and 8/48 at station 2-FLA013.95, and 15/47 at station 2-FLA028.98.

For 2018 assessment the segment was assessed as impaired for recreational use due to E. Coli exceedance rate of 3/12 at route 642 bridge (2-FLA018.71). and 5/42 at station 2-FLA013.95, and 14/41 at station 2-FLA028.98.

During the 2020 cycle the segment remained impaired for recreational use due to E.coli exceedance rates of 9/54 at station 2-FLA013.95 and 23/54 at station 2-FLA028.98. During the 2022 cycle the segment remained impaired for E.coli. During the 2024 cycle new data was collected at all three stations(3/5 at all sites). 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-J08R_FLA02A02 / Flat Creek / Headwaters to confluence with Nibbs Creek. Segment extended during the 2006 cycle.	4A	Escherichia coli (E. coli)	2008	L	29.9

Flat Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			29.9

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J09R-01-BAC Nibbs Creek

Cause Location: Nibbs Creek from Amelia Courthouse Sewage Treatment Plant to confluence with Flat Creek.

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Nibbs Creek was assessed in 1998 as fully supporting but threatened of the Recreation use goals based on sampling at the Route 609 bridge. The segment was identified to Virginia for listing consideration during the next cycle. The segment was subsequently listed as impaired during the 2002 cycle, therefore the TMDL was due in 2010.

In addition, during the year 2002 cycle, an UT to Nibbs Creek was considered impaired for Recreation Use based on monitoring at the Rt. 609 bridge (2-XQK000.15 and previously called PL-43B). The TMDL for this segment was due in 2014.

In the 2006 cycle, the bacteria impairment switched to E. coli. Bacteria TMDL for Nibbs Creek was included in the Appomattox River development report and was approved by EPA 8/30/2004. The segment is now assessed at Cat 4A for recreation use.

In 2010 cycle E.coli exceedances were still present. 7/9 exceedances at station 2-NBB001.54, and 4/8 at station 2-NBB003.65.

In 2012 cycle the segment remained impaired for the recreation use due to E.coli exceedances. There was no new data at station 2-NBB001.54 so that remains impaired, and 3/11 at station 2-NBB002.92.

There is no new data for the 2014 cycle so impairments will remain. There is no new data for the 2016 and 2018 cycle so impairment for E.coli will remain. During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 6/12 at stations 2-NBB001.54 and 2-NBB002.92. During the 2022 cycle the segment remained impaired for E.coli. During the 2024 cycle the segment was insufficient for E.coli, therefore the impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J09R_NBB01A98 / Nibbs Creek / Nibbs Creek from the Amelia Courthouse STP to the confluence with Flat Creek. Segment also includes an UT to Nibbs Creek from station 2-XQK000.15 (Hog Farm station PL-43B).	4A	Escherichia coli (E. coli)	2006	L	5.47

Nibbs Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.47

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J09R-02-BAC Nibbs Creek

Cause Location: Start of Nibbs Creek at the confluence of North and South Branches to the site of the previous Amelia courthouse STP.

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: For 2010 assessment the segment was assessed as impaired for recreational use due to E.coli an exceedance rate of 4/12.

During the 2012 cycle the segment was impaired for E. coli with an exceedance rate of 13/35.

During the 2014 cycle the segment was impaired for E. coli with an exceedance rate of 17/47.

During the 2016 cycle the segment was impaired for E. coli with an exceedance rate of 18/47.

During the 2018 cycle the segment was impaired for E. coli with an exceedance rate of 18/42. During the 2020 cycle the E.coli impairment remains at station 2-NBB005.84 with an exceedance rate of 22/51. During the 2022 cycle the segment remained impaired for E.coli. During the 2024 cycle no new data was collected. E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J09R_NBB01B10 / Nibbs Creek / Start of Nibbs Creek at the confluence of North and South Branches to the site of the previous Amelia courthouse STP.	4A	Escherichia coli (E. coli)	2010	L	0.64

Nibbs Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.64

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

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Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: J09R-03-BAC Nibbs Creek

Cause Location: From Rt. 301 Bridge to the confluence of North and South Branches

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2012 cycle the segment was impaired for recreation with an E.coli exceedance rate of 8/11 at station 2-NBX001.10. This impairment will be nested into the Appomattox TMDL.

During the 2014 cycle there was no new data, the segment remains impaired for E.coli.

During the 2016 cycle no new data was collected so the segment remains impaired for E.coli

During the 2018 cycle the segment remained impaired for benthics and E.coli with an exceedance rate of 10/13. During the 2020 cycle the segment remained impaired for E.coli with an exceedance rate of 9/12 at station 2DNBX002.33. During the 2022 cycle no new data was collected. During the 2024 cycle no data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J09R_NBX01A12 / Nibbs Creek South Branch / Headwaters to the confluence of North and south branches. Changed from NBB to NBX in 2018 cycle	4A	Escherichia coli (E. coli)	2012	L	5.87

Nibbs Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.87

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J09R-04-BEN Nibbs Creek South Branch

Cause Location: Nibbs Creek South Branch

Cause City/County: Amelia County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2014 cycle the segment became impaired for aquatic life due to Benthics at station 2DNBX002.33. During the 2016 cycle no new data was collected so the segment remains impaired for benthics at station 2DNBX002.33. During the 2018 cycle the segment remained impaired for benthics. During the 2020 cycle no new benthic data was collected and it remains impaired. During the 2022 cycle new benthic data was collected and it remains impaired. During the 2024 cycle no new data was collected and the benthics remain impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J09R_NBX01A12 / Nibbs Creek South Branch / Headwaters to the confluence of North and south branches. Changed from NBB to NBX in 2018 cycle	5A	Benthic Macroinvertebrates Bioassessments	2014	H	5.87

Nibbs Creek South Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.87

Sources: Source Unknown

James River Basin

Cause Group Code: J10R-01-BEN UT to Appomattox River

Cause Location: Mainstem to Appomattox

Cause City/County: Amelia County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2008 cycle this segment is impaired for aquatic life use due to benthic impairment at fresh water probabilistic monitoring station 2-XUE000.31

During the 2010 cycle this segment is impaired for aquatic life use due to benthic impairment at fresh water probabilistic monitoring station 2-XUE000.31.

No new data has been collected since 2010 cycle so the impairment will still remain until further analysis.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J10R_XUE01A06 / UT to Appomattox River / Headwaters to the mouth	5A	Benthic Macroinvertebrates Bioassessments	2008	L	1.49

UT to Appomattox River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.49

Sources: Source Unknown

James River Basin

Cause Group Code: J10R-02-DO Goodes Creek

Cause Location: from the dam of the pond located at approximately 2.73 miles from the mouth to the Appomattox

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: During the 2010 cycle the segment was impaired for aquatic life use due to low DO with an exceedance rate of 2/14 at station 2-GOC001.19., and assessed as Category 5C.

During the 2012 cycle the segment was impaired aquatic life use due to low DO with an exceedance rate of 3/23 at station 2-GOC001.19.

No new data has been collected since 2012 cycle so the impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J10R_GOC01A08 / Goodes Creek / from the dam of the pond located at approximately 2.73 miles from the mouth to the Appomattox	5C	Dissolved Oxygen	2010	L	2.92

Goodes Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.92

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

James River Basin

Cause Group Code: J10R-03-BAC Smacks Creek

Cause Location: Headwaters to mouth

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: The 2010 cycle this segment was impaired for recreation use due to E. Coli with an exceedance rate of 2/12 at station 2-SMK002.57.

The 2012 cycle this segment was impaired for recreation use due to an E. Coli exceedance rate of 3/11 at station 2-SMK006.57, and station 2-SMK002.57 remained impaired for E.Coli since no new data had been collected there since 2010 cycle. No new data has been collected since 2012 cycle so the impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J10R_SMK01A06 / Smacks Creek / Headwaters to mouth	4A	Escherichia coli (E. coli)	2010	L	9.07

Smacks Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.07

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J10R-03-DO Smacks Creek

Cause Location: Headwaters to mouth

Cause City/County: Amelia County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: The 2012 cycle the segment was impaired for aquatic life use at station 2-SMK006.57 for DO with an exceedance rate of 3/9. No new data has been collected since 2012 cycle so the impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J10R_SMK01A06 / Smacks Creek / Headwaters to mouth	5C	Dissolved Oxygen	2012	L	9.07

Smacks Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			9.07

Sources: Natural Sources

James River Basin

Cause Group Code: J11L-02-DO Lake Nottoway (Lee Lake)

Cause Location: Extent of backwater for Lake Nottoway (Lee Lake)

Cause City/County: Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: During the 2022 cycle the segment became impaired for Dissolved Oxygen with an exceedance rate of 3/23 at station 2-LDJ000.60. During the 2024 cycle new data was collected and the lake remained impaired for DO.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11L_LDJ01A98 / Lake Nottoway (Lee Lake) / Extent of backwater for Lake Nottoway (Lee Lake)	5A	Dissolved Oxygen	2022	L	161.07

Lake Nottoway (Lee Lake)

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		161.07	

Sources: Dam or Impoundment; Natural Sources

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Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: J11R-03-BAC Bland Creek

Cause Location: Bland Creek from its headwaters to the confluence with Cellar Creek

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2012 cycle the segment was impaired recreation use for E.coli at station 2-BLO001.85(5/36). During the 2014 cycle the segment was delisted and fully supporting. During the 2016 cycle the segment was impaired for E. Coli (6/48). During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli Impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_BLO01A00 / Bland Creek / Bland Creek from its headwaters to the confluence with Cellar Creek.	4A	Escherichia coli (E. coli)	2012	L	6.51

Bland Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.51

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-03-DO Bland Creek

Cause Location: Bland Creek from its headwaters to the confluence with Cellar Creek

Cause City/County: Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: During the 2010 cycle the segment was impaired for aquatic life use due to low D.O. with an exceedance rate of 2/12 at station 2-BLO001.85 .

During the 2012 cycle the segment was impaired for aquatic life use due to low D.O. at station 2-BLO001.85(10/35).

During the 2014 cycle the segment was impaired for aquatic life use due to low D.O. at station 2-BLO001.85(13/47).

During the 2016 cycle the segment was impaired for DO(15/46). During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the Dissolved Oxygen Impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_BLO01A00 / Bland Creek / Bland Creek from its headwaters to the confluence with Cellar Creek.	5C	Dissolved Oxygen	2010	L	6.51

Bland Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.51

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

James River Basin

Cause Group Code: J11R-04-BAC Cellar Creek

Cause Location: Cellar Creek from its headwaters to mouth at Deep Creek

Cause City/County: Amelia County; Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2010 cycle the segment was impaired for recreation use with an E.coli exceedance rate of 2/10 at station 2-CLR004.04, And an exceedance rate of 2/12 at station 2-CLR007.04.

During the 2012 cycle Both stations were impaired for recreation use with E.coli exceedance rates of 2/10 at station 2-CLR004.04, and 8/36 at station 2-CLR007.04.

During the 2014 cycle the segment remained impaired for recreation use for E.coli, New data was only collected at station 2-CLR007.04 with an exceedance rate of 12/48 for E.coli.

During the 2016 cycle the segment remained impaired for E. Coli at station 2-CLR007.04 with an exceedance rate of 12/46. The impaired area and cause group code was extended to include the lower impairment in VAP-J11R_CLR01B10(lower Cellar). Lower cellar became impaired for e.coli during the 2016 cycle. The lower station 2-CLR001.23 was impaired for e.coli with an exceedance rate of 14/46 and also nested within the Appomattox TMDL.

During the 2018 and 2020 cycle there was no new data. During the 2022 cycle new data was collected and the segment remained impaired for E.coli. During the 2024 cycle new data was collected that was insufficient therefore the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_CLR01A00 / Cellar Creek / Cellar Creek from its headwaters downstream to the confluence with Bland Creek. Segment expanded during the 2010 cycle.	4A	Escherichia coli (E. coli)	2010	L	10.97
VAP-J11R_CLR01B10 / Cellar Creek / From the confluence of Bland Creek to the mouth at Deep Creek	4A	Escherichia coli (E. coli)	2016	L	2.70

Cellar Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.67

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-04-DO Cellar Creek

Cause Location: From the confluence of Bland Creek to the mouth at Deep Creek

Cause City/County: Amelia County; Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: During the 2012 cycle the segment was impaired for aquatic life use with a D.O. exceedance rate of 5/35 at station 2-CLR001.23.

