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

Potomac and Shenandoah River Basins

***Cause Group Code:* A01R-01-BAC** **Piney Run**

Cause Location: Begins at the mouth of an unnamed pond on Piney Run and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterions (8 of 34 samples - 23.5%) at station 1aPIA001.80 at Route 671. The Piney Run bacteria TMDL (POL0023) was approved by the EPA on 07/06/2004 (Fed ID 24398). The SWCB approved the TMDL on 12/02/2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A01R_PIA01A00 / Piney Run / Segment begins at the mouth of an unnamed pond on Piney Run and continues downstream until the confluence with the Potomac River.	4A	Escherichia coli	2006	L	3.94

Piney Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.94**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A01R-01-BEN** **Dutchman Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Dutchman Creek at rivermile 2.9 and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of four biological monitoring events in 2015 and 2016 at station 1ADUT000.62 at Route 674 and a total of three biological monitoring events in 2015 and 2016 at station 1ADUT002.72 at Route 673 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A01R_DUT01A06 / Dutchman Creek / Segment begins at the confluence with an unnamed tributary to Dutchman Creek (streamcode XCO) and continues downstream until the confluence with the Potomac River.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	2.25
VAN-A01R_DUT02A06 / Dutchman Creek / Segment begins at the confluence with an unnamed tributary to Dutchman Creek, at rivermile 2.9, and continues downstream until the confluence with another unnamed tributary (XCO).	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	0.68

Dutchman Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.93**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-01-BAC** **Catoctin Creek**

Cause Location: Begins at the confluence with Milltown Creek, approximately 1.3 rivermiles downstream of Route 673, and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (17 of 54 samples - 31.5%) at station 1aCAX004.57 at Route 663. The Catoctin Creek bacteria TMDL (POL0169) was approved by the EPA on 05/31/2002 (Fed ID 24399). The SWCB approved the TMDL on 06/17/2004. A bacteria TMDL Implementation Plan for the Catoctin Creek watershed (ID 96) was approved by the EPA on 01/10/2005.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A02R_CAX01A00 / Catoctin Creek / Segment begins at the confluence with Milltown Creek, approximately 1.3 rivermiles downstream of Route 673, and continues downstream until the confluence with the Potomac River.	4A	Escherichia coli	2006	L	7.49

Catoctin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.49**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-02-BAC** **North Fork Catoctin Creek**

Cause Location: Begins at the confluence of an unnamed tributary to North Fork Catoctin Creek, approximately 0.75 rivermile upstream from Route 719 near Hillsboro, and continues downstream until the confluence with Catoctin Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (9 of 12 samples - 75.0%) at station 1aNOC000.42 at Route 681; excursions (5 of 11 samples - 45.5%) at station 1aNOC004.38 at Route 287; and 2010 Assessment: E. coli bacteria criterion excursions (4 of 10 samples - 40.0%) at station 1aNOC009.37 at Route 812. The Catoctin Creek bacteria TMDL for the North Fork Catoctin Creek watershed (POL0166) was approved by the EPA on 05/31/2002. The SWCB approved the TMDL on 06/17/2004. Federal ID 24402. The Catoctin Creek bacteria TMDL Implementation Plan for the North Fork Catoctin Creek watershed (ID 94) was approved by the EPA on 01/10/2005.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A02R_NOC01A00 / North Fork Catoctin Creek / Segment begins at the confluence with an unnamed tributary to North Fork Catoctin Creek, approximately 0.15 rivermile downstream from the Route 287 bridge, and continues downstream until the confluence with Catoctin Creek.	4A	Escherichia coli	2010	L	4.42
VAN-A02R_NOC02A02 / North Fork Catoctin Creek / Segment begins at the outlet from an unnamed impoundment, approximately 0.4 rivermile upstream from the Route 611 bridge, and continues downstream until the confluence with an unnamed tributary 0.15 rivermile downstream from the Route 287 bridge.	4A	Escherichia coli	2008	L	3.43
VAN-A02R_NOC03A02 / North Fork Catoctin Creek / Segment begins at the confluence of an unnamed tributary to North Fork Catoctin Creek, approximately 0.75 rivermile upstream from Route 719 near Hillsboro, and continues downstream 2.45 rivermiles to an unnamed impoundment.	4A	Escherichia coli	2004	L	2.54

North Fork Catoctin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.39**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

Waterfowl

Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-02-BEN** **North Fork Catoctin Creek**

Cause Location: Begins at the confluence with an unnamed tributary to North Fork Catoctin Creek, approximately 0.15 rivermile downstream from the Route 287 bridge, and continues downstream until the confluence with Catoctin Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2011 and 2014 at station 1aNOC000.42 at Route 681 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A02R_NOC01A00 / North Fork Catoctin Creek / Segment begins at the confluence with an unnamed tributary to North Fork Catoctin Creek, approximately 0.15 rivermile downstream from the Route 287 bridge, and continues downstream until the confluence with Catoctin Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	H, 2yr	4.42

North Fork Catoctin Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.42**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-03-BAC** **South Fork Catoctin Creek**

Cause Location: Begins at the headwaters of South Fork Catoctin Creek and continues downstream until the confluence with Catoctin Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 17 samples - 47.1%) at station 1aSOC001.66 at Route 698; 2016 assessment: excursions (4 of 13 samples - 30.8%) at station 1aSOC007.06 at Route 738; 2016 assessment: excursions (3 of 18 samples - 16.7%) at station 1aSOC011.82 at Route 611; and 2016 assessment: excursions (3 of 12 samples - 25.0%) at station 1aSOC013.05, at Route 7 Bypass.

The Catoctin Creek bacteria TMDL for the Upper (POL0168) and Lower (POL0167) South Fork Catoctin Creek watersheds was approved by the EPA on 05/31/2002. The SWCB approved the TMDL on 06/17/2004. Federal ID 24401. The Catoctin Creek bacteria TMDL Implementation Plan for the South Fork Catoctin Creek watershed (IDs 95 and 97) was approved by the EPA on 01/10/2005.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A02R_SOC01A00 / South Fork Catoctin Creek / Segment begins at the confluence with an unnamed tributary to South Fork Catoctin Creek, approximately 0.7 rivermile upstream from Route 9, and continues downstream until the confluence with Catoctin Creek.	4A	Escherichia coli	1996	L	6.33
VAN-A02R_SOC02A02 / South Fork Catoctin Creek / Segment begins at confluence with an unnamed tributary, 0.75 rivermile upstream from the Route 287 bridge, and continues downstream until the confluence with another unnamed tributary, approximately 0.7 rivermile upstream from the Route 9 bridge.	4A	Escherichia coli	2002	L	3.23
VAN-A02R_SOC03A04 / South Fork Catoctin Creek / Segment begins at the northwest corner of the town of Purcellville, 0.48 rivermiles upstream from the Route 690 bridge, and continues downstream until the confluence with an unnamed tributary to SOC, 0.75 rivermile upstream from the Route 287 bridge.	4A	Escherichia coli	2004	L	3.59
VAN-A02R_SOC04A04 / South Fork Catoctin Creek / Segment begins at the headwaters of South Fork Catoctin Creek and continues downstream until the Purcellville town limits, 0.48 rivermiles upstream from the Route 690 bridge.	4A	Escherichia coli	1996	L	5.34

South Fork Catoctin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**18.49**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas	Waterfowl
Wildlife Other than Waterfowl			

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-03-BEN** **South Fork Catoctin Creek**

Cause Location: Begins at the confluence with an unnamed tributary to South Fork Catoctin Creek, approximately 0.7 rivermile upstream from Route 9, and continues downstream until the confluence with Catoctin Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2016 at station 1ASOC002.93 (Next to Charles Henry Pl) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A02R_SOC01A00 / South Fork Catoctin Creek / Segment begins at the confluence with an unnamed tributary to South Fork Catoctin Creek, approximately 0.7 rivermile upstream from Route 9, and continues downstream until the confluence with Catoctin Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	6.33

South Fork Catoctin Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.33**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-04-BEN** **North Fork Catoctin Creek**

Cause Location: Begins at the confluence of an unnamed tributary to North Fork Catoctin Creek, approximately 0.75 rivermile upstream from Route 719 near Hillsboro, and continues downstream 2.45 rivermiles to an unnamed impoundment.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2011 and 2014 at station 1aNOC009.37 at Route 812 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. A new TMDL is not required for this impaired segment of North Fork Catoctin Creek because the Benthic TMDL Development Stressor Analysis Report for North Fork Catoctin Creek (09/15/2015) determined that this impairment is primarily due to low-flow conditions, and recommended that this segment be re-classified as Category 4C because the impairment is not caused by a pollutant.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A02R_NOC03A02 / North Fork Catoctin Creek / Segment begins at the confluence of an unnamed tributary to North Fork Catoctin Creek, approximately 0.75 rivermile upstream from Route 719 near Hillsboro, and continues downstream 2.45 rivermiles to an unnamed impoundment.	4C	Benthic-Macroinvertebrate Bioassessments			2.54

North Fork Catoctin Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.54**

Sources:

Natural Sources

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-05-BAC** **Milltown Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Milltown Creek, approximately 1.1 rivermile upstream from Route 681 near Milltown, and continues downstream until the confluence with Catoctin Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 10 samples - 40.0%) at station 1aMIH001.98 at Route 673. A new TMDL is not required for this impaired segment of Milltown Creek because the downstream Catoctin Creek bacteria TMDL (24399, 05/31/2002) included modeling, source identification, and reductions that covered the entire watershed (POL0169). A bacteria TMDL Implementation Plan for the Catoctin Creek watershed (ID 96) was approved by the EPA on 01/10/2005.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A02R_MIH01A06 / Milltown Creek / Segment begins at the confluence with an unnamed tributary to Milltown Creek, approximately 1.1 rivermile upstream from Route 681 near Milltown, and continues downstream until the confluence with Catoctin Creek.	4A	Escherichia coli	2006	L	3.90

Milltown Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.90**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-06-BAC** **Unnamed tributary to Catoctin Creek**

Cause Location: Begins at the confluence with an unnamed tributary, approximately 1.2 miles upstream from the Route 693 crossing, and continues downstream until the confluence with Catoctin Creek, at rivermile 9.81.