During the 2014 cycle the segment was impaired for aquatic life use with a DO exceedance rate of 9/47 at station 2-CLR001.23.

During the 2016 cycle the segment was impaired for DO with an exceedance rate of 14/46.

During the 2018, 202 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the dissolved oxygen impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_CLR01B10 / Cellar Creek / From the confluence of Bland Creek to the mouth at Deep Creek	5C	Dissolved Oxygen	2012	L	2.7

Cellar Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.7

Sources: Natural Sources

James River Basin

Cause Group Code: J11R-05-BAC Woody Creek

Cause Location: Woody Creek from its headwaters to its mouth at Deep Creek.

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2010 cycle the segment was impaired for E.coli at station 2-WDY003.04 with an exceedance rate of 2/12, And nested with the Deep Creek TMDL and classified category 4A.

During the 2012 cycle the segment was impaired for E.coli at station 2-WDY003.04 with an exceedance rate of 8/36, and at station 2DWDY005.35 with an exceedance rate of 2/2.

During the 2014 cycle the segment was impaired for E.coli at station 2-WDY003.04 with an exceedance rate of 12/48, and at station 2DWDY005.35 with an exceedance rate of 2/2.

During the 2016 cycle the segment was impaired for E.coli at station 2-WDY003.04 with an exceedance rate of 11/47, and no new data was collected at station 2DWDY005.35.

During the 2018 cycle the segment remained impaired for E.coli with an exceedance rate of 5/29 at station 2-WDY003.04. During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_WDY01A00 / Woody Creek / Woody Creek from its headwaters to its mouth at Deep Creek.	4A	Escherichia coli (E. coli)	2010	L	7.98

Woody Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.98

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-06-BAC Lees Creek

Cause Location: from its headwaters to Lake Nottoway (Lee Lake)

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2010 cycle the segment was impaired for E. Coli with an exceedance rate of 2/11.

During the 2012 cycle the segment was impaired for E. Coli with an exceedance rate of 8/32.

During the 2014 cycle the segment was impaired for E. Coli with an exceedance rate of 12/42.

During the 2016 cycle the segment was impaired for E. Coli with an exceedance rate of 13/42.

During the 2018 cycle the segment was impaired for E. Coli with an exceedance rate of 8/24. During the 2020 and 2022 cycle no new data was collected. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_LDJ01A10 / Lees Creek / From it's headwater to Lake Nottoway (Lee Lake)	4A	Escherichia coli (E. coli)	2010	L	3.32

Lees Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.32

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-07-BAC UT to Winningham Creek (easternmost)

Cause Location: East UT to Winningham Creek at Rt. 632 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: During the 2010 cycle the segment was impaired for recreation use with a E.coli exceedance rate of 3/3 at station 2-XZN001.15.

During the 2012 cycle this segment was impaired for recreation use with a E.coli exceedance rate of 27/27 at station 2-XZN001.15.

During the 2014 cycle this segment was impaired for recreation use with a E.coli exceedance rate of 39/39 at station 2-XZN001.15.

During the 2016 cycle the segment was impaired for E.coli with an exceedance rate of 48/48.

During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_XZN01A10 / UT to Winningham Creek (easternmost) / East UT to Winningham Creek at Rt. 632 from its headwaters to the mouth	4A	Escherichia coli (E. coli)	2010	L	2.16

UT to Winningham Creek (easternmost)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.16

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-08-BAC Beaverpond Creek

Cause Location: Beaverpond Creek from its headwaters to the confluence with Beaverpond

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2012 cycle the segment was impaired for recreation use with a E.coli exceedance rate of 3/11 at station 2-BVP006.58. This will be nested in the Appomattox TMDL.

During the 2014, 2016, 2018, 2020 and 2022 cycle there was no new data so the segment remains impaired for E. coli. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_BVP01A00 / Beaverpond Creek / Beaverpond Creek from its headwaters to the limit of Beaver Pond.	4A	Escherichia coli (E. coli)	2012	L	6.48

Beaverpond Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.48

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-09-BAC Sweathouse Creek

Cause Location: Sweathouse Creek from the headwaters to the confluence with Deep Creek

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2012 cycle this segment was impaired for E.coli with an exceedance rate of 4/34.

During the 2014 cycle this segment was impaired for E.coli with an exceedance rate of 6/45.

During the 2016 cycle this segment was impaired for E.coli with an exceedance rate of 8/45.

During the 2018 cycle this segment was impaired for E.coli with an exceedance rate of 7/28.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_SWT01A00 / Sweathouse Creek / Sweathouse Creek from the headwaters to the confluence with Deep Creek.	4A	Escherichia coli (E. coli)	2012	L	11.41

Sweathouse Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.41

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-10-BAC Winningham Creek

Cause Location: Winningham Creek from the headwaters to the confluence with Deep Creek

Cause City/County: Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During 2012 cycle the segment became impaired for recreation use with a E.coli exceedance rate of 6/14 at station 2-WGM003.15.

No new data has been collected since the 2012 cycle 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-J11R_WGM01A00 / Winningham Creek / Winningham Creek from its headwaters to its mouth at Deep Creek.	4A	Escherichia coli (E. coli)	2012	L	5.94

Winningham Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.94

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-11-BAC UT to Winningham Creek (West)

Cause Location: West UT to Winningham 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: During the 2012 cycle the segment became impaired for E.coli with an exceedance rate of 9/27.

During the 2014 cycle the segment remained impaired for E.coli with an exceedance rate of 13/39.

During the 2016 cycle the segment remained impaired for E.coli with an exceedance rate of 16/48.

During the 2018 cycle the segment remained impaired for E.coli with an exceedance rate of 8/27. During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_XFT01A10 / UT to Winningham Creek / West UT to Winningham Creek at Rt. 632 from its headwaters to mouth	4A	Escherichia coli (E. coli)	2012	L	2.07

UT to Winningham Creek (West)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.07

Sources: Agriculture; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-12-BAC Deep Creek

Cause Location: Deep Creek from Beaverpond Creek to the mouth.

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: The 2010 Cycle the segment became impaired for E. coli with an exceedance rate of 4/21.

During the 2012 cycle the segment remained impaired for E. Coli with an exceedance rate of 13/38.

During the 2014 cycle the segment remained impaired for E. Coli with an exceedance rate of 18/48.

During the 2016 cycle the segment remained impaired for E. Coli with an exceedance rate of 16/48. During the 2018 cycle the segment remained impaired for E. Coli with an exceedance rate of 12/43.

During the 2020 cycle the segment remained impaired for E. Coli with an exceedance rate of 16/54. During the 2022 cycle the segment remained impaired for E. Coli. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_DPC01C02 / Deep Creek / Deep Creek from Beaverpond Creek to the mouth.	4A	Escherichia coli (E. coli)	2010	L	1.66

Deep Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.66

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-13-BAC Rocky Run

Cause Location: Rocky Run from the headwaters to the confluence with Deep Creek

Cause City/County: Amelia County; Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2012 cycle this segment was impaired for E. Coli with an exceedance rate of 7/22, and will be nested in the Appomattox TMDL.

During the 2014 cycle this segment was impaired for E. Coli with an exceedance rate of 12/32.

During the 2016 cycle this segment was impaired for E. Coli with an exceedance rate of 14/41.

During the 2018 cycle this segment was impaired for E. Coli with an exceedance rate of 10/23.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_RKN01A12 / Rocky Run / Rocky Run from its headwaters to the confluence with Deep Creek	4A	Escherichia coli (E. coli)	2012	L	3.43

Rocky Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.43

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J11R-14-BAC West Creek

Cause Location: Mainstem of West Creek

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: VAP-J11R-14 VAP-J11R-06(old)

West Creek was initially impaired for fecal coliform in 2002. In the 2006 cycle, E. coli. was added as an impairing cause.

Bacteria TMDL for West Creek was included in the Appomattox River development report and was approved by EPA 8/30/2004. The segment is now assessed as Cat. 4A, however as of the 2006 assessment cycle the EPA TMDLID was not available.

During the 2006, this segment had E. coli exceedance rate of 3/19.

During the 2008 cycle, the segment had an E.coli exceedance rate of 3/20, and the TMDLID became available.

During the 2010 cycle the segment was fully supporting for all that it was monitored for.

During the 2012 cycle there has been no new data since 2008 cycle, and remains fully supporting

During the 2014 cycle there has been no new data since 2008 cycle, and remains fully supporting

During the 2016 cycle the segment became impaired for E.coli with an exceedance rate of 2/11 at station 2-WET004.96. A TMDL was completed in 2004 for West Creek.

During the 2018 cycle the segment was impaired for E.coli with an exceedance rate of 8/29.

During the 2020 cycle the segment was impaired for E.coli with an exceedance rate of 16/53. During the 2022 cycle the segment was impaired for E.coli. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J11R_WET02A00 / West Creek / West Creek from the confluence with Tanners Branch downstream to the confluence with Deep Creek.	4A	Escherichia coli (E. coli)	2006	L	7.37

West Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.37

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J12R-01-BAC Winticomack Creek

Cause Location: Winticomack Creek from Long Branch to its mouth at the Appomattox River.

Cause City/County: Amelia County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2010 cycle the segment was impaired for recreation use for E.coli at station 2-WTK001.50 with an exceedance rate of 2/10, and was nested with the Appomattox TMDL.

There has been no new data since the 2010 cycle.

During the 2016, 2018, 2020 and 2022 cycle no new data was collected for E.coli, therefore the segment will remain impaired for E.coli. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J12R_WTK02A00 / Winticomack Creek / Winticomack Creek from the confluence with Long Branch to the confluence with the Appomattox River.	4A	Escherichia coli (E. coli)	2010	L	4.07

Winticomack Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.07

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J12R-01-BEN Winticomack Creek

Cause Location: Winticomack Creek from Long Branch to its mouth at the Appomattox River.

Cause City/County: Amelia County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2010 cycle the segment was impaired for aquatic life use for Benthics at station 2-WTK001.50.

There has been no new data since the 2010 cycle.

During the 2016 cycle the segment was impaired for Benthics, new data was collected in 2013.

During the 2018 and 2020 cycle no new data was collected. During the 2022 cycle new data was collected and the segment remained impaired for Benthics. During the 2024 cycle new benthic data was collected and the segment remained impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J12R_WTK02A00 / Winticomack Creek / Winticomack Creek from the confluence with Long Branch to the confluence with the Appomattox River.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	4.07

Winticomack Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.07

Sources: Source Unknown

James River Basin

Cause Group Code: J12R-02-BEN Winterpock Creek

Cause Location: From its headwaters to mouth.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: 2022 Bio sample is impaired for Benthics, VSCI score was well below the impairment threshold of 60. This station was monitored within the PROBMON program and accessed through private property with permission for a single visit. Future monitoring should take place at 2-WPK003.23, an accessible location.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J12R_WPK01A98 / Winterpock Creek / Headwaters to mouth at Appomattox River. In 2006, the segment was shortened based on the Natural Conditions Assessment report for Winterpock Cr.	5A	Benthic Macroinvertebrates Bioassessments	2024	L	8.43

Winterpock Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.43

Sources: Source Unknown

James River Basin

Cause Group Code: J12R-06-DO Horsepen Branch

Cause Location: Headwaters to mouth

Cause City/County: Amelia County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: Horsepen Branch is assessed as not supporting for aquatic life use goals based on a dissolved oxygen exceedance rate 2/15 and a pH violation rate of 6/15 at the Rt. 622 bridge (2-HOI001.85).

Source of the DO and pH exceedances may be attributed to natural conditions

For 2008 it was assessed as not supporting for aquatic life based on a DO and pH exceedances at station at HOI001.85, exceedance rate was 1/15 for DO and 7/15 for pH.

For the 2010 cycle the segment was impaired for pH with an exceedance rate of 5/12.And the DO was fully supporting and delisted

no new data since 2010 cycle

During the 2016 cycle the segment had insufficient data to fully assess.

During the 2018 cycle the segment became impaired for DO with an exceedance rate of 3/13.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the DO impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J12R_HOI01A00 / Horsepen Branch / Horsepen Branch from its headwaters to the confluence with the Appomattox River.	5C	Dissolved Oxygen	2006	L	4.44

Horsepen Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.44

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

James River Basin

Cause Group Code: J12R-06-PH Horsepen Branch

Cause Location: Headwaters to mouth

Cause City/County: Amelia County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/5C

Cause Description: Horsepen Branch is assessed as not supporting for aquatic life use goals based on a dissolved oxygen exceedance rate 2/15 and a pH violation rate of 6/15 at the Rt. 622 bridge (2-HOI001.85).

Source of the DO and pH exceedances may be attributed to natural conditions

For 2008 it was assessed as not supporting for aquatic life based on a DO and pH exceedances at station at HOI001.85, exceedance rate was 1/15 for DO and 7/15 for pH.

For the 2010 cycle the segment was impaired for pH with an exceedance rate of 5/12.And the DO was fully supporting and delisted

no new data since 2010 cycle

During the 2016 cycle the segment had insufficient data to fully assess.

During the 2018 cycle the segment remained impaired for pH with an exceedance rate of 2/13.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the pH impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J12R_HOI01A00 / Horsepen Branch / Horsepen Branch from its headwaters to the confluence with the Appomattox River.	5C	pH	2006	L	4.44

Horsepen Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.44

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

James River Basin

Cause Group Code: J12R-08-BAC Appomattox River

Cause Location: Appomattox River from Deep Creek To Lake Chesdin

Cause City/County: Amelia County; Chesterfield County; Nottoway County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: For the 2008 cycle The segment was impaired for Recreation use due to E.coli exceedance rate of 2/11 at station 2-APP037.08. Although not specifically addressed in the TMDL the Segment was assessed as Cat. 4A because it was in the study area for the Bacteria TMDL for the Appomattox.

During the 2010 cycle the segment remained impaired for recreation use with a E.coli exceedance rate of 2/11 at station 2-APP037.08.

During the 2012 cycle there had been no new data collected since 2008 cycle.

During the 2014 cycle the segment remained impaired for recreation use with a E.coli exceedance rate of 3/12 at station 2-APP037.08.

During the 2016 cycle the segment remained impaired for E.coli with an exceedance rate of 5/24 at station 2-APP037.

During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J12R_APP01A08 / Appomattox River / From Deep Creek Downstream to Lake Chesdin	4A	Escherichia coli (E. coli)	2008	L	8.78

Appomattox River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.78

Sources: Agriculture; Industrial Point Source Discharge; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J13R-01-DO Namozine Creek

Cause Location: Namozine Creek from its headwaters to the confluence with Tylers Branch.

Cause City/County: Amelia County; Dinwiddie County; Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: During the 2016 cycle the segment was impaired for DO with a exceedance rate of 6/12.

During the 2018 cycle the segment was impaired for DO with a exceedance rate of 9/24.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the DO impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J13R_NMZ01A00 / Namozine Creek / Namozine Creek from its headwaters to the confluence with Tylers Branch.	5C	Dissolved Oxygen	2016	L	12.91

Namozine Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			12.91

Sources: Natural Sources

James River Basin

Cause Group Code: J13R-01-PH Namozine Creek

Cause Location: Namozine Creek from its headwaters to the confluence with Tylers Branch.

Cause City/County: Amelia County; Dinwiddie County; Nottoway County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/5C

Cause Description: During the 2018 cycle the segment was impaired for pH with a exceedance rate of 4/24. During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the pH impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J13R_NMZ01A00 / Namozine Creek / Namozine Creek from its headwaters to the confluence with Tylers Branch.	5C	pH	2018	L	12.91

Namozine Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			12.91

Sources: Natural Sources

James River Basin

Cause Group Code: J14L-02-DO Lake Chesdin

Cause Location: Lake Chesdin in its entirety

Cause City/County: Amelia County; Chesterfield County; Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: During the 2022 cycle the segment had Pooled DO data that was not supporting with an overall exceedance rate of 57/450(13%). During the 2024 cycle the segment had pooled DO data that remained not supporting with an overall exceedance rate of 32/280.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J14L_APP01A00 / Lake Chesdin / Extent of backwater for Lake Chesdin	5A	Dissolved Oxygen	2022	L	3164.42

Lake Chesdin

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		3164.42	

Sources: Dam or Impoundment

James River Basin

Cause Group Code: J14R-02-BAC Stoney Creek

Cause Location: Stoney Creek from headwaters to the limit with Lake Chesdin

Cause City/County: Chesterfield County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2020: 33319, 05/21/2004

During the 2020 cycle recreation use became impaired for E.coli with an exceedance rate of 8/12 at station 2DSTY001.96, this will be nested within the Appomattox TMDL that was EPA approved in 2004. During the 2022 cycle no new data was collected. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J14R_STY01A08 / Stoney Creek / Headwaters to Lake Chesdin	4A	Escherichia coli (E. coli)	2020	L	2.59

Stoney Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.59

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J14R-03-BAC Whipponock Creek

Cause Location: Whipponock Creek from its headwaters to the limit of Lake Chesdin.

Cause City/County: Chesterfield County; Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2010 cycle the segment was impaired for recreation use with a E.coli exceedance rate of 2/15 at station 2-WNK003.38. This Recreation impairment was nested with the Appomattox TMDL that was approved on 8/30/2004.

During the 2012 cycle the segment remained impaired for recreation use for E.coli since there has been no new data since the 2010 cycle.

During the 2014 cycle the segment remained impaired for recreation use with a E.coli exceedance rate of 4/17 at station 2-WNK003.38.

During the 2016 cycle the segment remained impaired for E.coli with an exceedance rate of 5/23. During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J14R_WNK01A00 / Whipponock Creek / Whipponock Creek from its headwaters to the limit of Lake Chesdin.	4A	Escherichia coli (E. coli)	2010	L	6.82

Whipponock Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.82

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J14R-03-DO Whipponock Creek

Cause Location: Whipponock Creek from its headwaters to the limit of Lake Chesdin.

Cause City/County: Chesterfield County; Dinwiddie County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: During the 2016 cycle the segment became impaired due to a DO exceedance rate of 3/23.

During the 2018, 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the DO impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J14R_WNK01A00 / Whipponock Creek / Whipponock Creek from its headwaters to the limit of Lake Chesdin.	5C	Dissolved Oxygen	2016	L	6.82

Whipponock Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.82

Sources: Natural Sources

James River Basin

Cause Group Code: J15L-01-HAB Wilcox lake

Cause Location: entire lake

Cause City/County: Petersburg

Use(s): Recreation

Causes(s)/VA Category: Harmful Algal Blooms/5A

Cause Description: During the 2022 cycle, the lake was impaired of the recreation use due to a VDH harmful algal bloom advisory. The 2019advisory lasted 66 days due to elevated microcystin and cylindrospermopsin.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15L_XOV01A22 / Wilcox Lake / Wilcox Lake	5A	Harmful Algal Blooms	2022	L	18.15

Wilcox lake

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Harmful Algal Blooms - Total Impaired Size by Water Type:		18.15	

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: J15R-01-BAC Appomattox River

Cause Location: The Appomattox River from the Rohoic Creek to the fall line at the Route 1/301 bridge.

Cause City/County: Chesterfield County; Dinwiddie County; Petersburg

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2020 cycle the segment became impaired for bacteria with an E.coli exceedance rate of 5/36 at station 2-APP012.79. The bacteria TMDL for the Appomattox River was completed and approved by EPA on 8/30/2004. The segment is assessed as Cat. 4A. During the 2022 cycle the segment remained impaired with high frequency data for geometric mean and STV. During the 2024 cycle the segment was insufficient for E.coli and it remained impaired for Bacteria.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_APP01A12 / Appomattox River / The Appomattox River from the Rohoic Creek to the fall line at the Route 1/301 bridge. Virginia Scenic River	4A	Escherichia coli (E. coli)	2020	L	1.95

Appomattox River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.95

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: J15R-02-BAC Oldtown Creek

Cause Location: Oldtown Creek from the confluence with Big Branch downstream to its tidal limit.

Cause City/County: Chesterfield County; Colonial Heights

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A; Fecal Coliform/4A

Cause Description: In 2006, the segment was also assessed as not supporting for recreation use due to a fecal coliform exceedance rate of 2/12 at station 2-OTC001.54.

In 2008 there was no new data, and was not assessed for E.coli.

For the 2010 cycle The segment was impaired for E.coli (exceedance rate 2/12) at station 2-OTC001.54, and is Nested into the Appomattox TMDL.

For the 2012 cycle The segment was impaired for E.coli (exceedance rate 2/12) at station 2-OTC001.54.

No new data has been collected since 2014 cycle so the segment remains impaired for E.coli. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_OTC01A00 / Oldtown Creek / Oldtown Creek from the confluence with Big Branch to the fall line.	4A	Escherichia coli (E. coli)	2020	L	4.23

Oldtown Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.23

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_OTC01A00 / Oldtown Creek / Oldtown Creek from the confluence with Big Branch to the fall line.	4A	Fecal Coliform	2006	L	4.23

Oldtown Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			4.23

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J15R-02-BEN Oldtown Creek

Cause Location: Oldtown Creek from the confluence with Big Branch downstream to its tidal limit.

Cause City/County: Chesterfield County; Colonial Heights

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: For the 2010 cycle the segment was impaired for aquatic life use from Benthics at station 2-OTC001.54.

For the 2012 cycle the segment was impaired for Benthics at station 2-OTC001.54.

During the 2014, 2016, 2018 and 2020 cycle there has been no new data collected so the segment remains impaired for Benthics. During the 2022 cycle the segment had new benthic data that was impaired. During the 2024 cycle no new data was collected and the Benthic impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_OTC01A00 / Oldtown Creek / Oldtown Creek from the confluence with Big Branch to the fall line.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	4.23

Oldtown Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.23

Sources: Source Unknown

James River Basin

Cause Group Code: J15R-03-BAC Harrison Creek

Cause Location: The mainstem of Harrison Creek.

Cause City/County: Chesterfield County; Colonial Heights; Petersburg

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: The segment was assessed not supporting of the Recreation use support goal based on fecal coliform violations at USGS stations 02041758 and 02041760.

In 2006, the bacteria impairment switched from fecal coliform to E. coli. Monitoring at DEQ station 2-HRA000.85 recorded E. coli exceedances at a rate of 2/4.

In 2008 cycle E. coli exceedance rate at station 2-HRA000.85 was 6/16.

no new data since 2008 cycle.

The segment remained impaired for E.coli, no new data has been collected since 2014 cycle. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_HRA01A04 / Harrison Creek / Headwaters to mouth at Appomattox River.	4A	Escherichia coli (E. coli)	2006	L	3.23

Harrison Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.23

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J15R-04-BAC Poor Creek

Cause Location: The mainstem of Poor Creek.

Cause City/County: Petersburg

Use(s): Recreation

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: In 2004, the segment was assessed not supporting of the Recreation use support goal based on fecal coliform exceedances at USGS station 02041745.

No additional data to assess for the 2006 cycle.

For 2008, 2010, 2012, and 2014 cycle there was no new data.

For 2016, 2018, 2020 and 2022 cycle E.coli was not monitored so the impairment remains. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_POR01A04 / Poor Creek / Headwaters to mouth at Appomattox River	4A	Fecal Coliform	2004	L	3.14

Poor Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			3.14

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J15R-05-BEN Rohoic Creek

Cause Location: Mainstem Rohoic Creek from headwaters to mouth including tributaries

Cause City/County: Dinwiddie County; Petersburg

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2012 cycle the segment became impaired for aquatic life use for Benthics at station 2-RHC000.58.

During the 2014, 2016, 2018 and 2020 cycle there was no new data so the Benthic Impairment remains. During the 2022 cycle new benthic data was collected and the segment remains impaired. During the 2024 cycle no new data was collected and benthics remained impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_RHC01A06 / Rohoic Creek / Headwaters to mouth at Appomattox River	5A	Benthic Macroinvertebrates Bioassessments	2012	H	13.46

Rohoic Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			13.46

Sources: Non-Point Source

James River Basin

Cause Group Code: J15R-06-BAC Lieutenant Run

Cause Location: The mainstem Lieutenant Run to mouth of Appomattox

Cause City/County: Petersburg

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: In 2008, this segment was assessed as not supporting for the recreation use due to an E. coli exceedance rate of 4/10 at station 2-LTC000.08.

no new data since 2008 cycle.

During the 2012 cycle the segment remained impaired for recreation use with a E.coli exceedance rate of 4/10 at station 2-LTC000.08 and 3/12 at station 2-LTC001.35.

New data has not been collected since 2014 cycle the segment remained impaired for E.coli since there was no new data.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_LTC01A08 / Lieutenant Run / From the headwaters to the mouth of the Appomattox	4A	Escherichia coli (E. coli)	2008	L	3.5

Lieutenant Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.5

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J15R-07-BAC Ashton Creek

Cause Location: The mainstem Ashton Creek

Cause City/County: Chesterfield County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: In 2006, this segment was assessed as not supporting for the recreation use due to an E. coli exceedance rate of 2/9 at the Rt. 746 bridge (2-ASH001.26).