City / County: Loudoun Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (2 of 4 samples - 50.0%) at station 1aXJT002.22 at Cottage Grove Lane. A new TMDL is not required for this impaired segment of an unnamed tributary to Catoctin Creek because the downstream Catoctin Creek bacteria TMDL (Fed ID 24399, 05/31/2002) included modeling, source identification, and reductions that covered the entire Catoctin Creek watershed (POL0169). The SWCB approved the TMDL on 06/17/2004. A bacteria TMDL Implementation Plan for the Catoctin Creek watershed (ID 96) was approved by the EPA on 01/10/2005.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A02R_XJT01A06 / Unnamed tributary to Catoctin Creek / Segment begins at the confluence with an unnamed tributary, approximately 1.2 miles upstream from the Route 693 crossing, and continues downstream until the confluence with Catoctin Creek, at rivermile 9.81.	4A	Escherichia coli	2006	L	4.35

Unnamed tributary to Catoctin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.35**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A03R-01-BAC** **Limestone Branch**

Cause Location: Begins at the headwaters of Limestone Branch and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (13 of 34 samples - 38.2%) at station 1aLIM001.16 at Route 15 and E. coli bacteria criterion excursions (5 of 10 samples - 50.0%) at station 1aLIM001.80 at Selma Lane. The Limestone Branch bacteria TMDL (POL0026) was approved by the EPA on 07/06/2004. The SWCB approved the TMDL on 12/02/2004. Federal ID 24403.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A03R_LIM01A00 / Limestone Branch / Segment begins at the edge of the 8b PWS supply designation, approximately 0.05 rivermile upstream from the Route 15 bridge, and continues downstream until the confluence with the Potomac River.	4A	Escherichia coli	2002	L	1.26
VAN-A03R_LIM01B06 / Limestone Branch / Segment begins at the headwaters of Limestone Branch and continues downstream until the edge of the 8b PWS supply designation, approximately 0.05 rivermile upstream from the Route 15 bridge.	4A	Escherichia coli	2002	L	3.66

Limestone Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.92**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

Cause Group Code: **A03R-02-BAC** **Clarks Run**

Cause Location: Begins at the confluence with an unnamed tributary to Clarks Run, at rivermile 5.4, and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 11 samples - 63.6%) at station 1aCLK002.40 at Route 658.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A03R_CLK01A08 / Clarks Run / Segment begins at the confluence with an unnamed tributary to Clarks Run, at rivermile 5.4, and continues downstream until the confluence with the Potomac River.	5A	Escherichia coli	2008	L	5.46

Clarks Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.46**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A03R-03-BAC** **Unnamed tributary to Limestone Branch**

Cause Location: Begins at the confluence with an unnamed tributary and continues downstream until the confluence with Limestone Branch.

City / County: Loudoun Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at station 1aXAQ000.85 at Route 661. A new TMDL is not required for this impaired segment of the unnamed tributary to Limestone Branch because the downstream Limestone Branch bacteria TMDL (24403, 07/06/2004) included modeling, source identification, and reductions that covered the entire watershed (POL0026).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A03R_XAQ01A04 / Unnamed tributary to Limestone Branch / Segment begins at the boundary of the 8b PWS area designation, just upstream of the Route 661 bridge, and continues downstream until the confluence with Limestone Branch.	4A	Escherichia coli	2006	L	0.91
VAN-A03R_XAQ01B06 / Unnamed tributary to Limestone Branch / Segment begins at the confluence with an unnamed tributary and continues downstream until the boundary of the 8b PWS area designation, just upstream of the Route 661 bridge.	4A	Escherichia coli	2006	L	1.02

Unnamed tributary to Limestone Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.93**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A03R-03-BEN** **Big Spring Creek**

Cause Location: Begins at the headwaters of Big Spring Creek and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of three biological monitoring events in 2015 and 2016 at station 1ABSC000.45 at Twin Maple Lane resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A03R_BSC01A06 / Big Spring Creek / Segment begins at the headwaters of Big Spring Creek and continues downstream until the confluence with the Potomac River.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	4.49

Big Spring Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.49**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A03R-04-BAC** **Unnamed tributary to Limestone Branch**

Cause Location: Segment begins at the headwaters of the unnamed tributary and continues downstream to the confluence with Limestone Branch.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 10 samples - 30.0%) at station 1aXGJ000.42 at Selma Lane. A new TMDL is not required for this impaired segment of the unnamed tributary to Limestone Branch because the downstream Limestone Branch bacteria TMDL (24403, 07/06/2004) included modeling, source identification, and reductions that covered the entire watershed (POL0026).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A03R_XGJ01A04 / Unnamed tributary to Limestone Branch / Segment begins at the boundary of the Section 8 PWS area designation and continues downstream to the confluence with Limestone Branch.	4A	Escherichia coli	2014	L	3.81
VAN-A03R_XGJ01B10 / Unnamed tributary to Limestone Branch / Segment begins at the headwaters of the unnamed tributary and continues downstream to the Section 8 PWS designation.	4A	Escherichia coli	2014	L	1.33

Unnamed tributary to Limestone Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.14**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A04R-01-BAC** **Goose Creek**

Cause Location: Begins at the confluence with Kettle Run and continues downstream until the confluence with Bolling Branch.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 33 samples - 12.1%) at station 1aGOO044.36 at Route 17. A new TMDL is not required for this impaired segment of Goose Creek because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063). The Goose Creek bacteria TMDL Implementation Plan for the Upper Goose Creek watershed (ID 131) was approved by the EPA on 04/02/2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A04R_GOO01B00 / Goose Creek / Segment begins at the confluence with Kettle Run and continues downstream until the confluence with Bolling Branch.	4A	Escherichia coli	2004	L	4.31

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

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A04R-02-BAC** **Gap Run**

Cause Location: Begins at the confluence with an unnamed tributary to Gap Run, just downstream from Route 712, and continues downstream until the confluence with Goose Creek.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 9 samples - 44.4%) at station 1aGAR002.24 at Route 623. A new TMDL is not required for this impaired segment of Gap Run because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063). The Goose Creek bacteria TMDL Implementation Plan for the Upper Goose Creek watershed (ID 131) was approved by the EPA on 04/02/2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A04R_GAR01A04 / Gap Run / Segment begins at the confluence with an unnamed tributary to Gap Run, just downstream from Route 712, and continues downstream until the confluence with Goose Creek.	4A	Escherichia coli	2004	L	3.21

Gap Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.21**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A04R-03-BAC** **Crooked Run**

Cause Location: Begins at the confluence with an unnamed tributary to Crooked Run, just downstream from Route 724, and continues downstream until the confluence with Goose Creek.

City / County: Fauquier Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (2 of 6 samples - 33.3%) at station 1aCRA000.42 at Route 623. A new TMDL is not required for this impaired segment of Crooked Run because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063). The Goose Creek bacteria TMDL Implementation Plan for the Upper Goose Creek watershed (ID 131) was approved by the EPA on 04/02/2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A04R_CRA01A04 / Crooked Run / Segment begins at the confluence with an unnamed tributary to Crooked Run, just downstream from Route 724, and continues downstream until the confluence with Goose Creek.	4A	Escherichia coli	2010	L	1.85

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

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A04R-04-BAC** **Bolling Branch**

Cause Location: Begins at the confluence with an unnamed tributary to Bolling Branch, just upstream from Route 723, and continues downstream until the confluence with Goose Creek.

City / County: Fauquier Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (2 of 6 samples - 33.3%) at station 1aBOL000.05 at Route 713. A new TMDL is not required for this impaired segment of Bolling Branch because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063). The Goose Creek bacteria TMDL Implementation Plan for the Upper Goose Creek watershed (ID 131) was approved by the EPA on 04/02/2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A04R_BOL01A04 / Bolling Branch / Segment begins at the confluence with an unnamed tributary to Bolling Branch, just upstream from Route 723, and continues downstream until the confluence with Goose Creek.	4A	Escherichia coli	2006	L	3.64

Bolling Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.64**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A04R-05-BAC** **Unnamed tributary to Goose Creek**

Cause Location: Begins at the headwaters of the unnamed tributary and continues downstream to the confluence with Goose Creek, at rivermile 45.10.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 10 samples - 20.0%) at station 1aXLW000.75 at Route 55. A new TMDL is not required for this impaired segment of Crooked Run because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063). The Goose Creek bacteria TMDL Implementation Plan for the Upper Goose Creek watershed (ID 131) was approved by the EPA on 04/02/2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A04R_XLW01A14 / Unnamed tributary to Goose Creek / Segment begins at the headwaters of the unnamed tributary and continues downstream to the confluence with Goose Creek, at rivermile 45.10.	4A	Escherichia coli	2014	L	5.91

Unnamed tributary to Goose Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.91**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-01-BAC** **Cromwells Run**

Cause Location: Begins at the headwaters of Cromwells Run and continues downstream until the confluence with Rocky Creek, approximately 0.4 rivermile downstream from Route 50.

City / County: Fauquier Co. Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 10 samples - 30.0%) at station 1aCRM005.39 at Route 715, and E. coli bacteria criterion excursions (6 of 24 samples - 25.0%) at station 1aCRM001.20 at Route 50. The Goose Creek bacteria TMDL for the Cromwells Run watershed (POL0064) was approved by the EPA on 05/01/2003. The SWCB approved the TMDL on 06/17/2004. Federal ID 24404. The Goose Creek bacteria TMDL Implementation Plan for the Cromwells Run watershed (ID 133) was approved by the EPA on 04/02/2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_CRM01A00 / Cromwells Run / Segment begins at the confluence with an unnamed tributary to Cromwells Run, approximately 0.78 rivermile downstream from Route 715, and continues downstream until the confluence with Rocky Creek, approximately 0.4 rivermile downstream from Route 50.	4A	Escherichia coli	2016	L	3.81
VAN-A05R_CRM02A06 / Cromwells Run / Segment begins at the headwaters of Cromwells Run and continues downstream until the confluence with an unnamed tributary (XMI), at rivermile 4.61.	4A	Escherichia coli	2012	L	6.76

Cromwells Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.57**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-01-BEN** **Wancopin Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Wancopin Creek, just upstream from Route 50, and continues downstream until the confluence with Goose Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

2008 Assessment: Two biological monitoring events in 2002 at station 1aWAC003.31 at Route 50 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_WAC01A04 / Wancopin Creek / Segment begins at the confluence with an unnamed tributary to Wancopin Creek, just upstream from Route 50, and continues downstream until the confluence with Goose Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	3.44

Wancopin Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.44**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-02-BEN** **Jeffries Branch**

Cause Location: Begins at the confluence with unnamed tributary XCD and continues downstream until the confluence with Panther Skin Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

Five biological monitoring events in 2013, 2014, and 2015 at station 1aJEE000.23 at Rt. 719 and 8 biological monitoring events in 2011, 2013, 2014, and 2015 at station 1aJEE002.22 at Route 743 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_JEE01A16 / Jeffries Branch / Segment begins at the confluence with unnamed tributary XCD and continues downstream until the confluence with Panther Skin Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	4.41

Jeffries Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.41**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-03-BAC** **Goose Creek**

Cause Location: Begins at the confluence with Panther Skin Creek and continues downstream until the confluence with Rocky Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 33 samples - 15.2%) at station 1aGOO030.75 at Route 611. A new TMDL is not required for this impaired segment of Goose Creek because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and tributaries watershed (POL0063).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_GOO02A06 / Goose Creek / Segment begins at the confluence with Panther Skin Creek and continues downstream until the confluence with Rocky Creek.	4A	Escherichia coli	2006	L	2.74

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

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-03-BEN** **Goose Creek**

Cause Location: Begins at the headwaters of Cromwells Run and continues downstream until the confluence with Rocky Creek, approximately 0.4 rivermile downstream from Route 50.

City / County: Fauquier Co. Loudoun Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2016 at station 1ACRM004.09 at the end of Hatchers Mill Road resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_CRM01A00 / Cromwells Run / Segment begins at the confluence with an unnamed tributary to Cromwells Run, approximately 0.78 rivermile downstream from Route 715, and continues downstream until the confluence with Rocky Creek, approximately 0.4 rivermile downstream from Route 50.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	3.81
VAN-A05R_CRM02A06 / Cromwells Run / Segment begins at the headwaters of Cromwells Run and continues downstream until the confluence with an unnamed tributary (XMI), at rivermile 4.61.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	6.76

Goose Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.57**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-04-BAC** **Panther Skin Creek**

Cause Location: Begins at the headwaters of Panther Skin Creek and continues downstream until the confluence with Goose Creek.