In 2008 the segment was impaired for recreation use, the E.coli exceedance rate was 2/11 at station 2-ASH001.26.

During the 2018 cycle the segment remained impaired for E.coli with an exceedance rate of 4/12.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle no new data was collected and the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_ASH01A06 / Ashton Creek / Headwaters to mouth at Appomattox River 02080207	4A	Escherichia coli (E. coli)	2006	L	7.81

Ashton Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.81

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

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Impaired (Category 4 or 5) Waters in 2024

James River Basin

Cause Group Code: J15R-08-BEN Oldtown Creek

Cause Location: Headwaters to the confluence of Big Branch

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2018 cycle the segment became impaired for Benthics.

During the 2020 cycle there was no new data. During the 2022 cycle the segment remained impaired for Benthics with new data collected in 2019. During the 2024 cycle no new data was collected and Benthics remain impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_OTC01B08 / Oldtown Creek / Headwaters to the confluence of Big Branch	5A	Benthic Macroinvertebrates Bioassessments	2018	H	6.23

Oldtown Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.23

Sources: Natural Sources; Source Unknown

James River Basin

Cause Group Code: J15R-08-DO Oldtown Creek

Cause Location: Headwaters to the confluence of Big Branch

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: For the 2018 Cycle the segment was impaired for DO with an exceedance rate of 2/14. During the 2020 cycle there was no new data. During the 2022 cycle not enough data was collected to make an assessment determination so the segment remains impaired. During the 2024 cycle no new data was collected and DO remains impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_OTC01B08 / Oldtown Creek / Headwaters to the confluence of Big Branch	5C	Dissolved Oxygen	2018	L	6.23

Oldtown Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.23

Sources: Natural Sources; Source Unknown

James River Basin

Cause Group Code: J15R-08-PH Oldtown Creek

Cause Location: Headwaters to the confluence of Big Branch

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/5C

Cause Description: For the 2010 Cycle the segment was impaired for aquatic life use with a pH exceedance rate of 2/10 at station 2-OTC005.38.

For the 2012 Cycle the segment was impaired for aquatic life use with a pH exceedance rate of 2/14 at station 2-OTC005.38.

During the 2014 cycle there was no new data so the pH remained impaired.

For the 2016 Cycle the segment was impaired for pH with an exceedance rate of 2/16 at station 2-OTC005.38.

For the 2018 Cycle the segment was impaired for pH with an exceedance rate of 2/14. During the 2020 cycle there was no new data. During the 2022 cycle not enough data was collected to make an assessment determination so the segment remains impaired. During the 2024 cycle no new data was collected and pH remains impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J15R_OTC01B08 / Oldtown Creek / Headwaters to the confluence of Big Branch	5C	pH	2010	L	6.23

Oldtown Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			6.23

Sources: Natural Sources; Source Unknown

James River Basin

Cause Group Code: J15R-09-BAC Cattail Run

Cause Location: The mainstem Cattail Run

Cause City/County: Dinwiddie County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2012 cycle the segment was impaired for recreation use with a E.coli exceedance rate of 5/12 at station 2-CLC000.62. The segment will be nested in the Appomattox TMDL.

No new data has been collected since 2014 cycle and 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-J15R_CLC01A12 / Cattail Run / Mainstem of Cattail Run	4A	Escherichia coli (E. coli)	2012	L	4.27

Cattail Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.27

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J16R-01-BAC Swift Creek

Cause Location: Swift Creek from Turkey Creek downstream to the normal pool of Swift Creek Reservoir.

Cause City/County: Chesterfield County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: In 1998 the segment was listed as fully supporting but threatened of the Recreation Use goal. During the 2002 cycle, the segment was downgraded to partially supporting. During the year 2004 cycle, the segment was assessed not supporting of the Recreation use goal based on fecal coliform exceedances at the Route 657 bridge (2-SFT036.00). The fecal TMDL was due in 2014.

Bacteria TMDL for Swift Creek was included the TMDL for the Appomattox River development report and was approved by EPA 8/30/2004. The segment is now assessed as Cat 4A, however as of the 2006 assessment cycle the EPA TMDLID was not available.

Swift Creek was initially assessed for fecal coliform in 2002 . In the 2006 cycle, the bacteria impairment switched to E. coli. During the 2006 cycle, the exceedance rate for E. coli was 4/22 at 2-SFT036.00.

For the 2008 cycle there was an impairment for recreation use, the E.coli. exceedance rate was 4/23 at station 2-SFT036.00.

During the 2010 cycle the segment was still impaired for recreation use with a E.coli exceedance rate of 2/19 at station 2-SFT036.00.

No new data has been collected since 2010 cycle so the impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J16R_SFT01A00 / Swift Creek / Swift Creek from the confluence with Turkey Creek downstream to the limit of Swift Creek Reservoir.	4A	Escherichia coli (E. coli)	2006	L	1.8

Swift Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.8

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J16R-02-DO Blackman Creek

Cause Location: Mainstem from its headwaters to its mouth at the confluence of Deep Creek and Horsepen Creek

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: The segment is considered impaired of the Aquatic Life Use based on a dissolved oxygen exceedances at the Route 668 bridge (2-BCM000.79). In addition, phosphorus was listed as an observed effect in the segment.

The DO standards exceedance rate for Blackman Creek was 6/12 at the Rt. 668 bridge. However, it is suspected the low DO is due to natural conditions of the watershed. Therefore, for the 2006 cycle, Blackman Creek is assessed as Cat. 5C.

The segment also had observed effects for violation in Total Phosphorus standards with exceedences of 2/12.

The 2008 cycle the segment was impaired for the aquatic life use. the exceedence rate for DO was 6/12 at station 2-BCM000.79.

There is no new data since the 2008 and 2020 cycle.

There is no new data for the 2014 cycle.

During the 2016 cycle the segment was impaired for DO(4/12) at station 2-BCM000.79. There is no new data for the 2018 cycle. During the 2022 cycle the segment remained impaired for DO with new data (1/10). During the 2024 cycle no new data was collected and the segment remained impaired for DO.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J16R_BCM01A04 / Blackman Creek / Headwaters to mouth HUC: 02080207	5C	Dissolved Oxygen	2004	L	4.57

Blackman Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.57

Sources: Natural Sources

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James River Basin

Cause Group Code: J16R-03-BAC Horsepen Creek

Cause Location: Headwaters to Mouth

Cause City/County: Chesterfield County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: Bacteria TMDL for Horsepen Creek was included the TMDL for the Appomattox River development report and was approved by EPA 8/30/2004. The segment is now assessed as Cat 4A.

During the 2018 cycle the segment was impaired for E.coli(3/9) at station 2-HEP000.23.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle the segment had no new data within the data window, therefore the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J16R_HEP01A04 / Horsepen Creek / Headwaters to mouth	4A	Escherichia coli (E. coli)	2018	L	3.58

Horsepen Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.58

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J16R-03-PH Horsepen Creek

Cause Location: Headwaters to Mouth

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/5C

Cause Description: During the 2018 cycle the segment was impaired for pH(7/9) at station 2-HEP000.23.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle the segment had no new data within the data window, therefore the pH impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J16R_HEP01A04 / Horsepen Creek / Headwaters to mouth	5C	pH	2018	L	3.58

Horsepen Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.58

Sources: Source Unknown

James River Basin

Cause Group Code: J17E-01-BAC Swift Creek

Cause Location: Mainstem from confluence with Timsbury Creek downstream to mouth

Cause City/County: Chesterfield County; Colonial Heights

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: In 2006 this segment was assessed as not supporting for the recreation use due to an E. coli violation rate of 3/4 at 2DSFT001.18.

Although this segment was not specifically addressed in the Appomattox bacteria TMDL report, The upstream and downstream portions of the Appomattox were included, therefore this segment will be addressed in the implementation phase and is assessed as Cat. 4A.

in 2008 this segment was impaired for the recreation use with a violation rate of 5/16 at station 2DSFT001.18.

There was no new data since the 2008 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17E_SFT01D04 / Swift Creek / Tidal Swift Creek from the confluence with Timsbury Creek downstream to the mouth at the Appomattox River APPTF.	4A	Escherichia coli (E. coli)	2006	L	0.087

Swift Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	0.087		

Sources: Agriculture; Industrial Point Source Discharge; Municipal Point Source Discharges; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: J17L-01-DO Swift Creek Lake

Cause Location: Swift Creek Lake

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: In 2006 the reservoir was impaired for DO in bottom waters during summer months due to stratification and the lake being drained in 2003. The Trophic State Index (TSI) is acceptable except for Secchi TSI = 67 (TSI >60). Since the Secchi TSI is larger than the Phos and Chl_a TSIs, the Secchi TSI is ignored and the segment is considered naturally impaired due to stratification.

For 2008 cycle there was no new data; Swift Creek Lake does not have defined nutrient criteria therefore the segment was moved to Cat 5A.

During the 2010 cycle the segment was impaired for aquatic life use with a DO exceedance rate of 9/58 at station 2-SFT022.14.

No new data since the 2010 cycle, the DO impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17L_SFT01A98 / Swift Creek Lake / Swift Creek Lake	5A	Dissolved Oxygen	2006	L	107.74

Swift Creek Lake

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		107.74	

Sources: Changes in Ordinary Stratification and Bottom Water Hypoxia/Anoxia; Dam or Impoundment

James River Basin

Cause Group Code: J17L-02-BAC Lakeview Reservoir

Cause Location: Lakeview Reservoir

Cause City/County: Chesterfield County; Colonial Heights

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2016 cycle the segment was impaired for E.coli with an exceedence rate of 3/14 at 2-SFT006.10.

No new data during the 2018, 2020, 2022 and 2024 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17L_SFT02A08 / Lakeview Reservoir / Backwater to dam	4A	Escherichia coli (E. coli)	2016	L	43.5

Lakeview Reservoir

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:		43.5	

Sources: Agriculture; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: J17R-01-BEN Swift Creek

Cause Location: Swift Creek from the Swift Creek Lake dam downstream to its confluence with Licking Creek.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: For the 2010 cycle the segment was impaired for Benthics at station 2-SFT019.02.

During the 2012 cycle the segment was impaired at station 2-SFT019.02 for Benthics. During the 2014, 2016, 2018 and 2020 cycle there was no new data so the segment remains impaired for Benthics. During the 2022 cycle new benthic data was collected and the segment remains impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_SFT01B98 / Swift Creek / Swift Creek from the Swift Creek Lake dam downstream to the confluence with Licking Creek.	5A	Benthic Macroinvertebrates Bioassessments	2010	H	7.26

Swift Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.26

Sources: Dam or Impoundment; Source Unknown

James River Basin

Cause Group Code: J17R-01-DO Swift Creek

Cause Location: Swift Creek from the Swift Creek Lake dam downstream to its confluence with Licking Creek.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: In 1998, Swift Creek was assessed as threatened of the Aquatic Life Use due to dissolved oxygen exceedances. In 2002, the segment was considered partially supporting of the Aquatic Life use support goal based on water quality monitoring performed at the Route 655 bridge (2-SFT019.15). During the year 2004 cycle, the segment continued to show dissolved oxygen problems.

In 2006, the DO exceedance rate was 3/22 at the Rt. 655 bridge. However, it is suspected the low DO violations in this segment of Swift Creek are due to an upstream impoundment, therefore will be assessed as Cat. 5C.

In 2008 cycle, the DO exceedance rate was 4/26 at the Rt. 655 bridge. However, it is suspected the low DO violations in this segment of Swift Creek are due to an upstream impoundment, therefore will be assesses as Cat. 5C.

In the 2010 cycle the segment remained impaired for DO with an exceedance rate of 5/33.it is suspected the low DO exceedances in this segment of Swift Creek are due to an upstream impoundment, therefore will be assesses as Cat. 5A.

During the 2012 cycle the segment was impaired for aquatic life use for DO at station 2-SFT019.15. However, it is suspected the low DO exceedances in this segment of Swift Creek are due to an upstream impoundment, therefore will be assessed as Cat. 5C.

During the 2014,2016, and 2018 cycle there was no new data so the segment remains impaired for DO.