City / County: Fauquier Co. Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at station 1aPAE004.21 at Route 719. 2016 Assessment: E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aPAE002.54 at Route 623. A new TMDL is not required for this impaired segment of Panther Skin Creek because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_PAE01A02 / Panther Skin Creek / Segment begins at the confluence with Jeffries Branch and continues downstream until the confluence with Goose Creek.	4A	Escherichia coli	2012	L	3.91
VAN-A05R_PAE02A06 / Panther Skin Creek / Segment begins at the headwaters of Panther Skin Creek and continues downstream until the confluence with Jeffries Branch.	4A	Escherichia coli	2006	L	5.27

Panther Skin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.18**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-05-BAC** **Jeffries Branch**

Cause Location: Begins at the confluence with unnamed tributary XCD and continues downstream until the confluence with Panther Skin Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (18 of 33 samples - 54.5%) at station 1aJEE000.23 at Route 719 and E. coli bacteria criterion excursions (14 of 33 samples - 42.4%) at station 1aJEE002.22 at Route 743. A new TMDL is not required for this impaired segment of Jeffries Branch because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_JEE01A16 / Jeffries Branch / Segment begins at the confluence with unnamed tributary XCD and continues downstream until the confluence with Panther Skin Creek.	4A	Escherichia coli	2016	L	4.41

Jeffries Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.41**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-06-BAC** **Goose Creek**

Cause Location: Begins at the confluence with Gap Run and continues downstream until the confluence with Panther Skin Creek.

City / County: Fauquier Co. Loudoun Co.

Use(s): Recreation

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

2010 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at station 1aGOO034.20 at Route 624. E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aGOO036.61 at Route 710. A new TMDL is not required for this impaired segment of Goose Creek because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and tributaries watershed (POL0063). The Goose Creek bacteria TMDL Implementation Plan for the Upper Goose Creek watershed (ID 131) was approved by the EPA on 04/02/2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_GOO02B06 / Goose Creek / Segment begins at the confluence with an unnamed tributary to Goose Creek, at rivermile 35.28, and continues downstream until the confluence with Panther Skin Creek.	4A	Escherichia coli	2006	L	2.68
VAN-A05R_GOO02C04 / Goose Creek / Segment begins at the confluence with Gap Run and continues downstream until the confluence with an unnamed tributary to Goose Creek, at rivermile 35.28.	4A	Escherichia coli	2016	L	3.27

Goose Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.95**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-07-BAC** **Unnamed tributary to Jeffries Branch**

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 0.32 and continues downstream to the confluence with Jeffries Branch.

City / County: Fauquier Co. Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 11 samples 36.4%) at station 1aXCD000.07 at Route 619. A new TMDL is not required for this impaired segment of an unnamed tributary to Jeffries Branch because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A05R_XCD01A16 / Unnamed tributary to Jeffries Branch / Segment begins at the confluence with an unnamed tributary at rivermile 0.32 and continues downstream to the confluence with Jeffries Branch.	4A	Escherichia coli	2018	L	0.31

Unnamed tributary to Jeffries Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.31**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A06R-01-BAC** **North Fork Goose Creek**

Cause Location: Begins at the outlet from Sleeter Lake and continues downstream until the confluence with Crooked Run.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (17 of 32 samples - 53.1%) at station 1aNOG005.69 at Route 722. 2012 Assessment: E. coli bacteria criterion excursions (2 of 6 samples - 33.3%) at station 1aNOG011.60. The Goose Creek bacteria TMDL for the North Fork Goose Creek watershed (POL0065) was approved by the EPA on 05/01/2003. The SWCB approved the TMDL on 06/17/2004. Federal ID 24405

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A06R_NOG02A00 / North Fork Goose Creek / Segment begins at the confluence with an unnamed tributary to North Fork Goose Creek, approximately 0.23 rivermiles upstream from Route 725, and continues downstream until the confluence with Crooked Run.	4A	Escherichia coli	1998	L	4.69
VAN-A06R_NOG03A02 / North Fork Goose Creek / Segment begins at the outlet from Sleeter Lake and continues downstream until the confluence with an unnamed tributary to North Fork Goose Creek, approximately 0.23 rivermiles upstream of Route 725.	4A	Escherichia coli	2008	L	2.96

North Fork Goose Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.65**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A06R-01-BEN** **North Fork Goose Creek**

Cause Location: Begins at the confluence with an unnamed tributary to North Fork Goose Creek, approximately 0.23 rivermile upstream from Route 725, and continues downstream until the confluence with Crooked Run.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

2014 Assessment: One biological monitoring event in 2008 at station 1aNOG005.69 at Route 722 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A06R_NOG02A00 / North Fork Goose Creek / Segment begins at the confluence with an unnamed tributary to North Fork Goose Creek, approximately 0.23 rivermiles upstream from Route 725, and continues downstream until the confluence with Crooked Run.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	4.69

North Fork Goose Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.69**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A06R-02-BAC** **Crooked Run**

Cause Location: Begins at the confluence with an unnamed tributary to Crooked Run, at the Route 725 bridge, and continues downstream until the confluence with North Fork Goose Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 9 samples - 44.4%) at station 1aCRF001.18 at Route 727. A new TMDL is not required for this impaired segment of Goose Creek because the downstream Goose Creek bacteria TMDL 23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A06R_CRF01A02 / Crooked Run / Segment begins at the confluence with an unnamed tributary to Crooked Run, at the Route 725 bridge, and continues downstream until the confluence with North Fork Goose Creek.	4A	Escherichia coli	2014	L	2.16

Crooked Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.16**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A06R-02-BEN** **Jacks Run**

Cause Location: Begins at the headwaters of Jacks Run and continues downstream until the confluence with North Fork Goose Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2016 at station 1AJAC000.74 at 0.4 miles downstream from Route 690 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A06R_JAC01A04 / Jacks Run / Segment begins at the headwaters of Jacks Run and continues downstream until the confluence with North Fork Goose Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	3.18

Jacks Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.18**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A06R-03-BAC** **Jacks Run**

Cause Location: Begins at the headwaters of Jacks Run and continues downstream until the confluence with North Fork Goose Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 12 samples 66.7%) at station 1aJAC001.06 at Route 690. A new TMDL is not required for this impaired segment of Goose Creek because the downstream Goose Creek bacteria TMDL (24405, 05/01/2003) included modeling, source identification, and reductions that covered the entire North Fork Goose Creek watershed (POL0065).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A06R_JAC01A04 / Jacks Run / Segment begins at the headwaters of Jacks Run and continues downstream until the confluence with North Fork Goose Creek.	4A	Escherichia coli	2018	L	3.18

Jacks Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.18**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A07R-01-BAC** **Beaverdam Creek**

Cause Location: Begins at the confluence with North Fork Beaverdam Creek, approximately 0.27 rivermile upstream of Route 746, and continues downstream until the confluence with North Fork Goose Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (10 of 31 samples - 31.3%) at station 1aBEC004.76 at Route 734. The Goose Creek bacteria TMDL for the Beaverdam Creek watershed (POL0066) was approved by the EPA on 05/01/2003. The SWCB approved the TMDL on 06/17/2004. Federal ID 23318.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A07R_BEC01A00 / Beaverdam Creek / Segment begins at the confluence with North Fork Beaverdam Creek, approximately 0.27 rivermile upstream of Route 746, and continues downstream until the confluence with North Fork Goose Creek.	4A	Escherichia coli	2006	L	6.50

Beaverdam Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.50**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A07R-02-BAC** **North Fork Beaverdam Creek**

Cause Location: Begins at the confluence with Butchers Branch and continues downstream until the confluence with the main stem of Beaverdam Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at station 1aNOB000.75 at Route 630. 2010 Assessment: E. coli bacteria criterion excursions (3 of 6 samples - 50.0%) at station 1aNOB005.49 at Route 719. A new TMDL is not required for this impaired segment of North Fork Beaverdam Creek because the downstream Goose Creek bacteria TMDL (23318, 05/01/2003) included modeling, source identification, and reductions that covered the entire Beaverdam Creek watershed (POL0066).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A07R_NOB01A02 / North Fork Beaverdam Creek / Segment begins at the confluence with an unnamed tributary to North Fork Beaverdam Creek, at rivermile 3.12, and continues downstream until the confluence with the main stem of Beaverdam Creek.	4A	Escherichia coli	2012	L	3.15
VAN-A07R_NOB02A04 / North Fork Beaverdam Creek / Segment begins at the confluence with Butchers Branch and continues downstream until the confluence with an unnamed tributary to North Fork Beaverdam Creek, at rivermile 3.12.	4A	Escherichia coli	2006	L	2.60

North Fork Beaverdam Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.75**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A07R-02-BEN** **North Fork Beaverdam Creek**

Cause Location: Begins at the headwaters of North Fork Beaverdam Creek and continues downstream until the confluence with the main stem of Beaverdam Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of six biological monitoring events in 2013, 2014, and 2016 at station 1aNOB000.75 at Route 630 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. 2008 Assessment: A total of two biological monitoring events in 2001 at station 1aNOB007.97 at Route 831 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A07R_NOB01A02 / North Fork Beaverdam Creek / Segment begins at the confluence with an unnamed tributary to North Fork Beaverdam Creek, at rivermile 3.12, and continues downstream until the confluence with the main stem of Beaverdam Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	3.15
VAN-A07R_NOB02A04 / North Fork Beaverdam Creek / Segment begins at the confluence with Butchers Branch and continues downstream until the confluence with an unnamed tributary to North Fork Beaverdam Creek, at rivermile 3.12.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	2.60
VAN-A07R_NOB03A04 / North Fork Beaverdam Creek / Segment begins at the headwaters of North Fork Beaverdam Creek and continues downstream until the confluence with Butchers Branch.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	4.81

North Fork Beaverdam Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.56**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A07R-03-BAC** **Beaverdam Creek**

Cause Location: Begins at the confluence with an unnamed tributary, at rivermile 13.2, and continues downstream until the confluence of with Dog Branch.

City / County: Loudoun Co.

Use(s): Recreation

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

2010 Assessment: E. coli bacteria criterion excursions (4 of 6 samples - 66.7%) at station 1aBEC009.01 at Route 626. 2016 Assessment: E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at station 1aBEC011.76 at Route 630. A new TMDL is not required for this impaired segment of Beaverdam Creek because the downstream Goose Creek bacteria TMDL (23318, 05/01/2003) included modeling, source identification, and reductions that covered the entire Beaverdam Creek watershed (POL0066).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A07R_BEC02A04 / Beaverdam Creek / Segment begins at the confluence with an unnamed tributary to Beaverdam Creek, just upstream from Route 626, and continues downstream until the confluence of with Dog Branch.	4A	Escherichia coli	2006	L	1.26
VAN-A07R_BEC03A12 / Beaverdam Creek / Segment begins at the confluence with an unnamed tributary, at rivermile 13.2, and continues downstream to the confluence with an unnamed tributary to Beaverdam Creek, just upstream from Route 626.	4A	Escherichia coli	2012	L	4.37

Beaverdam Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.63**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08L-01-BAC** **Beaverdam Reservoir**

Cause Location: Includes all of Beaverdam Reservoir

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 16 samples - 12.5%) at stations 1ABEE000.40 (1 of 11 samples) and 1ABEE000.40 (1 of 5 samples).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08L_BEE01A08 / Beaverdam Reservoir / Beaverdam Reservoir	5A	Escherichia coli	2018	L	301.08

Beaverdam Reservoir **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:		**301.08**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08L-02-BAC** **Goose Creek Reservoir**

Cause Location: Includes all of Goose Creek Reservoir.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 23 samples - 34.8%) at stations 1AGOO004.93 (4 of 12 samples) and 1AGOO005.57 (4 of 11 samples).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08L_GOO02A02 / Goose Creek Reservoir / Segment includes the impounded waters downstream of the Dulles Greenway Road bridge.	5A	Escherichia coli	2018	L	39.63
VAN-A08L_GOO02B06 / Goose Creek Reservoir / Segment includes the impounded waters upstream of the Dulles Greenway Road bridge.	5A	Escherichia coli	2018	L	58.12

Goose Creek Reservoir **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:		**97.75**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-01-BAC** **Goose Creek**

Cause Location: Begins below the Goose Creek impoundment and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 35 samples - 14.3%) at station 1aGOO002.38 at Route 7. The Goose Creek bacteria TMDL for the Goose Creek and Tributaries watershed (POL0063) was approved by the EPA on 05/01/2003. The SWCB approved the TMDL on 06/17/2004. Federal ID 23319.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_GOO01A00 / Goose Creek / Segment begins below the Goose Creek impoundment and continues downstream until the confluence with the Potomac River.	4A	Escherichia coli	2006	L	4.81

Goose Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.81**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-01-BEN** **Goose Creek**

Cause Location: Begins below the Goose Creek impoundment and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

2016 Assessment: Two biological monitoring events in 2009 at station 1aGOO002.38 at Route 7 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. The Goose Creek and Little River sediment TMDL for the Goose Creek watershed (POL0072) was approved by the EPA on 04/26/2004. The SWCB approved the TMDL on 08/31/2004. Federal ID 23320.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_GOO01A00 / Goose Creek / Segment begins below the Goose Creek impoundment and continues downstream until the confluence with the Potomac River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.81

Goose Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.81**

Sources:

- Channel Erosion/Incision from Upstream Hydromodifications
- Crop Production (Crop Land or Dry Land)
- Post-development Erosion and Sedimentation
- Rangeland Grazing
- Site Clearance (Land Development or Redevelopment)

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-01-PCB** **Broad Run, Difficult Run, Goose Creek**

Cause Location: Includes the following tributaries between the Virginia/Maryland state line near the Route 340 bridge (Loudoun County) to the I-395 bridge in Arlington County (above the Woodrow Wilson Bridge): Goose Creek up to the Dulles Greenway Road Bridge, Broad Run up to the Route 625 bridge, and Difficult Run up to the Route 7 bridge.

City / County: Fairfax Co. Loudoun Co.

Use(s): Fish Consumption

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

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 12/13/04, limits American eel consumption to no more than two meals per month.

Additionally, there were two excursions greater than the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for total PCBs in fish tissue recorded at station 1aBRB002.15 at Route 7 in 2015 in two species of fish (American eel and channel catfish)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08L_GOO02A02 / Goose Creek Reservoir / Segment includes the impounded waters downstream of the Dulles Greenway Road bridge.	5A	PCB in Fish Tissue	2006	L	39.63
VAN-A08R_GOO01A00 / Goose Creek / Segment begins below the Goose Creek impoundment and continues downstream until the confluence with the Potomac River.	5A	PCB in Fish Tissue	2006	L	4.81
VAN-A09R_BRB01A00 / Broad Run / Segment begins at the confluence with Beaverdam Run and continues downstream until the confluence with the Potomac River.	5A	PCB in Fish Tissue	2006	L	2.93
VAN-A09R_BRB02A06 / Broad Run / Segment begins at the confluence with Cabin Branch and continues downstream until the confluence with Beaverdam Run.	5A	PCB in Fish Tissue	2006	L	2.27
VAN-A09R_BRB03A06 / Broad Run / Segment begins at the Route 625 crossing and continues downstream until the confluence with Cabin Branch.	5A	PCB in Fish Tissue	2006	L	1.11
VAN-A11R_DIF01A00 / Difficult Run / Segment begins at the confluence with Captain Hickory Run and continues downstream until the confluence with the Potomac River.	5A	PCB in Fish Tissue	2006	L	3.17
VAN-A11R_DIF01B06 / Difficult Run / Segment begins at the Route 7 bridge crossing and continues downstream until the confluence with Captain Hickory Run.	5A	PCB in Fish Tissue	2006	L	1.05

Broad Run, Difficult Run, Goose Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:		**39.63**	**15.34**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-02-BAC** **Little River**

Cause Location: Begins the confluence with Bartons Creek and continues downstream until the confluence with Goose Creek.

City / County: Fauquier Co. Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 13 samples - 30.8%) at stations 1aLIV004.78 and 1aLIV004.79 at Route 50; E. coli bacteria criterion excursions (2 of 4 samples - 50.0%) at station 1aLIV006.92 at Route 629 (2012 Assessment); and E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at station 1aLIV012.12 at Route 776. The Goose Creek bacteria TMDL for the Little River watershed (POL0067) was approved by the EPA on 05/01/2003. The SWCB approved the TMDL on 06/17/2004. Federal ID 24406.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_LIV01A00 / Little River / Segment begins at the confluence with Hungry Run, approximately 1.5 rivermiles upstream from Route 50 near Aldie, and continues downstream until the confluence with Goose Creek.	4A	Escherichia coli	2016	L	6.41
VAN-A08R_LIV02A06 / Little River / Segment begins at the confluence with an unnamed tributary and continues downstream until the confluence with Hungry Run, approximately 1.5 rivermiles upstream from Route 50 near Aldie.	4A	Escherichia coli	2006	L	2.48
VAN-A08R_LIV02B10 / Little River / Segment begins at the confluence with Bartons Creek and continues downstream until the confluence with an unnamed tributary.	4A	Escherichia coli	2016	L	4.36

Little River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**13.25**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-03-BAC** **Sycolin Creek**

Cause Location: Begins at the headwaters of Sycolin Creek and continues downstream until the confluence with Goose Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 11 samples - 45.5%) at station 1aSYC002.03 at Route 652. 2004 Assessment: fecal coliform bacteria criterion excursions (3 of 5 samples - 60.0%) at station 1aSYC004.93 at Route 621. 2006 Assessment: fecal coliform bacteria criterion excursions (3 of 7 samples - 42.8%) at station 1aSYC007.43 at Route 797. The Goose Creek bacteria TMDL for the Sycolin Creek watershed (POL0069) was approved by the EPA on 05/01/2003. The SWCB approved the TMDL on 06/17/2004. Federal ID 24408.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_SYC01A00 / Sycolin Creek / Segment begins at rivermile 1.20, the boundary of the PWS designation, and continues downstream until the confluence with Goose Creek.	4A	Escherichia coli	1998	L	1.19
VAN-A08R_SYC01B06 / Sycolin Creek / Segment begins at the confluence with an unnamed tributary to Sycolin Creek, approximately 0.23 rivermile upstream from Route 643, and continues downstream until rivermile 1.20, the boundary of the PWS designation.	4A	Escherichia coli	1998	L	1.90

Sycolin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.09**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_SYC02A02 / Sycolin Creek / Segment begins at the confluence with South Fork Sycolin Creek and continues downstream until the confluence with an unnamed tributary to Sycolin Creek, approximately 0.23 rivermile upstream from Route 643.	4A	Fecal Coliform	1998	L	4.00
VAN-A08R_SYC03A02 / Sycolin Creek / Segment begins at the headwaters of Sycolin Creek and continues downstream until the confluence with South Fork Sycolin Creek.	4A	Fecal Coliform	1998	L	3.98

Sycolin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**7.98**

Sources:

Grazing in Riparian or Shoreline Zones

Livestock (Grazing or Feeding Operations)

Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-04-BAC** **South Fork Sycolin Creek**

Cause Location: Begins at the headwaters of South Fork Sycolin Creek and continues downstream until the confluence with Sycolin Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (2 of 2 samples - 100%) at station 1aSFS000.28 at Route 15. The Goose Creek bacteria TMDL for the Sycolin Creek watershed (POL0069) was approved by the EPA on 05/01/2003. The SWCB approved the TMDL on 06/17/2004. Federal ID 33840.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_SFS01A02 / South Fork Sycolin Creek / Segment begins at the headwaters of South Fork Sycolin Creek and continues downstream until the confluence with Sycolin Creek.	4A	Escherichia coli	2002	L	3.76

South Fork Sycolin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.76**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-04-BEN** **Tuscarora Creek**

Cause Location: Begins at the confluence with Town Branch and continues downstream until the confluence with Goose Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2012 at station 1aTUS003.19 at Route 643 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_TUS01A00 / Tuscarora Creek / Segment begins at the boundary for the PWS designation area, approximately 0.1 rivermile downstream from the Route 15 crossing. and continues downstream until the confluence with Goose Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	2.80
VAN-A08R_TUS01B06 / Tuscarora Creek / Segment begins at the confluence with Town Branch and continues downstream until the boundary for the PWS designation area, approximately 0.1 rivermile downstream from the Route 15 crossing.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	1.09

Tuscarora Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.89**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-05-BAC** **Tuscarora Creek**

Cause Location: Begins at the confluence with Town Branch and continues downstream until the confluence with Goose Creek.

City / County: Loudoun Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (2 of 3 samples - 66.7%) at station 1aTUS000.04 at the golf cart bridge. A new TMDL is not required for this impaired segment of Tuscarora Creek because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_TUS01A00 / Tuscarora Creek / Segment begins at the boundary for the PWS designation area, approximately 0.1 rivermile downstream from the Route 15 crossing. and continues downstream until the confluence with Goose Creek.	4A	Escherichia coli	2004	L	2.80
VAN-A08R_TUS01B06 / Tuscarora Creek / Segment begins at the confluence with Town Branch and continues downstream until the boundary for the PWS designation area, approximately 0.1 rivermile downstream from the Route 15 crossing.	4A	Escherichia coli	2004	L	1.09

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

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-05-BEN** **Dry Mill Branch**

Cause Location: Segment begins at the confluence with an unnamed tributary at rivermile 2.97 and continues downstream to the confluence with Tuscarora Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of six biological monitoring events in 2013, 2014, and 2016 at station 1aDRL001.00, upstream of Route 699, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_DRL01A16 / Dry Mill Branch / Segment begins at the confluence with an unnamed tributary at rivermile 2.97 and continues downstream to the confluence with Tuscarora Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2016	L	2.97

Dry Mill Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.97**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-06-BAC** **Goose Creek**

Cause Location: Begins at the confluence with the Little River and extends downstream until the backwaters of the Goose Creek Reservoir, at approximately rivermile 10.2.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 33 samples - 12.1%) at station 1aGOO011.23 at Route 621. A new TMDL is not required for this impaired segment of Goose Creek because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_GOO03A02 / Goose Creek / Segment begins at the confluence with the Little River and extends downstream until the backwaters of the Goose Creek Reservoir, at approximately rivermile 10.2.	4A	Escherichia coli	2006	L	2.54

Goose Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.54**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-06-BEN** **Goose Creek**

Cause Location: Begins at the confluence with the Little River and extends downstream until the backwaters of the Goose Creek Reservoir, at approximately rivermile 10.2.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of six biological monitoring events in 2013, 2014 and 2016 at station 1aGOO011.23 at Route 621 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_GOO03A02 / Goose Creek / Segment begins at the confluence with the Little River and extends downstream until the backwaters of the Goose Creek Reservoir, at approximately rivermile 10.2.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	2.54

Goose Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.54**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-07-BAC** **Howsers Branch**

Cause Location: Begins at the headwaters of Howsers Branch and continues downstream until the confluence with Little River.