During the 2020 cycle the segment remained impaired for DO with an exceedance rate of 2/12 at station 2-SFT019.15. During the 2022 cycle the segment remained impaired for DO with an exceedance rate of 6/27 at station 2-SFT019.15.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_SFT01B98 / Swift Creek / Swift Creek from the Swift Creek Lake dam downstream to the confluence with Licking Creek.	5A	Dissolved Oxygen	2002	L	7.26

Swift Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			7.26

Sources: Dam or Impoundment; Source Unknown

James River Basin

Cause Group Code: J17R-03-BAC Franks Branch

Cause Location: Franks Branch from the headwaters to the mouth at Swift Creek.

Cause City/County: Chesterfield County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED 2020:33316, 05/21/2004 During the 2020 cycle the segment became impaired for E.coli with an exceedance rate of 5/12 at station 2-FNK001.12 Bacteria TMDL for the Appomattox River development report was completed and approved by EPA on 8/30/2004. During the 2022 cycle no new data was collected. During the 2024 cycle the segment had no new data within the data window, therefore the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_FNK01A00 / Franks Branch / Franks Branch from the headwaters to the mouth at Swift Creek.	4A	Escherichia coli (E. coli)	2020	L	10.36

Franks Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.36

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J17R-04-BAC Swift Creek

Cause Location: Swift Creek from the confluence with Licking Creek downstream to its confluence with Franks Branch.

Cause City/County: Chesterfield County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: During the 2006 cycle, this segment of Swift Creek was assessed as not supporting for Recreation use due to an E. coli exceedance rate of 3/9 that was recorded at the Rt. 631 bridge (2-SFT012.84).

Bacteria TMDL for the Appomattox River development report was completed and approved by EPA on 8/30/2004. Though allocations were calculated for Swift Creek, this segment was not included in the study. Additional monitoring is recommended to better determine if the bacteria impairment will improve with implementation of the TMDL. Therefore this segment will be assessed as Cat. 4A

There was a pH exceedance rate of 7/24 recorded by Chesterfield Co at WQ-12, which is co-located with 2-SFT012.84. These data were not acceptable for an impairment but was assessed as an observed effect for low pH.

For the 2008 cycle the E.coli exceedance rate was 3/11 at station 2-SFT012.84 and still impaired for the recreation use and was changed to category 4A since the TMDL was completed for other portions of swift creek.

For the 2010 cycle the segment remained impaired for recreation use with a E.coli exceedance rate of 3/11 at station 2-SFT012.84.

no new data since 2010 cycle During the 2024 cycle no new data was collected so the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_SFT02B00 / Swift Creek / Swift Creek from the confluence with Licking Creek downstream to the confluence with Franks Branch.	4A	Escherichia coli (E. coli)	2006	L	5.12

Swift Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.12

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J17R-05-PH Church Branch

Cause Location: From headwaters to the mouth at Franks Branch

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/5C

Cause Description: For the 2008 cycle the violation rate for pH was 8/8. This segment was assessed as Insufficient information with observed effects of pH, since methodology used for samples was uncertain. During the 2024 cycle the segment had no new data within the data window, therefore the pH impairment was carried over. For the 2010 cycle the segment was impaired for aquatic life use with a pH exceedance rate of 8/9 at station 2-CUR001.58.

For the 2012 cycle the segment was impaired for aquatic life use with a pH exceedance rate of 12/13 at station 2-CUR001.58.

No new data has been collected since 2012 cycle, the segment remains impaired for pH.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_CUR01A08 / Church Branch / From headwaters to the mouth at Franks Branch	5C	pH	2010	L	2.64

Church Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			2.64

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

James River Basin

Cause Group Code: J17R-06-BAC Nuttree Branch

Cause Location: The mainstem of Nuttree Branch

Cause City/County: Chesterfield County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: NESTED2018:33316, 5/21/2004

During the 2018 cycle the segment became impaired for E.coli with an exceedance rate of 3/11 at station 2-NUT000.62.

During the 2020 and 2022 cycle there was no new data. During the 2024 cycle the segment had no new data within the data window, therefore the E.coli impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_NUT01A06 / Nuttree Branch / Nuttree Branch from headwaters to mouth at Swift Creek.	4A	Escherichia coli (E. coli)	2018	L	5.58

Nuttree Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.58

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: J17R-06-BEN Nuttree Branch

Cause Location: The mainstem of Nuttree Branch

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5A

Cause Description: During the 2012 cycle the segment was impaired for aquatic life use for Benthics at station 2-NUT000.62. During the 2014,2016 and 2018 cycle there was no new data so the segment remained impaired for Benthics. During the 2020 cycle there was no new data. During the 2022 cycle the segment had new benthic data collected and 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-J17R_NUT01A06 / Nuttree Branch / Nuttree Branch from headwaters to mouth at Swift Creek.	5A	Benthic Macroinvertebrates Bioassessments	2012	H	5.58

Nuttree Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.58

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: J17R-06-DO Nuttree Branch

Cause Location: The mainstem of Nuttree Branch

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5A

Cause Description: For the 2010 cycle 2 new stations were added Station 2-NUT002.22 was impaired for aquatic life use with a DO violation rate of 2/9. During the 2022 cycle the segment had new data that was fully supporting at station 2-NUT000.62(0/26) the Dissolved Oxygen remained impaired due to listing station not having any new data collected.

During the 2012 cycle the segment was impaired for aquatic life use with a DO violation rate of 2/13 at station 2-NUT002.22.

During the 2014 and 2016 cycle there was no new data so the segment remained impaired for DO.

During the 2018 cycle the DO remains impaired with exceedances at station 2-NUT002.22(3/12).

During the 2020 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-J17R_NUT01A06 / Nuttree Branch / Nuttree Branch from headwaters to mouth at Swift Creek.	5A	Dissolved Oxygen	2010	L	5.58

Nuttree Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			5.58

Sources: Non-Point Source; Source Unknown

James River Basin

Cause Group Code: J17R-07-PH Second Branch

Cause Location: Second Branch from Headwaters downstream to confluence with Mann Creek

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/5C

Cause Description: For the 2010 cycle the segment was impaired for pH at station 2-SEC008.84(A) with an exceedance rate of 4/12. The Chesterfield Co. stations are impaired with observed effects for pH and DO.

For the 2012 cycle the segment is impaired for aquatic life use for pH at station 2-SEC008.84(A) with an exceedance rate of 4/16. The Chesterfield Co. and ACB stations are impaired with observed effects for pH and DO.

During the 2014, 2016, 2018, 2020 and 2022 cycle there was no new data so the segment remained impaired for pH. During the 2024 cycle the segment had no new data within the data window, therefore the pH impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_SEC01B06 / Second Branch / Second Branch from headwaters downstream to confluence with Mann Creek	5C	pH	2010	L	6.22

Second Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			6.22

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

James River Basin

Cause Group Code: J17R-08-DO Swift Creek

Cause Location: Swift Creek from the Swift Creek Reservoir dam downstream to its confluence with Reedy Creek.

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4C

Cause Description: For the 2010 cycle 2 DEQ stations (2-SFT030.65, 2-SFT027.38) were added and both stations were impaired for aquatic life use for DO.

There has been no new data since 2010 cycle. During the 2018 and 2020 cycle the segment had level II citizen data for aquatic life that shows insufficient data. During the 2022 cycle the segments Dissolved Oxygen impairment was moved to 4C. Continuous monitoring demonstrated that low DO conditions downstream from the reservoir are caused by the impoundment. Based on this recent monitoring and recommendations in the Stressor Analysis, this segment should be reclassified from Category 5A to Category 4C (impaired but not needing a TMDL). During the 2024 cycle only new level II data was collected and the DO impairment remains.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_SFT01A00 / Swift Creek / Swift Creek from the Swift Creek Reservoir dam downstream to the confluence with Reedy Creek.	4C	Dissolved Oxygen	NA	NA	3.78

Swift Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.78

Sources: Dam or Impoundment; Natural Sources

James River Basin

Cause Group Code: J17R-09-BEN Swift Creek

Cause Location: Swift Creek from Reedy Branch to the limit of Swift Creek Lake

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Benthic Macroinvertebrates Bioassessments/5C

Cause Description: For the 2010 cycle the segment was impaired for aquatic life use for Benthics at station 2-SFT025.32.

For the 2012 cycle the segment was impaired for aquatic life use for Benthics at station 2-SFT025.32.

During the 2014, 2016, 2018 and 2020 cycle there was no new data and the segment remained impaired for Benthics. During the 2022 cycle new benthic data was collected and 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-J17R_SFT02A00 / Swift Creek / Swift Creek from Reedy Branch to the limit of Swift Creek Lake.	5C	Benthic Macroinvertebrates Bioassessments	2010	H	2.88

Swift Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.88

Sources: Source Unknown

James River Basin

Cause Group Code: J17R-11-DO Long Swamp

Cause Location: The mainstem of Long Swamp

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/5C

Cause Description: For the 2010 cycle the segment was assessed as not supporting for Aquatic Life use due to a pH exceedance rate of 6/11 at station 2-LNS000.69.

there has been no new data since 2010 cycle.

During the 2016 cycle the segment was impaired for DO(4/11). No new data for the 2018, 2020 and 2022 cycle. During the 2024 cycle the segment had no new data within the data window, therefore the DO impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_LNS01A10 / Long Swamp / From its headwater to the mouth at Swift Creek	5C	Dissolved Oxygen	2016	L	3.73

Long Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.73

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

James River Basin

Cause Group Code: J17R-11-PH Long Swamp

Cause Location: The mainstem of Long Swamp

Cause City/County: Chesterfield County

Use(s): Aquatic Life

Causes(s)/VA Category: pH/5C

Cause Description: For the 2010 cycle the segment was assessed as not supporting for Aquatic Life use due to a pH exceedance rate of 6/11 at station 2-LNS000.69.

there has been no new data since 2010 cycle.

During the 2016 cycle the segment was impaired for pH(2/11). No new data for the 2018, 2020 and 2022 cycle. During the 2024 cycle the segment had no new data within the data window, therefore the pH impairment was carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_LNS01A10 / Long Swamp / From its headwater to the mouth at Swift Creek	5C	pH	2010	L	3.73

Long Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.73

Sources: Natural Conditions - Water Quality Standards Use Attainability Analyses Needed; Natural Sources

James River Basin

Cause Group Code: J17R-12-BAC Licking Creek

Cause Location: From the confluence with Second Branch to swift creek

Cause City/County: Chesterfield County

Use(s): Recreation

Causes(s)/VA Category: Escherichia coli (E. coli)/4A

Cause Description: For the 2010 cycle the segment was impaired for recreation use with a E.coli exceedance rate of 3/12 at station 2-LIA000.50, and was nested into the Appomattox TMDL.

There has been no new data since 2010 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-J17R_LIA01A10 / Licking Creek / From the confluence with second Branch, to Swift Creek	4A	Escherichia coli (E. coli)	2010	L	0.47

Licking Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.47

Sources: Agriculture; Non-Point Source; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

James River Basin

Cause Group Code: JMSMH-SAV-BAY Chesapeake Bay segment JMSMH

Cause Location: This cause encompasses the complete CBP segment JMSMH.