City / County: Loudoun Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100%) at station 1aHOW003.68 at Route 50. A new TMDL is not required for this impaired segment of Howsers Branch because the downstream Goose Creek bacteria TMDL (24406, 05/01/2003) included modeling, source identification, and reductions that covered the entire Little River watershed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_HOW01A08 / Howsers Branch / Segment begins at the headwaters of Howsers Branch and continues downstream until the confluence with Little River.	4A	Escherichia coli	2008	L	5.10

Howsers Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.10**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-07-BEN** **Cattail Branch**

Cause Location: Begins downstream from Lake Sherred near Route 15 and continues downstream to the confluence with Goose Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of four biological monitoring events in 2015 and 2016 at station 1aCAC000.16 at Riverlook Court resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_CAC01A18 / Cattail Branch / Segment begins downstream from Lake Sherred near Route 15 and continues downstream to the confluence with Goose Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	3.41

Cattail Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.41**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-08-BAC** **Big Branch**

Cause Location: Begins at the headwaters of Big Branch and continues downstream to the confluence with Goose Creek

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 9 samples - 33.3%) at station 1aBIB000.69 at Route 650. A new TMDL is not required for this impaired segment of Big Branch because the downstream Goose Creek bacteria TMDL (23319, 05/01/2003) included modeling, source identification, and reductions that covered the entire Goose Creek and Tributaries watershed (POL0063).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_BIB01A14 / Big Branch / Segment begins at the headwaters of Big Branch and continues downstream to the confluence with Goose Creek	4A	Escherichia coli	2014	L	2.61

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

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-08-BEN** **Sycolin Creek**

Cause Location: Begins at the headwaters of Sycolin Creek and continues downstream until the confluence with South Fork Sycolin Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of six biological monitoring events in 2013, 2014, and 2016 at station 1aSYC007.43 at Route 797 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A08R_SYC03A02 / Sycolin Creek / Segment begins at the headwaters of Sycolin Creek and continues downstream until the confluence with South Fork Sycolin Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	3.98

Sycolin Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.98**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-01-BAC** **Unnamed tributary to the Potomac River**

Cause Location: Begins at an unnamed tributary at rivermile 1.82, and continues downstream to the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at station 1aXLE001.62 at Algonkian Parkway.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_XLE01A10 / Unnamed tributary to Potomac River / Segment begins at an unnamed tributary at rivermile 1.82, and continues downstream to the confluence with the Potomac River.	5A	Escherichia coli	2010	M	1.74

Unnamed tributary to the Potomac River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.74**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-01-BEN** **Broad Run**

Cause Location: Begins at the confluence with Horsepen Run and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2012 at station 1aBRB002.15 at Route 7 and two biological monitoring events in 2012 at station 1aBRB006.97 (upstream from Route 625 (Waxpool Road)) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_BRB01A00 / Broad Run / Segment begins at the confluence with Beaverdam Run and continues downstream until the confluence with the Potomac River.	5A	Benthic-Macroinvertebrate Bioassessments	2006	M	2.93
VAN-A09R_BRB02A06 / Broad Run / Segment begins at the confluence with Cabin Branch and continues downstream until the confluence with Beaverdam Run.	5A	Benthic-Macroinvertebrate Bioassessments	2008	M	2.27
VAN-A09R_BRB03A06 / Broad Run / Segment begins at the Route 625 crossing and continues downstream until the confluence with Cabin Branch.	5A	Benthic-Macroinvertebrate Bioassessments	2008	M	1.11
VAN-A09R_BRB03B08 / Broad Run / Segment begins at the confluence with Horsepen Run and continues downstream until the Route 625 crossing.	5A	Benthic-Macroinvertebrate Bioassessments	2008	M	2.11

Broad Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**8.42**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-01-HG** **Broad Run**

Cause Location: Begins at the confluence with Beaverdam Run and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Fish Consumption

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

2010 Assessment: Excursions greater than the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded at station 1aBRB002.15 at Route 7 in 2004 in two species of fish (smallmouth bass and yellow bullheaded catfish).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_BRB01A00 / Broad Run / Segment begins at the confluence with Beaverdam Run and continues downstream until the confluence with the Potomac River.	5A	Mercury in Fish Tissue	2010	L	2.93

Broad Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**2.93**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-02-BAC** **Broad Run**

Cause Location: Begins at the confluence with Horsepen Run, and continues downstream until the confluence with Cabin Branch, at rivermile 5.35. Also, begins at the confluence with Beaverdam Run and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aBRB006.33 at Route 625 (Waxpool Rd). E. coli bacteria criterion excursions (7 of 40 samples - 17.5%) at station 1aBRB002.15 at Route 7.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_BRB01A00 / Broad Run / Segment begins at the confluence with Beaverdam Run and continues downstream until the confluence with the Potomac River.	5A	Escherichia coli	2014	M	2.93
VAN-A09R_BRB03A06 / Broad Run / Segment begins at the Route 625 crossing and continues downstream until the confluence with Cabin Branch.	5A	Escherichia coli	2010	M	1.11
VAN-A09R_BRB03B08 / Broad Run / Segment begins at the confluence with Horsepen Run and continues downstream until the Route 625 crossing.	5A	Escherichia coli	2010	M	2.11

Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.15**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-02-BEN** **Broad Run**

Cause Location: Begins at the perennial headwaters and continues downstream until the confluence with Horsepen Run.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2012 at station 1aBRB015.43, upstream of Route 621, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_BRB03C10 / Broad Run / Segment begins at the confluence of Broad Run with South Fork Broad Run, and continues downstream until the confluence with Horsepen Run.	5A	Benthic-Macroinvertebrate Bioassessments	2018	M	5.76
VAN-A09R_BRB04A08 / Broad Run / Segment begins at the perennial headwaters and continues downstream until the confluence with South Fork Broad Run.	5A	Benthic-Macroinvertebrate Bioassessments	2008	M	3.69

Broad Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.45**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-03-BAC** **Broad Run**

Cause Location: Begins at the perennial headwaters and continues downstream until the confluence with South Fork Broad Run.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aBRB015.38 at Route 621.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_BRB04A08 / Broad Run / Segment begins at the perennial headwaters and continues downstream until the confluence with South Fork Broad Run.	5A	Escherichia coli	2012	M	3.69

Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.69**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-03-BEN** **Horsepen Run**

Cause Location: Segment begins at the headwaters of Horsepen Run and continues until the confluence with an unnamed tributary to Horsepen Run, approx. 1.0 rivermile downstream from Route 28.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of four biological monitoring events in 2013 and 2014 at station 1aHPR003.93 (upstream of the confluence with Merrybrook Run) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_HPR01A00 / Horsepen Run / Segment begins at the headwaters of Horsepen Run and continues downstream until the confluence with Stallion Branch, 0.83 rivermile upstream from Route 606.	5A	Benthic-Macroinvertebrate Bioassessments	2016	M	8.17

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

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-04-BAC** **South Fork Broad Run**

Cause Location: Begins at the headwaters of South Fork Broad Run and continues downstream until the confluence with Broad Run.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aSOR000.59 at Route 621.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_SOR01A04 / South Fork Broad Run / Segment begins at the headwaters of South Fork Broad Run and continues downstream until the confluence with Broad Run.	5A	Escherichia coli	2014	M	5.28

South Fork Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.28**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-04-BEN** **South Fork Broad Run**

Cause Location: Begins at the headwaters of South Fork Broad Run and continues downstream until the confluence with Broad Run.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of four biological monitoring events in 2011 and 2012 at station 1aSOR000.59 at Route 621 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_SOR01A04 / South Fork Broad Run / Segment begins at the headwaters of South Fork Broad Run and continues downstream until the confluence with Broad Run.	5A	Benthic-Macroinvertebrate Bioassessments	2014	M	5.28

South Fork Broad Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.28**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-05-BAC** **Beaverdam Run**

Cause Location: Begins at the confluence with of an unnamed tributary to Beaverdam Run, in Ashburn Park, and continues downstream until the confluence with Broad Run.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 26.0%) at station 1aBEM000.60 at Route 607.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_BEM01A04 / Beaverdam Run / Segment begins at the confluence with of an unnamed tributary to Beaverdam Run, and continues downstream until the confluence with Broad Run.	5A	Escherichia coli	2014	M	2.31
VAN-A09R_BEM02B10 / Beaverdam Run / Segment begins at the confluence with of an unnamed tributary to Beaverdam Run, in Ashburn Park, and continues downstream until the confluence with an unnamed tributary to Beaverdam Run.	5A	Escherichia coli	2014	M	1.54

Beaverdam Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.85**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-05-BEN** **Beaverdam Run**

Cause Location: Begins at the confluence with of an unnamed tributary to Beaverdam Run, in Ashburn Park, and continues downstream until the confluence with Broad Run.

City / County: Loudoun Co.

Use(s): Aquatic Life

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

A total of four biological monitoring events in 2013 and 2014 at station 1aBEM000.60 at Route 607 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_BEM01A04 / Beaverdam Run / Segment begins at the confluence with of an unnamed tributary to Beaverdam Run, and continues downstream until the confluence with Broad Run.	5A	Benthic-Macroinvertebrate Bioassessments	2016	L	2.31
VAN-A09R_BEM02B10 / Beaverdam Run / Segment begins at the confluence with of an unnamed tributary to Beaverdam Run, in Ashburn Park, and continues downstream until the confluence with an unnamed tributary to Beaverdam Run.	5A	Benthic-Macroinvertebrate Bioassessments	2016	L	1.54

Beaverdam Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.85**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-06-BAC** **Indian Creek**

Cause Location: Begins at the headwaters of Indian Run and continues downstream to the confluence with Horsepen Run.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 15 samples - 33.3%) at station 1aINI000.80 at Route 606 (Old Ox Road).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_INI01A14 / Indian Creek / Segment begins at the headwaters of Indian Creek and continues downstream to the confluence with Horsepen Run.	5A	Escherichia coli	2014	M	3.48

Indian Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.48**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-06-BEN** **Frying Pan Branch**

Cause Location: Begins at the perennial headwaters and continues downstream to the confluence with Horsepen Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2016 at station 1aFRY000.85 at 0.25 mile upstream of Route 608 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_FRY01A18 / Frying Pan Branch / Segment begins at the perennial headwaters and continues downstream to the confluence with Horsepen Run.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	1.42

Frying Pan Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.42**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-07-BAC** **Horsepen Run**

Cause Location: Segment begins at the headwaters of Horsepen Run and continues until the confluence with an unnamed tributary to Horsepen Run, approx. 1.0 rivermile downstream from Route 28.

City / County: Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 17 samples - 11.8%) at station 1aHPR003.87 at Dulles Airport Access Road.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_HPR01A00 / Horsepen Run / Segment begins at the headwaters of Horsepen Run and continues downstream until the confluence with Stallion Branch, 0.83 rivermile upstream from Route 606.	5A	Escherichia coli	2016	L	8.17

Horsepen Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.17**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-08-BAC** **Frying Pan Branch**

Cause Location: Begins at the perennial headwaters and continues downstream to the confluence with Horsepen Run.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 12 samples 50.0%) at station 1aFRY000.60 at Route 657.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A09R_FRY01A18 / Frying Pan Branch / Segment begins at the perennial headwaters and continues downstream to the confluence with Horsepen Run.	5A	Escherichia coli	2018	L	1.42

Frying Pan Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.42**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A10R-01-BAC** **Sugarland Run**

Cause Location: Begins at the confluence with Folly Lick Branch and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co. Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (10 of 34 samples - 29.4%) at station 1aSUG004.42 at Route 7. The Tributaries to the Potomac River bacteria TMDL for the Sugarland Run watershed (782) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53779.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A10R_SUG01A00 / Sugarland Run / Segment begins at the boundary of the PWS designation area, at rivermile 4.82, and continues downstream until the confluence with the Potomac River.	4A	Escherichia coli	2002	L	4.88
VAN-A10R_SUG01B06 / Sugarland Run / Segment begins at the confluence with Folly Lick Branch and continues downstream until the boundary of the PWS designation area, at rivermile 4.82.	4A	Escherichia coli	2006	L	1.06

Sugarland Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.94**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)
Sewage Discharges in Unsewered Areas	Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A10R-01-BEN** **Sugarland Run**

Cause Location: Begins at the confluence with Smilax Branch and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co. Loudoun Co.

Use(s): Aquatic Life

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

2016 Assessment: A total of four biological events in 2009 and in 2010 at station 1aSUG006.28 at Wiehle Avenue and two biological monitoring events in 2010 at station 1aSUG003.52 (adjacent to Brasswood Place) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A10R_SUG01A00 / Sugarland Run / Segment begins at the boundary of the PWS designation area, at rivermile 4.82, and continues downstream until the confluence with the Potomac River.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	4.88
VAN-A10R_SUG01B06 / Sugarland Run / Segment begins at the confluence with Folly Lick Branch and continues downstream until the boundary of the PWS designation area, at rivermile 4.82.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	1.06
VAN-A10R_SUG02A02 / Sugarland Run / Segment begins at the confluence with Smilax Branch and continues downstream until the confluence with Folly Lick Branch.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	3.77

Sugarland Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.71**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-01-BAC** **Difficult Run**

Cause Location: begins at the confluence with Captain Hickory Run and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (18 of 55 samples - 32.7%) at station 1aDIF000.86 at Route 193. The Difficult Run bacteria TMDL (POL0557) was approved by the EPA on 11/07/2008. The SWCB approved the TMDL on 04/28/2009. Federal ID 38239.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_DIF01A00 / Difficult Run / Segment begins at the confluence with Captain Hickory Run and continues downstream until the confluence with the Potomac River.	4A	Escherichia coli	2004	L	3.17

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

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-01-BEN** **Difficult Run**

Cause Location: Begins at the confluence with Captain Hickory Run and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aDIF000.86 (Route 193) as well as two biological monitoring events in 2007 at station 1aDIF000.80 (downstream of Route 193) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. The Difficult Run sediment TMDL (POL0558) was approved by the EPA on 11/07/2008. The SWCB approved the TMDL on 04/27/2009. Federal ID 37087.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_DIF01A00 / Difficult Run / Segment begins at the confluence with Captain Hickory Run and continues downstream until the confluence with the Potomac River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	3.17

Difficult Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.17**

Sources:

Post-development Erosion and Sedimentation	Streambank Modifications/destabilization	Urban Runoff/Storm Sewers

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-01-HEPOXID Difficult Run**

Cause Location: Begins at the confluence with Captain Hickory Run and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Heptachlor epoxide / 5A

2008 Assessment: Two exceedances of the water quality criterion based tissue screening value (TV) of 12 parts per billion (ppb) for heptachlor epoxide in fish tissue were recorded in one species of fish (American eel) collected in 2001 and 2004 at monitoring station 1aDIF000.86.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_DIF01A00 / Difficult Run / Segment begins at the confluence with Captain Hickory Run and continues downstream until the confluence with the Potomac River.	5A	Heptachlor epoxide	2006	L	3.17

Difficult Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Heptachlor epoxide - Total Impaired Size by Water Type:			**3.17**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-02-BAC** **Mine Run**

Cause Location: Begins at the confluence with an unnamed tributary to Mine Run, approximately 0.5 rivermile upstream from River Bend Road, and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (2 of 13 samples - 15.4%) at station 1aMNR000.72 at Route 603. The bacteria TMDL for the Mine Run watershed (783) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53778.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_MNR01A04 / Mine Run / Segment begins at the confluence with an unnamed tributary to Mine Run, approximately 0.5 rivermile upstream from River Bend Road, and continues downstream until the confluence with the Potomac River.	4A	Escherichia coli	2006	L	1.02

Mine Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.02**

Sources:

Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas	Urban Runoff/Storm Sewers
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-02-BEN** **Captain Hickory Run**

Cause Location: Begins at the headwaters of Captain Hickory Run and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2008 Assessment: Two biological monitoring events in 2001 at station 1aCAH001.82 (upstream from Route 681) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_CAH01A04 / Captain Hickory Run / Segment begins at the boundary of the PWS designation area, approximately 0.86 rivermile upstream from the confluence with Piney Run, and continues downstream until the confluence with Difficult Run.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	2.19
VAN-A11R_CAH01B06 / Captain Hickory Run / Segment begins at the headwaters of Captain Hickory Run and continues downstream until the boundary of the PWS designation area, approximately 0.86 rivermile upstream from the confluence with Piney Run.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	1.08

Captain Hickory Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.27**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-03-BAC** **Difficult Run**

Cause Location: Begins at confluence with Rocky Branch, approximately 0.25 rivermile upstream of Route 672, and continues downstream until the confluence with Wolftrap Creek.

City / County: Fairfax Co.

Use(s): Recreation

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

2014 Assessment: E. coli bacteria criterion excursions (4 of 18 samples - 22.2%) at station 1aDIF005.06 at Route 675 and E. coli bacteria criterion excursions (3 of 18 samples - 16.7%) at station 1aDIF010.48 at Route 672. A new TMDL is not required for this impaired segment of Difficult Run because the downstream bacteria TMDL (38239, 11/07/2008) included modeling, source identification, and reductions that covered the entire watershed (POL0557).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_DIF02A02 / Difficult Run / Segment begins at the boundary of the PWS designation area, approximately 0.05 rivermile upstream from the Route 675 crossing, and continues downstream until the confluence with Wolftrap Creek.	4A	Escherichia coli	2010	L	0.85
VAN-A11R_DIF02B06 / Difficult Run / Segment begins at the confluence with Piney Branch and continues downstream until the boundary of the PWS designation area, approximately 0.05 rivermile upstream from the Route 675 crossing.	4A	Escherichia coli	2010	L	1.97
VAN-A11R_DIF03A02 / Difficult Run / Segment begins at confluence with Rocky Branch, approximately 0.25 rivermile upstream of Route 672, and continues downstream until the confluence with Piney Branch.	4A	Escherichia coli	2006	L	3.55

Difficult Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.37**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-03-BEN** **Difficult Run**

Cause Location: Begins at confluence with Rocky Branch, approximately 0.25 rivermile upstream of Route 672, and continues downstream until the confluence with Wolftrap Creek.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aDIF005.06 at Route 675 and two biological monitoring events in 2007 at station 1aDIF010.48 at Route 672 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_DIF02A02 / Difficult Run / Segment begins at the boundary of the PWS designation area, approximately 0.05 rivermile upstream from the Route 675 crossing, and continues downstream until the confluence with Wolftrap Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	0.85
VAN-A11R_DIF02B06 / Difficult Run / Segment begins at the confluence with Piney Branch and continues downstream until the boundary of the PWS designation area, approximately 0.05 rivermile upstream from the Route 675 crossing.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	1.97
VAN-A11R_DIF03A02 / Difficult Run / Segment begins at confluence with Rocky Branch, approximately 0.25 rivermile upstream of Route 672, and continues downstream until the confluence with Piney Branch.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	3.55

Difficult Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.37**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-04-BAC** **Snakeden Branch**

Cause Location: Begins at the confluence with an unnamed tributary to Snakeden Branch, approximately 0.4 rivermile downstream from the Twin Branches Road bridge, and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (4 of 13 samples - 30.8%) at station 1aSNA000.21 at Route 677. A new TMDL is not required for this impaired segment of Snakeden Branch because the downstream bacteria TMDL (38239, 11/07/2008) included modeling, source identification, and reductions that covered the entire Difficult Run watershed (POL0557).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_SNA01A02 / Snakeden Branch / Segment begins at the confluence with an unnamed tributary to Snakeden Branch, approximately 0.4 rivermile downstream from the Twin Branches Road bridge, and continues downstream until the confluence with Difficult Run.	4A	Escherichia coli	2006	L	0.97

Snakeden Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.97**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-04-BEN** **Colvin Run**

Cause Location: Begins at the headwaters of Colvin Run and continues downstream until the confluence with an unnamed tributary (streamcode XJJ) flowing from Lake Anne.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aCOV003.32 (Wiehle Ave) resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_COV02A02 / Colvin Run / Segment begins at the headwaters of Colvin Run and continues downstream until the confluence with an unnamed tributary (streamcode XJJ) flowing from Lake Anne.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	2.09

Colvin Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.09**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-05-BAC** **Little Difficult Run**

Cause Location: Begins at the confluence with South Fork Little Difficult Run and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (3 of 13 samples - 23.1%) at station 1aLID000.64 at Route 669 (Stuart Mill Road). A new TMDL is not required for this impaired segment of Little Difficult Run because the downstream bacteria TMDL (38239, 11/07/2008) included modeling, source identification, and reductions that covered the entire Difficult Run watershed (POL0557).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_LID01A02 / Little Difficult Run / Segment begins at the confluence with South Fork Little Difficult Run and continues downstream until the confluence with Difficult Run.	4A	Escherichia coli	2008	L	1.75

Little Difficult Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.75**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-05-BEN** **Snakeden Branch**

Cause Location: Begins at the confluence with an unnamed tributary to Snakeden Branch, approximately 0.4 rivermile downstream from the Twin Branches Road bridge, and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aSNA000.21 at Route 677 (Hunter Station Road) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_SNA01A02 / Snakeden Branch / Segment begins at the confluence with an unnamed tributary to Snakeden Branch, approximately 0.4 rivermile downstream from the Twin Branches Road bridge, and continues downstream until the confluence with Difficult Run.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	0.97

Snakeden Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.97**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-06-BAC** **Wolftrap Creek**

Cause Location: Begins at the confluence with Old Courthouse Spring Branch and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aWOT000.92 at Route 702. A new TMDL is not required for this impaired segment of Wolftrap Creek because the downstream bacteria TMDL (38239, 11/07/2008) included modeling, source identification, and reductions that covered the entire Difficult Run watershed (POL0557).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_WOT01A02 / Wolftrap Creek / Segment begins at the boundary of the PWS designation area, approximately 0.73 rivermile upstream from the confluence with Difficult Run, and continues downstream until the confluence with Difficult Run.	4A	Escherichia coli	2008	L	0.76
VAN-A11R_WOT01B06 / Wolftrap Creek / Segment begins at the confluence with Old Courthouse Spring Branch and continues downstream until the boundary of the PWS designation area, approximately 0.73 rivermile upstream from the confluence with Difficult Run.	4A	Escherichia coli	2008	L	1.96