Cause City/County: Isle Of Wight County; James City County; Newport News; Portsmouth; Suffolk; Surry County

Use(s): Aquatic Life; Shallow-Water Submerged Aquatic Vegetation

Causes(s)/VA Category: Aquatic Plants (Macrophytes)/4A

Cause Description: The Aquatic Life Use Aquatic Plants [Macrophytes] use is impaired based on not meeting the SAV criteria. EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_BAL01A06 / Ballard Creek & Bay-James R. South Shore Tributary / South shore tributary to James R., upstream of James R. Bridge. North of Ragged Island area. From end of tidal water downstream almost to confluence with James R. CBP segment JMSMH. Portion of DSS Admin Condemnation # 062-164 A (effective 20210915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.019
VAT-G11E_CKT01A04 / Chuckatuck & Brewers Creeks / South shore trib to James R., confluence upstream of Nansemond R. From headwaters of Brewers and Chuckatuck Creeks downstream to end of SF condemnation at Route 17 Bridge, Carrollton Blvd. Portion of CBP segment JMSMH. DSS shellfish harvesting condemnation # 062-080 (effective 20221015).	4A	Aquatic Plants (Macrophytes)	2006	L	0.977
VAT-G11E_CKT02A12 / Chuckatuck Creek and Mouth in James / South shore trib to James R, confluence upstream of Nansemond River. Segment includes DSS OPEN shellfish area from Carrollton Bridge downstream to mouth. Portion of CBP segment JMSMH. DSS OPEN shellfish direct harvesting condemnation # 062-080 (effective 20221015).	4A	Aquatic Plants (Macrophytes)	2014	L	0.304
VAT-G11E_CYP01A06 / Cypress Creek / South shore tributary to Pagan R, confluence near Smithfield. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 061-064 (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2006	L	0.263
VAT-G11E_DEP01A02 / Deep Creek - Lower / Located in Menchville area. Tributary to Warwick R. From Warwick Yacht Club downstream to mouth. CBP segment JMSMH. DSS (ADMIN) shellfish direct harvesting condemnation # 058-034 A (effective 20090518).	4A	Aquatic Plants (Macrophytes)	2006	L	0.100

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JMS01A06 / James River - Gravel Neck to Pagan River / From start of JMSMH salinity boundary (Hog Isl. Cr.) downstream to line between Jail Pt (Mulberry Isle) to Days Pt (mouth Pagan R). CBP segment JMSMH. DSS (OPEN) shellfish condemnation # 059-069 & 058-183(effective 20201113).	4A	Aquatic Plants (Macrophytes)	2006	L	40.260
VAT-G11E_JMS01C08 / James River - Carter Grove Area / Mainstem along north shore, from near Carter Grove. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 059-067 A (effective 20100901).	4A	Aquatic Plants (Macrophytes)	2014	L	0.404
VAT-G11E_JMS02A06 / James River - Jail Point to Hilton Village / Mainstem from line between Jail Pt (Mulberry Isle) to Days Pt (Mouth Pagan R) downstream to line Hilton Village (Newport News)/Kings Creek (Isle of Wight). CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 058-034 (effective 20201113) & 061-064 (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2006	L	24.697
VAT-G11E_JMS03A06 / James River - Along Lower North Shore / Mainstem along north shore, from Jail Point (Mulberry Isle) downstream to line following Rt. 664. CBP segment JMSMH. Portions of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518) & 056-007 A (effective 20120529).	4A	Aquatic Plants (Macrophytes)	2006	L	3.943
VAT-G11E_JMS03B06 / James River - Hilton Beach Area / North shore James R. NW of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518).	4A	Aquatic Plants (Macrophytes)	2006	L	0.110
VAT-G11E_JMS03C06 / James River - Huntington Beach Area / North shore James R. near foot of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH. Portion of DSS (ADMIN) shellfish condemnation # 058-034 A (effective 20090518).	4A	Aquatic Plants (Macrophytes)	2006	L	0.008
VAT-G11E_JMS04A06 / James River - Hilton Village to Craney Island / Mainstem from a line between Hilton Village (Newport News)/Kings Creek (Isle of Wight) downstream to the end of DSS (OPEN) shellfish direct harvesting condemnation # 059-007 (effective 20210615) & Conditionally Approved 062-080 C8 (effective 20221015) CBP segment JMSMH.	4A	Aquatic Plants (Macrophytes)	2006	L	24.105

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_JMS06A10 / James River - Outside Mouth Streeter & Hoffler Creeks / Mainstem area at Mouth of Streeter & Hoffler Creeks @ SW corner Craney Island. CBP segment JMSMH. DSS (ADMIN) shellfish condemnation # 064-018 A (effective 20210615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.156
VAT-G11E_JOG01A08 / Jones Creek - Tributary to Pagan River / South shore trib. to Pagan R. near confluence with James R. From headwaters to SR 669, including tidal tributaries. CBP segment JMSMH. Portion of DSS shellfish harvesting (Admin-PROHIBITED) # 061-064 B, D, E, F (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.229
VAT-G11E_JOG02A08 / Jones Creek - Tributary to Pagan River / South shore trib. to Pagan R. near confluence with James R. From SR 669 to mouth, including tidal tributaries. CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.102
VAT-G11E_KIN01A06 / Kings Creek & Bay - James R. South Shore Tributary / South shore tributary to James R., upstream of James R. Bridge. North of Ragged Island area. CBP segment JMSMH. From end of tidal waters downstream to end of DSS Admin shellfish direct harvesting condemnation # 062-164 A (effective 20210915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.031
VAT-G11E_KIN02A18 / Kings Creek & Bay Mouth- James R. South Shore Tributary / South shore tributary to James R., upstream of James R. Bridge. North of Ragged Island area. CBP segment JMSMH. Lower Kings Cr to mouth at Ballard Bay Admin Condemn # 062-164 A (effective 20210915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.005
VAT-G11E_LAW01A00 / Lawnes Creek (Tributary to James River) / South shore tributary to James R. near Hog Island WMA. Hog Isl. area, opposite Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 060-206 A (effective 20141231).	4A	Aquatic Plants (Macrophytes)	2006	L	0.291
VAT-G11E_MRS01A06 / Morrisons Creek - Mulberry Island / North shore tributary to James R. on Mulberry Island. Downstream of Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 058-183 (effective 20201113).	4A	Aquatic Plants (Macrophytes)	2006	L	0.127

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_PGN01A08 / Pagan River - Upstream of Chalmers Point / Located in Smithfield area. South shore tributary to James R. From end of tidal water downstream to approx. RM 7.00. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.062
VAT-G11E_PGN01B18 / Pagan River - Upper Middle / Located in Smithfield area. South shore tributary to James R. From downstream of Crook Ln to Unnamed N Trib at Goose Hill Way. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.065
VAT-G11E_PGN01C18 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. Middle Pagan segment that Includes Morris Cr ends before Battery Park. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.058
VAT-G11E_PGN02A08 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. North of Town of Smithfield downstream Azalea Dr. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	1.030
VAT-G11E_PGN02B14 / Pagan River - Middle / Located in Smithfield area. South shore tributary to James R. Lower portion from Moonefield Dr to Morris Cr. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.162
VAT-G11E_PGN02C18 / Pagan River - Lower SF Open / Located in Smithfield area. South shore tributary to James R. From Morris Creek downstream to River Ave. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting condemnation # 061-064 A (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.084
VAT-G11E_PGN02D16 / Pagan River - Middle / Located in Smithfield area. South shore tributary on the East shore to James R. Portion near Battery Park. Portion of CBP segment JMSMH. Portion of DSS shellfish Restricted-condemnation # 061-064 (20220615)	4A	Aquatic Plants (Macrophytes)	2014	L	0.020
VAT-G11E_PGN03A10 / Pagan River - Mouth Area / Located in Smithfield area. South shore tributary to James R. From the edge of shellfish condemnation #061-064A to. downstream to mouth. Portion of CBP segment JMSMH. DSS Restricted shellfish direct harvesting designations # 061-064 A 20220615	4A	Aquatic Plants (Macrophytes)	2014	L	0.889

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_RIC01A06 / Ragged Island Creek / North shore tributary to James R. on Mulberry Island. Downstream of Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS Admin shellfish direct harvesting condemnation # 062-080 B (effective 20221015).	4A	Aquatic Plants (Macrophytes)	2006	L	0.163
VAT-G11E_RIC01A24 / Ragged Island Creek / North shore tributary to James R. on Mulberry Island. Downstream of Mulberry Point. From end of tidal waters downstream to mouth. Portion of CBP segment JMSMH. DSS Restricted shellfish direct harvesting condemnation # 062-080 B (effective 20221015).	4A	Aquatic Plants (Macrophytes)	2006	L	0.173
VAT-G11E_SFF02A08 / Skiffes Creek System [Admin Cond] / Located west of Lee Hall area, flows along the James City Co./NN City boundary. From dam downstream to mouth, including tidal tribs. Portion of CBP segment JMSMH. DSS (ADMIN) shellfish direct harvesting condemnation # 059-023 A (effective 20081215).	4A	Aquatic Plants (Macrophytes)	2014	L	0.452
VAT-G11E_SFF03A10 / Skiffes Creek - Mouth / Located west of Lee Hall area, flows across the James City Co./NN City boundary. From Goose Island to point on opposite shore. Portion of CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 059-069 (effective 20201113).	4A	Aquatic Plants (Macrophytes)	2014	L	0.060
VAT-G11E_TTS01A16 / Titus Creek / Located in Isle of Wight County. Tributary of Jones Creek, which flows into the Pagan River. Shellfish Prohib # 061-064E (20220615).	4A	Aquatic Plants (Macrophytes)	2006	L	0.017
VAT-G11E_TYB01A00 / Tylers Beach Boat Basin / Located in the Bailey Beach area. Adjacent to the James River. Opposite Mulberry Island. NW corner of Burwell Bay. From end of tidal waters downstream to mouth. CBP segment JMSMH. DSS Admin shellfish direct harvesting condemnation # 060-206 B (20141231).	4A	Aquatic Plants (Macrophytes)	2006	L	0.011
VAT-G11E_WIL01A18 / Williams Creek / Located off of North shore tributary to Pagan River. Portion of CBP segment JMSMH. Portion of DSS shellfish direct harvesting ADMIN condemnation # 061-064 C (effective 20220615).	4A	Aquatic Plants (Macrophytes)	2014	L	0.060
VAT-G11E_WWK01A08 / Warwick River - Upper Tidal Portion / Located in Menchville area. Tributary to James R. From end of tidal waters downstream approx. to Denbigh Landing. Portion of CBP segment JMSMH. Portion of DSS (ADMINISTRATIVE) shellfish direct harvesting condemnation # 058-034 A (20090518).	4A	Aquatic Plants (Macrophytes)	2014	L	0.283

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G11E_WWK02A08 / Warwick River - Middle Tidal Portion / Located in Menchville area. From approx. Denbigh Landing area downstream to Denbigh Park area. CBP segment JMSMH. DSS (ADMINISTRATIVE) shellfish direct harvesting condemnation # 058-034 A (20090518).	4A	Aquatic Plants (Macrophytes)	2014	L	0.075
VAT-G11E_WWK03A08 / Warwick River - Lower Tidal Portion / Located in Menchville area. Tributary to James R. From Lucas Cr to downstream to mouth. Portion of CBP segment JMSMH. DSS (ADMINISTRATIVE) shellfish direct harvesting condemnation # 058-034 A, B (20090518).	4A	Aquatic Plants (Macrophytes)	2014	L	2.434
VAT-G11E_WWK03B18 / Warwick River - Middle-Lower Tidal Portion / Located in Menchville area. Tributary to James R. From Denbigh Park to Approx. Lucas Cr. Portion of CBP segment JMSMH. DSS (ADMINISTRATIVE) shellfish direct harvesting condemnation # 058-034 A (20090518).	4A	Aquatic Plants (Macrophytes)	2014	L	0.077
VAT-G11E_WWK03C24 / Warwick River Middle Tributary / Tributaries to Warwick R., NE of Mulberry Island area. From end of tidal water downstream to confluence with Warwick R. CBP segment JMSMH. DSS (Admin Cond) shellfish direct harvesting condemnation # 058-034 A (20090518).	4A	Aquatic Plants (Macrophytes)	2006	L	0.042
VAT-G11E_ZZZ01A00 / Unsegmented estuaries - James R. Tribs / Tributaries to James R., Mulberry Island area & NW Ragged Isl. From end of tidal water downstream to confluence. CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 059-069 (20141219) 58-183 (20201113).	4A	Aquatic Plants (Macrophytes)	2006	L	0.358
VAT-G11E_ZZZ02A00 / Unsegmented estuaries - Warwick R. Tribs / Tributaries to Warwick R., NE of Mulberry Island area. From end of tidal water downstream to confluence with Warwick R. CBP segment JMSMH. DSS (Admin Cond) shellfish direct harvesting condemnation # 058-034 A (20090518).	4A	Aquatic Plants (Macrophytes)	2006	L	0.077
VAT-G13E_BEN01A04 / Bennett Creek - Tributary to Nansemond R. [No TMDL] / Eastern shore trib. to Nansemond R., near confluence with James R. Bennett Harbor area. From headwaters to mouth, including tidal tributaries. Portion of CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 063-046 A (20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.542