Wolftrap Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.72**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-06-BEN** **Little Difficult Run**

Cause Location: Segment begins at the confluence with South Fork Little Difficult Run and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aLID000.64 at Route 669 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_LID01A02 / Little Difficult Run / Segment begins at the confluence with South Fork Little Difficult Run and continues downstream until the confluence with Difficult Run.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	1.75

Little Difficult Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.75**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-07-BAC** **Captain Hickory Run**

Cause Location: Begins at the headwaters of Captain Hickory Run and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (2 of 9 samples - 22.2%) at station 1aCAH000.96 at Fringe Tree Road. A new TMDL is not required for this impaired segment of Captain Hickory Run because the downstream Difficult Run bacteria TMDL (38239, 11/07/2008) included modeling, source identification, and reductions that covered the entire watershed (POL0557).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_CAH01A04 / Captain Hickory Run / Segment begins at the boundary of the PWS designation area, approximately 0.86 rivermile upstream from the confluence with Piney Run, and continues downstream until the confluence with Difficult Run.	4A	Escherichia coli	2010	L	2.19
VAN-A11R_CAH01B06 / Captain Hickory Run / Segment begins at the headwaters of Captain Hickory Run and continues downstream until the boundary of the PWS designation area, approximately 0.86 rivermile upstream from the confluence with Piney Run.	4A	Escherichia coli	2010	L	1.08

Captain Hickory Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.27**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-07-BEN** **Old Courthouse Spring Branch**

Cause Location: Begins at the headwaters of Old Courthouse Spring Branch and continues downstream until the confluence with Wolftrap Creek.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aOCS000.43 at Laurel Hill Road resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_OCS01A04 / Old Courthouse Spring Branch / Segment begins at the headwaters of Old Courthouse Spring Branch and continues downstream until the confluence with Wolftrap Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	2.11

Old Courthouse Spring Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.11**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-08-BAC** **Nichols Run**

Cause Location: Begins at the headwaters of Nichols Run and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (3 of 11 samples - 27.3%) at station 1aNIC002.10 at Route 603.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_NIC01A02 / Nichols Run / Segment begins at the headwaters of Nichols Run and continues downstream until the confluence with the Potomac River.	5A	Escherichia coli	2012	L	4.56

Nichols Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.56**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-08-BEN** **Turkey Run**

Cause Location: Begins at the headwaters of Turkey Run, near Langley High School, and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2009 at station 1aTUY000.26, upstream of the G.W. Parkway, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_TUY01A06 / Turkey Run / Segment begins at the headwaters of Turkey Run, near Langley High School, and continues downstream until the confluence with the Potomac River.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	1.34

Turkey Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.34**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-09-BEN** **Dead Run**

Cause Location: Begins at the headwaters of Dead Run and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2016 Assessment: Two biological monitoring events in 2009 at station 1aDED000.29, upstream of G.W. Parkway, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_DEA01A04 / Dead Run / Segment begins at the headwaters of Dead Run and continues downstream until the confluence with the Potomac River.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	2.82

Dead Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.82**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-10-BEN** **Wolftrap Creek**

Cause Location: Begins at the boundary of the PWS designation area, approximately 0.73 rivermile upstream from the confluence with Difficult Run, and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2016 at station 1aWOT000.92 at Route 702 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A11R_WOT01A02 / Wolftrap Creek / Segment begins at the boundary of the PWS designation area, approximately 0.73 rivermile upstream from the confluence with Difficult Run, and continues downstream until the confluence with Difficult Run.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	0.76
VAN-A11R_WOT01B06 / Wolftrap Creek / Segment begins at the confluence with Old Courthouse Spring Branch and continues downstream until the boundary of the PWS designation area, approximately 0.73 rivermile upstream from the confluence with Difficult Run.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	1.96

Wolftrap Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.72**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

Cause Group Code: **A12E-01-BAC** **Four Mile Run**

Cause Location: Includes the tidal waters of Four Mile Run; from rivermile 1.46 downstream until the confluence with the Potomac River, at the state line.

City / County: Alexandria City Arlington Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (10 of 31 samples - 32.3%) at station 1aFOU000.19 at George Washington Parkway. The Tidal Four Mile Run bacteria TMDL (POL0737) was approved by the EPA on 06/14/2010. The SWCB approved the TMDL on 09/30/2010. Federal ID 38716.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12E_FOU01A00 / Four Mile Run / Segment includes the tidal waters of Four Mile Run; from rivermile 1.46 downstream until the confluence with the Potomac River, at the state line. Portion of CBP segment POTTF.	4A	Escherichia coli	1996	L	0.050

Four Mile Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:	**0.050**		

Sources:

Illicit Connections/Hook-ups to Storm Sewers

Sanitary Sewer Overflows (Collection System Failures)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12E-01-CDANE** **Four Mile Run**

Cause Location: Includes the tidal waters of Four Mile Run; from rivermile 1.46 downstream until the confluence with the Potomac River, at the state line.

City / County: Alexandria City Arlington Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Chlordane / 5A

2014 Assessment: three exceedances of the water quality criterion based fish tissue value (TV) of 110 parts per billion (ppb) for total chlordane in fish tissue were recorded in two species of fish (carp and channel catfish) in three total samples collected in 2008 at monitoring station 1aFOU000.45.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12E_FOU01A00 / Four Mile Run / Segment includes the tidal waters of Four Mile Run; from rivermile 1.46 downstream until the confluence with the Potomac River, at the state line. Portion of CBP segment POTTF.	5A	Chlordane	2010	L	0.050

Four Mile Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlordane - Total Impaired Size by Water Type:	**0.050**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12E-01-PCB** **Potomac River Embayments (FOU downstream until POM)**

Cause Location: Includes the tidal portions of the following tributaries and embayments from the I-395 bridge (above the Woodrow Wilson Bridge) to the Potomac River Bridge at Route 301: Fourmile Run, Hunting Creek, Little Hunting Creek, Pohick Creek, Accotink Creek, Occoquan River, Neabsco Creek, Powells Creek, Quantico Creek, Chopawamsic Creek, Aquia Creek, and Potomac Creek.

City / County: Alexandria City Arlington Co. Fairfax Co. King George Co. Prince William Co. Stafford Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Fish Tissue / 4A PCB in Water Column / 4A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 4/19/99 and modified 12/13/04 and 10/7/09, limits consumption of bullhead catfish, channel catfish less than 18 inches long, largemouth bass, anadromous (coastal) striped bass, sunfish species, smallmouth bass, white catfish, white perch, gizzard shad, and yellow perch to no more than two meals per month. The advisory also bans the consumption of American eel, carp and channel catfish greater than 18 inches long.

The following exceedances of the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for PCBs in fish tissue were recorded: 8 exceedances in five species of fish (largemouth bass, carp, channel catfish, gizzard shad, and blue catfish) sampled in 2015 at station 1aFOU000.45; Six exceedances in six species of fish (largemouth bass, carp, channel catfish, gizzard shad, white catfish, and blue catfish) sampled in 2015 at station 1aHUT000.01; Two exceedances in one species of fish (northern snakehead) collected in 2014 at station 1aDOU001.02; Four exceedances in three species of fish (carp, channel catfish, and blue catfish) sampled in 2015 at station 1aLIF000.01; 10 exceedances in 7 species of fish (largemouth bass, carp, channel catfish, bluegill sunfish, brown bullhead catfish, northern snakehead, and gizzard shad) sampled in 2015 at station 1aNEA000.57; Five exceedances in four species of fish (American eel, carp, brown bullhead catfish, and bluegill sunfish) sampled in 2008 (2014 Assessment) and one exceedance in one species of fish (northern snakehead) sampled in 2014 at station 1aPOH002.27; 18 exceedances in 9 species of fish (largemouth bass, yellow perch, channel catfish, carp, brown bullhead catfish, American eel, white perch, gizzard shad, and bluegill sunfish) sampled in 2008 at station 1aCHO000.90 (2014 Assessment); 9 exceedances in five species of fish (largemouth bass, channel catfish, blue catfish, brown bullhead catfish, and carp) sampled in 2015 at station 1aPOW001.11; 9 exceedances in six species of fish (bluegill sunfish, channel catfish, blue catfish, white catfish, gizzard shad, and northern snakehead) sampled in 2015 at station 1aAUA003.71; 10 exceedances in five species of fish (blue catfish, channel catfish, carp, gizzard shad, and northern snakehead) sampled in 2015 at station 1aPOM001.04; 7 exceedances in 7 species of fish (brown bullhead catfish, carp, channel catfish, gizzard shad, largemouth bass, pumpkinseed sunfish and yellow perch) sampled in 2005 at station 1aACO001.78; Five exceedances in one species of fish (American shad) sampled in 2006 at station 1aACO001.78; Three exceedances in three species of fish (largemouth bass, gizzard shad, and bluegill sunfish) sampled in 2008 at station 1aACO001.78; Two exceedances in two species of fish (largemouth bass and bullhead catfish) sampled in 1996 at station 1aQUA002.76 (2002 Assessment); 7 exceedances in four species of fish (largemouth bass, carp, channel catfish, and gizzard shad) sampled in 2008 at station 1aQUA001.00 (2014 Assessment).

Two exceedances of the human health criteria for PCBs were recorded in water samples collected in 2006 at monitoring station 1aHUT001.72 and one exceedance was recorded in SPMD data collected in 2005 at monitoring station 1aHUT001.54 (2012 Assessment).