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_BHN01A00 / Bleakhorn Creek - Tributary to Nansemond R. Mouth / Western shore trib. to Nansemond R., near confluence with James R. Eclipse area near Crittenden. From headwaters to mouth, including tidal tributaries. CBP segment JMSMH. DSS Restricted shellfish direct harvesting condemnation # 063-046 B (20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.014
VAT-G13E_BML01A06 / Burnetts Mill Creek - Tributary to Upper Nansemond R. / Eastern shore trib. to upper Nansemond R., south of the Nansemond area. Drains the Beamon area. From headwaters to mouth. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.028
VAT-G13E_KNC01A00 / Knotts Creek - Tributary to E. shore Nansemond R. / Eastern shore trib. to Nansemond R., near confluence with James R. Belleville and Huntersville areas. From headwaters to mouth, including tidal tributaries. CBP segment JMSMH. DSS shellfish direct harvesting condemnation # 063-046 A (20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.122
VAT-G13E_NAN01A00 / Nansemond River - Upper / Upper Nansemond River, within city of Suffolk. Extends from most upstream point in river at Lake Meade Dam (RM 19.8) downstream to Rt. 58/460 crossing (RM 15.2). CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (effective 2020915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.263
VAT-G13E_NAN02A06 / Nansemond River - Upper Middle / Downstream of Suffolk. From Rt 58/460 (RM 15.1) crossing downstream to confluence with the Western Branch Reservoir (RM 11.9). CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.209
VAT-G13E_NAN03A06 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS shellfish condemnation # 063-008 A (20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	2.636
VAT-G13E_NAN03A24 / Nansemond River - Lower Middle / In area of Western Branch Reservoir. From confluence with Western Br. (RM 11.8) downstream to Holidays Pt. CBP segment JMSMH. Portion of DSS Shellfish Open Condemnation # 063-008 (20220915)	4A	Aquatic Plants (Macrophytes)	2006	L	0.197
VAT-G13E_NAN04A00 / Nansemond River - Lower [No TMDL] / Nansemond R mouth. From Olds Cove downstream to mouth. CBP segment JMSMH. DSS (OPEN) condemnation 063-046 (effective 20220915) & 063-008 (effective 20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	6.303

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G13E_NAN04C10 / Nansemond River - Lower DSS Condemned at Knotts Cr / Nansemond R at confluence Knotts Cr. CBP segment JMSMH. DSS condemnation # 063-046 A (effective 20220915).	4A	Aquatic Plants (Macrophytes)	2014	L	0.467
VAT-G13E_SGL01A00 / Shingle Creek - Tributary to Nansemond R. / NE of Suffolk, near Rt 642. From end of tidal waters (0.2 mi upstream of Portsmouth Blvd) downstream to confluence with Nansemond River. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.049
VAT-G13E_STR01A04 / Star & Oyster House Creeks - Tributary to Nansemond R. / Eastern shore tributary to Nansemond R. Adjacent to the Naval Communication station at Driver. From headwaters to confluence with Nansemond R. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.046
VAT-G13E_WBN01A06 / Western Branch - Tributary to Nansemond R. / Western shore branch off the Nansemond River south of the Reids Ferry area. Downstream of the Western Branch Reservoir, prior to reaching the Nansemond River. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A (effective 20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.106
VAT-G13E_ZZZ01A00 / Unsegmented Estuaries - Upper Nansemond R. / Upper Nansemond River unsegmented tributaries with a DSS condemnation. CBP segment JMSMH. DSS shellfish condemnation # 063-008 A, B (effective 20220915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.097
VAT-G13E_ZZZ02A08 / Unsegmented Estuaries - Lower Nansemond R. / Lower Nansemond River unsegmented tributaries without a DSS condemnation. CBP segment JMSMH. DSS (OPEN) shellfish direct harvesting condemnation # 063-046 (20220915) # 063-008 (20220915) or no DSS.	4A	Aquatic Plants (Macrophytes)	2014	L	0.061
VAT-G15E_HOF01A06 / Hoffler Creek / Located along south shore of Hampton Roads Harbor. Entirety of Hoffler Cr. South shore trib to James R. west of Craney Isl. (at mouth of Elizabeth R). CBP segment JMSMH. DSS (ADMIN) shellfish harvesting condemnation # 064-018 A (effective 20210615).	4A	Aquatic Plants (Macrophytes)	2006	L	0.053
VAT-G15E_JMS05A06 / James River - Newport News Point to NW Corner Craney Isl. / Line following the Rt. 664 crossing mid-river, SW to mid-mouth Nansemond R. to SW tip Craney Isl. Line. The NW line from NW tip Craney Isl. to Lincoln Pk. CBP segment JMSMH. DSS (ADMIN) cond # 056-007 A, B, C (effective 20210615).	4A	Aquatic Plants (Macrophytes)	2014	L	4.509

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_SRE01A06 / Streeter Creek / Located along south shore of Hampton Roads Harbor. Entirety of Streeter Cr. South shore trib to James R. near Craney Isl. (at mouth of Elizabeth R).CBP segment JMSMH. DSS (ADMIN) shellfish harvesting condemnation # 056-007 A (effective 20210615).	4A	Aquatic Plants (Macrophytes)	2006	L	0.030

Chesapeake Bay segment JMSMH

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	118.512		

Chesapeake Bay segment JMSMH

Shallow-Water Submerged Aquatic Vegetation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	118.512		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Natural Sources; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: JMSPH-SAV-BAY Chesapeake Bay segment JMSPH

Cause Location: This cause encompasses the complete CBP segment JMSPH.

Cause City/County: Hampton; Newport News; Norfolk; Portsmouth

Use(s): Aquatic Life; Shallow-Water Submerged Aquatic Vegetation

Causes(s)/VA Category: Aquatic Plants (Macrophytes)/4A

Cause Description: The Aquatic Life Use Aquatic Plants [Macrophytes] use is impaired based on not meeting the SAV criteria. EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_HAI01A06 / Hampton River / Located between Cherry Acres & East Hampton areas of Hampton, north shore tributary to Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	4A	Aquatic Plants (Macrophytes)	2006	L	0.547
VAT-G15E_JMS01A00 / James River at Hampton Roads Harbor / Mainstem from a line between Lincoln Park and the NW corner of Craney Isl. downstream to mouth at Hampton Roads Tunnel. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	4A	Aquatic Plants (Macrophytes)	2006	L	25.575
VAT-G15E_JMS01B06 / James River - King/Lincoln Park Beach Area / Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	4A	Aquatic Plants (Macrophytes)	2006	L	0.009
VAT-G15E_JMS01C06 / James River - Anderson Park Beach Area / Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	4A	Aquatic Plants (Macrophytes)	2006	L	0.011
VAT-G15E_MIG01A10 / Mill Creek, Trib to Hampton Roads Harbor / Mill Creek, north shore tributary to Hampton Roads Harbor. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20210615).	4A	Aquatic Plants (Macrophytes)	2020	L	0.915
VAT-G15E_WLY01A06 / Willoughby Bay [Less Beach Area] / Located adjacent to mouth of James River at Hampton Roads, southeast of Hampton Roads Bridge Tunnel. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	4A	Aquatic Plants (Macrophytes)	2006	L	2.476

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_WLY03A06 / Willoughby Bay - Beach Area / Located along the northern shore portion of Willoughby Bay along Willoughby Spit. CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20120529).	4A	Aquatic Plants (Macrophytes)	2006	L	0.142
VAT-G15E_ZZZ01A00 / Unsegmented estuaries in Hampton Roads Harbor / Non segmented areas of G15 within the Hampton Roads Harbor area (Incl. Mill Cr.). CBP segment JMSPH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 A (effective 20210615).	4A	Aquatic Plants (Macrophytes)	2006	L	0.005

Chesapeake Bay segment JMSPH

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	29.68		

Chesapeake Bay segment JMSPH

Shallow-Water Submerged Aquatic Vegetation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	29.68		

Sources: Agriculture; Source Unknown; Urban Runoff/Storm Sewers

James River Basin

Cause Group Code: JMSTFL-SAV-BAY James River Tidal Freshwater (Lower) Estuary

Cause Location: The James River Lower Tidal Freshwater Estuary.

Cause City/County: Charles City County; Chesterfield County; Hopewell; Prince George County; Surry County

Use(s): Aquatic Life; Shallow-Water Submerged Aquatic Vegetation

Causes(s)/VA Category: Aquatic Plants (Macrophytes)/4A

Cause Description: The James River from the Appomattox River to the Chickahominy River was originally listed on the 1998 list as fully supporting but threatened of the Aquatic Life Use goal based on chlorophyll a exceedances. During the 1998 cycle, EPA extended the segment upstream to the fall line and downgraded the river to not supporting of the Aquatic Life Use, citing nutrient concerns.

During the 2006 cycle, the Chesapeake Bay water quality standards were implemented. The lower tidal Freshwater James River from the Appomattox to the oligohaline boundary fails the Shallow Water Use SAV acreage requirements. There is insufficient information to assess the water clarity acreage criteria.

The Chesapeake Bay TMDL was approved by the EPA on 12/29/2010; therefore, the segment is Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G02E_APP01A12 / Appomattox River / Portion of the Appomattox River within CB segment JMSTFl State Scenic River	4A	Aquatic Plants (Macrophytes)	2006	L	0.113
VAP-G02E_JMS03A06 / James River / The James River from the upstream extent of JMSTFl to the downstream extent of PWS. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.633
VAP-G02E_XGJ01A06 / XGJ - Appomattox River, UT / Tidal limit to mouth at the Appomattox River. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.003
VAP-G02E_XGK01A06 / XGK - James River, UT / Tidal limit to mouth near James River/Appomattox River confluence JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.002
VAP-G03E_BLY01A98 / Bailey Creek/Cattail Creek / The tidal portions of Bailey Creek and Cattail Creek. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.114
VAP-G03E_GRV01A02 / Gravelly Run / Tidal limit to mouth at James River JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.009
VAP-G03E_GUN01B00 / Gunns Run / Gunns Run from the head of tide at rivermile 2.64 to the mouth. JMSTFl	4A	Aquatic Plants (Macrophytes)	2008	L	0.042
VAP-G03E_JMS01A00 / James River / The mainstem of the James River from the confluence with the Appomattox River downstream to Powell Creek. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	10.194

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G03E_JMS01B10 / James River / The mainstem of the James River from the confluence with Powell Creek downstream to Queen Creek. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	3.485
VAP-G03E_PTH01A00 / Poythress Run / The tidal portion of Poythress Run. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.002
VAP-G03E_PWL01A02 / Powell Creek / The estuarine portion of Powell Creek. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.396
VAP-G03E_QEE01A06 / Queens Creek / Tidal limit to mouth JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.226
VAP-G03E_ZZZ01A14 / Unsegmented estuaries in G03 / Unsegmented portion of watershed JL07 JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.267
VAP-G03E_ZZZ01C14 / Unsegmented estuaries in G03 / Unsegmented portion of watershed JL09 JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.335
VAP-G04E_BNG01A04 / Brandon Gut / Tidal portion of Brandon Gut JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.005
VAP-G04E_JMS01A02 / James River / The James River from the confluence with Queens Creek downstream to Buoy 74 at Brandon Point JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	7.756
VAP-G04E_JMS03A04 / James River / Buoy 74 at Brandon Point (rivermile 55.94) to 1/2 mile upstream of station 2CJMS055.04. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.294
VAP-G04E_JMS03B24 / James River / James River 1/2 mile upstream and downstream of station 2CJMS055.04. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	1.050
VAP-G04E_JMS03C24 / James River / James River from 1/2 mile downstream of station 2CJMS055.04 to the tidal freshwater/oligohaline boundary at approximately river mile 52.08. JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	2.412
VAP-G04E_KEN01A06 / Kennon Creek / Tidal limit to mouth JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.054
VAP-G04E_UCK01A06 / Upper Chippokes Creek / Tidal limit to mouth at James River JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	1.017
VAP-G04E_WRD01A24 / Wards Creek / Tidal Wards Creek JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.231

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G04E_ZZZ01A14 / Unsegmented estuaries in G04 / Unsegmented portion of watershed JL11 JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.082
VAP-G04E_ZZZ01C14 / Unsegmented estuaries in G04 / Unsegmented portion of watershed JL13 JMSTFl	4A	Aquatic Plants (Macrophytes)	2006	L	0.348

James River Tidal Freshwater (Lower) Estuary

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	29.068		

James River Tidal Freshwater (Lower) Estuary

Shallow-Water Submerged Aquatic Vegetation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	29.068		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: JMSTFU-SAV-BAY James River Tidal Freshwater (Upper) Estuary

Cause Location: The James River Tidal Freshwater Upper estuary, which extends from the fall line to approximately the Appomattox River, including tributaries.

Cause City/County: Charles City County; Chesterfield County; Henrico County; Richmond

Use(s): Aquatic Life; Shallow-Water Submerged Aquatic Vegetation

Causes(s)/VA Category: Aquatic Plants (Macrophytes)/4A

Cause Description: The mainstem James River from the Appomattox River to the Chickahominy River was originally listed on the 1998 list as fully supporting but threatened of the Aquatic Life Use goal based on chlorophyll a exceedances. During the 1998 cycle, EPA extended the segment upstream to the fall line and downgraded the river to not supporting of the Aquatic Life Use, citing nutrient concerns.

The Chesapeake Bay Water Quality Standards were implemented in the 2006 cycle.

The Upper Tidal Freshwater James River from the fall line to the Appomattox fails the Shallow Water Subuse's submerged aquatic vegetation (SAV) acreage criterion. There is insufficient information to assess the water clarity acreage criterion. The TMDL was approved by the EPA on 12/29/2010; therefore, the segment is considered a Category 4A water.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01E_GIL01A18 / Gillies Creek / Tidal portion of Gillies Creek JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.001
VAP-G01E_JMS01A02 / James River / The James River from the fall line near Mayos Bridge to river mile 108.76. State Scenic River JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.239
VAP-G01E_JMS02A02 / James River / The James River from river mile 108.76 to river mile 108.63. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.016
VAP-G01E_JMS03A02 / James River / The James River from river mile 108.63 to the confluence with Kingsland Creek. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	1.012
VAP-G01E_JMS03B24 / James River / The James River from Kingsland Creek downstream to the confluence with Proctors Creek at river mile 2-JMS097.94. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.217
VAP-G01E_KAN01A14 / Kanawha Canal / Tidal portion of Kanawha Canal JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.001
VAP-G01E_ZZZ01A14 / Unsegmented estuaries in G01 / Unsegmented estuaries in JL01 JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.007
VAP-G01E_ZZZ01B14 / Unsegmented estuaries in G01 / Unsegmented estuaries in JL02 JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.013

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-G01E_ZZZ01C14 / Unsegmented estuaries in G01 / Unsegmented estuaries in JL03 JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.018
VAP-G02E_FOM01A22 / Fourmile Creek / The tidal portion of Fourmile Creek watershed. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.027
VAP-G02E_JMC01A10 / James River - Old Channel (aka Farrar Gut) / The old channel of the James River JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.511
VAP-G02E_JMS01A00 / James River / The James River from Proctors Creek to 5 miles above the old American Tobacco raw water intake. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.078
VAP-G02E_JMS02A00 / James River / The James River from 5 miles above the old American Tobacco intake to 1/2 mile upstream of 2CJMS084.70. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	2.048
VAP-G02E_JMS02B18 / James River / The James River from 5 miles above City Point at Hopewell to the downstream extent of JMSTFu. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	1.182
VAP-G02E_JMS02C24 / James River / The James River 1/2 mile upstream and downstream of 2CJMS084.70. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.178
VAP-G02E_JMS02D24 / James River / The James River from 1/2 mile downstream of 2CJMS084.70 to 5 miles above City Point at Hopewell. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.564
VAP-G02E_TIC01A24 / Turkey Island Creek / Tidal Turkey Island Creek Renamed in 2024 cycle. JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.066
VAP-G02E_XMT01A08 / XMT - James River, UT / Shirley Plantation Cove JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.137
VAP-G02E_XQW01A08 / XQW - James River, UT / Tidal pools on Farrar Island JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.395
VAP-G02E_ZZZ02B14 / Unsegmented estuaries in G02 / Unsegmented portion of JL06 within PWS JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.057
VAP-G02E_ZZZ03B18 / Unsegmented estuaries in G02 / Unsegmented portion of JL06 not in PWS JMSTFu	4A	Aquatic Plants (Macrophytes)	2006	L	0.980

Virginia Department of Environmental Quality
Appendix 4 - Fact Sheets for
Impaired (Category 4 or 5) Waters in 2024

James River Tidal Freshwater (Upper) Estuary

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	7.746		

James River Tidal Freshwater (Upper) Estuary

Shallow-Water Submerged Aquatic Vegetation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	7.746		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Clean Sediments; Contaminated Sediments; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Sediment Resuspension (Clean Sediment); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

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; Norfolk; Portsmouth

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-G15R_SBE02B24 / Southern Branch, Elizabeth R. - Riverine / Class VII Riverine tributary to the Southern Branch, Elizabeth River	5A	Mercury in Fish Tissue	2024	L	4.3

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:			4.3

Sources: Source Unknown

James River Basin

Cause Group Code: SBEMH-DO-BAY Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River)

Cause Location: This cause encompasses the complete CBP segment SBEMH

Cause City/County: Chesapeake; Norfolk; Portsmouth

Use(s): Aquatic Life; Deep-Water Aquatic Life; Open-Water Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: The Aquatic Life and Open-Water Aquatic Life Use is impaired based on failure to meet the dissolved oxygen criteria for Open Water - ROY, Summer, and Deep Water. There is insufficient data to assess the remaining shorter-term dissolved oxygen criteria for these uses. EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_BLM01A22 / Bells Mill Creek - SB Elizabeth R. S. shore tributary / SB Elizabeth R S shore tributary SW of Great Bridge Locks. CBP & BIBI segment SBEMHa. Portion of DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	0.027
VAT-G15E_DEC01A06 / Deep Creek, Southern Br. Elizabeth R. / South of I-64 crossing of Southern Br. E shore trib to Southern Br. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.209
VAT-G15E_DEC02A18 / Deep Creek, Southern Br. Elizabeth R.- Mouth / South of I-64 crossing of Southern Br. E shore trib to Southern Br. Mouth of Creek North of Interstate 64. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	0.075
VAT-G15E_GIL01A10 / Gilligan Cr - Upper, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Upper portion no Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.012
VAT-G15E_GIL02A10 / Gilligan Cr - Lower, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Lower portion with Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.011
VAT-G15E_JON01A10 / Jones Cr - Upper, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Upper portion no Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.027

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_JON02A10 / Jones Cr - Lower, trib to SB Eliz R / Trib to E shore SB Eliz R, adjacent to Jones Cr. Opposite Paradise Cr. Lower portion with Deep Water Use. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.017
VAT-G15E_MAI01A10 / Mains Cr. - SB Eliz R. E shore Tributary / SB Eliz R. E shore upstream tributary, SE of Deep Cr. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.013
VAT-G15E_MDM01A10 / Milldam Cr trib S. Br. Elizabeth R. / Tributary to E shore SB Elizabeth R. N of Gilmerton Br. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.071
VAT-G15E_NMC01A00 / New Mill Creek - Southern Br. Elizabeth R. / Located south of I-64 crossing of Southern Br. Eastern shore trib to Southern Br, downstream of locks. Entirety of Creek. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.082
VAT-G15E_NTN01A10 / Newton Cr trib to SB Eliz R / Tributary to E shore SB Eliz R. NE of Deep Cr. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.038
VAT-G15E_PAR01A06 / Paradise Creek - Upper, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. No Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.025
VAT-G15E_PAR02A10 / Paradise Creek - Lower, trib. to S. Br. Elizabeth R. / South of Norfolk Naval Shipyard. Eastern shore trib to Southern Br. Entirety of Creek. With Deep Water Use. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.028
VAT-G15E_SBE01A00 / Southern Branch, Elizabeth R. - Upper / South of I-64 crossing. From headwaters @ Great Br Locks downstream to I-64 crossing @ Deep Cr. (RM 6.86). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.636

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_SBE02A06 / Southern Branch, Elizabeth R. - Middle / From I-64 crossing @ Deep Cr. confluence (RM 6.86) downstream to the Jordan Bridge (RM 2.30). CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	1.055
VAT-G15E_SBE02B20 / Southern Branch, Elizabeth R. - Middle / Shore along Chesapeake Deep Water Terminal south of Paradise Creek. CBP segment SBEMH. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.015
VAT-G15E_SBE02C22 / Southern Branch, Elizabeth R. - Middle / Buffer of station 2CSBE005.84 outside of Newton Creek tributary. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.005
VAT-G15E_SBE03A06 / Southern Branch, Elizabeth R. - Lower / North of the Jordan Bridge. From the Jordan Bridge, Rt. 337 (RM 2.30) downstream to the mouth, confluence with the mainstem Elizabeth R. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMIN) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.545
VAT-G15E_SCU02A24 / Scuffeltown Creek / CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.029
VAT-G15E_STJ01A04 / Saint Julian Creek / Northwest of Gilmerton Bridge. Eastern shore tributary to Southern Br. Entirety of Creek. CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.133
VAT-G15E_XFR01A10 / UT to SB Elizabeth R. S shore estuary SE of Mill Cr. / SB Eliz S shore estuary SE of Mill Cr. CBP & BIBI segment SBEMH. DSS (ADMIN-COND) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.008
VAT-G15E_XQT01A10 / UT to SB Elizabeth R. N shore creek near Great Bridge Locks / SB Elizabeth R. upstream N shore creek north of Great Bridge Locks. CBP & BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.045

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_XQU01A10 / SB Eliz N shore creek SW of Mains Cr. / SB Elizabeth R. upstream N shore creek SW of Mains Cr. CBP & BIBI segment SBEMHa. DSS (ADMIN-COND) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.020
VAT-G15E_ZZZ02A08 / Unsegmented estuaries in SBEMH / CBP segment SBEMH. BIBI segment SBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.030

Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River)

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	3.152		

Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River)

Deep-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	2.868		

Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River)

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	3.152		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Industrial/Commercial Site Stormwater Discharge (Permitted); Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Non-Point Source; Source Unknown; Sources Outside State Jurisdiction or Borders; Urban Runoff/Storm Sewers; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

James River Basin

Cause Group Code: WBEMH-DO-BAY Chesapeake Bay segment WBEMH (Western Branch, Elizabeth River)

Cause Location: This cause encompasses the complete CBP segment WBEMH

Cause City/County: Chesapeake; Portsmouth

Use(s): Aquatic Life; Open-Water Aquatic Life

Causes(s)/VA Category: Dissolved Oxygen/4A

Cause Description: The Aquatic Life and Open Water Aquatic Life Use is not supporting based on the assessment of the Open Water Summer dissolved oxygen criteria for the Western Branch of the Elizabeth River Mesohaline (WBEMH) Chesapeake Bay program Segment. Open Water Rest of Year DO is supporting EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_BAB01A06 / Bailey Creek, Western Branch Elizabeth R. / Western shore tributary to the Western Branch. Entirety of creek including tributaries. Located in the area of Charlton Village to Ahoy Acres. CBP segment WBEMH. Portion of DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20120529).	4A	Dissolved Oxygen	2006	L	0.041
VAT-G15E_DPT01A06 / Drum Point Creek - Western Branch, Elizabeth R. / Western shore trib to the Western Br. Entirety of creek including tributaries. Located in the area of Charlton Village to Ahoy Acres. CBP segment WBEMH. Portion of the DSS (ADMINISTRATIVE) shellfish condemnation # 065-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.148
VAT-G15E_GOE01A06 / Goose Creek - Western Branch, Elizabeth R. / Headwaters tributary to the Western Branch. Entirety of creek including tributaries. Located in the area of Charlton Village to Ahoy Acres. CBP segment WBEMH. Portion of the DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.049
VAT-G15E_WBE01A02 / Western Branch, Elizabeth R. - Upper / Located between Stewart Manor and Point Elizabeth areas. From headwaters (RM 8.5) downstream to Sterns Creek (RM 3.5). BIBI segment WBEMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.561
VAT-G15E_WBE02A00 / Western Branch, Elizabeth R. - Lower / Located between the Point Elizabeth and Lovett Point areas. From Sterns Creek confluence (RM 3.5) downstream to the mouth. CBP segment WBEMH. BIBI segment WBEMHa. DSS (ADMIN) condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	1.457

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-G15E_ZZZ04A08 / Unsegmented estuaries in WBEMH / CBP segment WBEMH. BIBI segment WBEMHa. DSS (ADMINISTRATIVE) shellfish condemnation # 056-007 E (effective 20210615).	4A	Dissolved Oxygen	2006	L	0.560

Chesapeake Bay segment WBEMH (Western Branch, Elizabeth River)

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	2.814		

Chesapeake Bay segment WBEMH (Western Branch, Elizabeth River)

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	2.814		

Sources: Agriculture; Atmospheric Deposition - Nitrogen; Industrial Point Source Discharge; Internal Nutrient Recycling; Loss of Riparian Habitat; Municipal Point Source Discharges; Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)