The Tidal Potomac River PCB TMDL was approved by the EPA on 10/31/2007. The SWCB approved the TMDL on 04/11/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12E_FOU01A00 / Four Mile Run / Segment includes the tidal waters of Four Mile Run; from rivermile 1.46 downstream until the confluence with the Potomac River, at the state line. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.050
VAN-A12E_POT01A16 / Potomac River / Segment includes all tidal Virginia water adjacent to Alexandria, from Second Street to King Street.	4A	PCB in Fish Tissue	2016	L	0.047

Portion of CBP segment POTTF.					
VAN-A13E_HFF01A06 / Hooff Run / Segment contains the tidal portion of Hooff Run; begins at the Alexandria National Cemetery and continues downstream until the confluence with Hunting Creek. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2006	L	0.003
VAN-A13E_HUT01A02 / Hunting Creek / Segment includes all tidal waters of Hunting Creek; beginning at the Route 241 (Telegraph Road) bridge crossing and continuing downstream until the mouth of the embayment, at Jones Point and Belle View. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2004	L	0.529
VAN-A14E_DOU01A00 / Dogue Creek / Segment includes all tidal waters of Dogue Creek, extending from approximately rivermile 2.1 until the confluence with the Potomac River. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.736
VAN-A14E_LIF01A00 / Little Hunting Creek / Segment includes all tidal waters of Little Hunting Creek, extending from approximately rivermile 1.7 downstream until the confluence with the Potomac River. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.250
VAN-A14E_POT01A08 / Potomac River / Segment includes all tidal waters downstream of the mouth of the Hunting Creek embayment, at Jones Point and Belle View. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2004	L	0.848
VAN-A14E_POT02A16 / Potomac River / Segment includes all tidal Virginia water adjacent to Alexandria, from King Street to the DC/MD boundary. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2016	L	0.029
VAN-A15E_ACO01A06 / Accotink Bay / Segment includes tidal waters of Accotink Creek until the confluence with the tidal waters of Pohick Bay/Gunston Cove. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.395
VAN-A15E_POH01A00 / Gunston Cove / Segment extends from rivermile 1.31 in Gunston Cove until the confluence with the Potomac River. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	1.504
VAN-A15E_POH02A00 / Pohick Bay / Segment includes tidal waters of Pohick Creek, from the boundary of watershed A15, and extends until rivermile 1.31 in Gunston Cove. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.450
VAN-A16E_POH01A06 / Pohick Bay / Segment includes tidal waters of Pohick Creek upstream from the boundary of watershed A16. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.461
VAN-A25E_MAE01A16 / Massey Creek / Segment extends from 0.29 rivermile upstream of monitoring station 1aMAE000.21 until the confluence with the tidal waters of Occoquan River within Occoquan Bay. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.065
VAN-A25E_MAU01A12 / Marumsco Creek / Segment includes all the tidal waters of Marumsco Creek from the end of the free-flowing stream to the open Occoquan Bay. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.025
VAN-A25E_NEA01A00 / Neabsco Bay / Segment includes the tidal waters of Neabsco Bay, beginning at rivermile 1.37, downstream until the confluence with Occoquan Bay.	4A	PCB in Fish Tissue	2002	L	0.545

Portion of CBP segment POTTF.					
VAN-A25E_NEA20A02 / Neabsco Creek / Segment begins at the upstream limit of the tidal waters on Neabsco Creek and continues downstream until the start of the open waters of Neabsco Bay, approximately 0.8 rivermile upstream from monitoring station 1aNEA000.57. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.182
VAN-A25E_OCC01A04 / Occoquan Bay / Segment extends 0.5 mile around the Coastal 2000 monitoring station 1aOCC000.77, just west of the Potomac Shoreline of Mason Neck State Park. The downstream limit is the state line at the Potomac River. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.720
VAN-A25E_OCC01A10 / Occoquan Bay / Segment includes waters of Occoquan Bay within a 0.5 mile radius of station 1aOCC001.29. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.598
VAN-A25E_OCC01A12 / Occoquan Bay/Belmont Bay / Segment includes waters of Occoquan Bay in a 0.5 mile radius around station 1aOCC000.01 down to the Virginia state line. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.412
VAN-A25E_OCC01B12 / Occoquan Bay / Segment includes waters of Occoquan Bay located approximately 0.5 mile radius around station 1aOCC001.69. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.709
VAN-A25E_OCC01C16 / Occoquan Bay/Belmont Bay / Segment includes waters of Occoquan Bay located approximately 0.5 mile radius around station 1aOCC001.04. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.438
VAN-A25E_OCC02A00 / Occoquan Bay / Segment extends 0.5 mile around the around monitoring station 1aOCC002.47. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.633
VAN-A25E_OCC03A04 / Belmont Bay (Occoquan River) / Segment extends 0.5 mile around Coastal 2000 monitoring station 1aOCC002.62 (coordinates 38.6382, -77.208). Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.286
VAN-A25E_OCC04A02 / Belmont Bay / Segment extends 0.5 mile around the monitoring station 1AOCC-766-ALL (coordinates 38.647, -77.195). Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.412
VAN-A25E_OCC04B08 / Occoquan River / Segment extends from 0.5 rivermile upstream of monitoring station 1aOCC004.52 until 0.5 rivermile downstream of monitoring station 1aOCC003.82. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.561
VAN-A25E_OCC04C18 / Occoquan River / Segment extends from 0.5 rivermile upstream of monitoring station 1aOCC005.16 until 0.5 rivermile downstream of monitoring station 1aOCC005.16. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.104
VAN-A25E_OCC05A02 / Occoquan River / Segment extends from the end of the free-flowing waters to 0.5 rivermile upstream of monitoring station 1aOCC005.16. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.086
VAN-A25E_OCC20A02 / Occoquan Bay/Belmont Bay / Segment includes all waters of the Occoquan and Belmont Bays not included in other delineated segments. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	2.623
VAN-A25E_OCC30A02 / Occoquan Bay/Belmont Bay / Segment	4A	PCB in Fish Tissue	2002	L	0.126

includes all tidal waters in the Occoquan watershed not included in other delineated stream segments. Portion of CBP segment POTTF.					
VAN-A25E_POT01A10 / Potomac River / Segment includes the Potomac River embayment located between Hallowing Point and Sycamore Point. Portion of CBP segment POTTF.	A	PCB in Fish Tissue	2010	L	0.633
VAN-A26E_CHO01A04 / Chopawamsic Creek / Segment includes the lower most portion of Chopawamsic Creek embayment downstream until the state line at the confluence with the Potomac River. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2002	L	0.595
VAN-A26E_CHO01B06 / Chopawamsic Creek / Segment includes all Chopawamsic Creek tidal waters not included in other delineated segments. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2002	L	0.103
VAN-A26E_POT01A08 / Potomac River / Segment includes the tidal waters of the Potomac River embayment surrounding Chopawamsic Island. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2008	L	0.265
VAN-A26E_POW01A02 / Powells Creek / Segment extends to a 0.5 mile radius around the ACB station 1aPOW-865-ALL (38.5862, -77.253). Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.229
VAN-A26E_POW02A02 / Powells Creek / Segment extends to a 0.5 mile radius around the ACB station 1aPOW-765-ALL (38.5842, -77.2647). Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.402
VAN-A26E_POW20A10 / Powells Creek / Segment includes all tidal waters in Powells Creek watershed not included in other delineated stream segments. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.663
VAN-A26E_QUA01A10 / Quantico Creek / Segment includes Quantico Creek approximately 0.2 miles upstream of station 1aQUA000.43 to the downstream limit of Quantico Creek at the state line at the Potomac River. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.187
VAN-A26E_QUA01B04 / Quantico Creek / Segment extends to a 0.5-mile radius around station 1aQUA001.09. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.419
VAN-A26E_QUA01C18 / Quantico Creek / Segment includes all tidal waters in Quantico Creek watershed not Segment extends from 0.5 mile downstream of station 1aQUA002.38 to 0.5 mile upstream of station 1aQUA001.09. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.268
VAN-A26E_QUA02A06 / Quantico Creek / Segment extends to an approximate 0.5 mile radius around station 1aQUA002.38. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.209
VAN-A26E_QUA20A10 / Quantico Creek / Segment includes all tidal waters in Quantico Creek watershed not included in other delineated segments. Portion of CBP segment POTTF.	4A	PCB in Fish Tissue	2002	L	0.023
VAN-A28E_AUA01A14 / Aquia Creek / Segment includes the tidal	4A	PCB in Fish Tissue	2006	L	0.741

waters of Aquia Creek from the Thorney Point - Simms Point transect to the downstream limit of Aquia Creek at the state line at the Potomac River. Portion of CBP segment POTOH.					
VAN-A28E_AUA01B06 / Aquia Creek / Segment extends to a 0.5 mile upstream of station 1aAUA-SCSHORE-ALL and 0.5 mile downstream of station 1aAUA001.39 (Thorney Point - Simms Point transect). Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	1.206
VAN-A28E_AUA01C00 / Aquia Creek / Segment extends from rivermile 4.28 to rivermile 3.28 in Aquia Creek encompassing a 0.5-mile radius around station 1aAUA003.71. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	0.364
VAN-A28E_AUA01D06 / Aquia Creek / Segment extends from approximately rivermile 6.70 and continues downstream until approximately rivermile 4.19. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	0.578
VAN-A28E_AUA02A04 / Aquia Creek / Segment begins at the upstream limit of the tidal waters of Aquia Creek and continues downstream until the confluence with Austin Run. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	0.235
VAN-A28E_AUA20A02 / Aquia Creek / Segment includes all tidal waters of Aquia Creek not included in another segment. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	0.603
VAN-A29E_CHN01A10 / Chotank Creek / Segment includes the tidal portion of Chotank Creek, from the fire road crossing inside Caledon State Park until its confluence with the Potomac River. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	0.123
VAN-A29E_CHN02A10 / Chotank Creek / Segment includes the tidal portion of Chotank Creek, from its headwaters until the fire road crossing inside of Caledon State Park. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	0.054
VAN-A29E_POM01A04 / Potomac Creek / Segment extends to a half-mile radius around station 1aPOM000.59. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2004	L	0.433
VAN-A29E_POM01B06 / Potomac Creek / Segment extends from rivermile 1.91 until rivermile 1.09 along Potomac Creek. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2002	L	0.587
VAN-A29E_POM02A02 / Potomac Creek / Segment extends a half-mile radius around monitoring station 1aPOM002.41. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2002	L	0.600
VAN-A29E_POM02B16 / Potomac Creek / Segment extends from rivermile 3.72 until rivermile 2.92 along Potomac Creek Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2002	L	0.184
VAN-A29E_POM03A08 / Potomac Creek / Segment extends to a half-mile radius around station 1aPOM-SCSPILL-ALL (38.345, -77.3515). Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2002	L	0.321
VAN-A29E_POM20A04 / Potomac Creek / Segment includes all tidal waters of Potomac Creek not included in other segments; beginning at the upstream limit of the tidal waters and continuing downstream until the confluence with the Potomac River at the state line.	4A	PCB in Fish Tissue	2002	L	0.329

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

Potomac and Shenandoah River Basins

Portion of CBP segment POTOH.

VAN-A29E_POT01A06 / Fairview Beach/Potomac River / Segment includes all of Fairview Beach on the Potomac River. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	0.005
VAN-A29E_POT20A06 / Potomac River / Segment includes all tidal embayments of the Potomac River located in Virginia, but not included in other segments. Portion of CBP segment POTOH.	4A	PCB in Fish Tissue	2006	L	0.007

Potomac River Embayments (FOU downstream until POM) **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:	**24.192**		

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13E_HUT01A02 / Hunting Creek / Segment includes all tidal waters of Hunting Creek; beginning at the Route 241 (Telegraph Road) bridge crossing and continuing downstream until the mouth of the embayment, at Jones Point and Belle View. Portion of CBP segment POTTF.	4A	PCB in Water Column	2010	L	0.529

Potomac River Embayments (FOU downstream until POM) **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Water Column - Total Impaired Size by Water Type:	**0.529**		

Sources:

Atmospheric Deposition - Toxics	Clean Sediments	Combined Sewer Overflows	Contaminated Sediments
Upstream Source			

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

Potomac and Shenandoah River Basins

Cause Group Code: **A12R-01-BAC** **Four Mile Run**

Cause Location: Begins at the headwaters of Four Mile Run and continues downstream until rivermile 1.46, approximately 0.27 rivermile upstream from the Arlington Ridge Road bridge. Segment includes non-tidal waters of Four Mile Run.

City / County: Alexandria City Arlington Co. Fairfax Co. Falls Church City

Use(s): Recreation

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

E. coli bacteria criterion excursions (17 of 31 samples 54.8%) at station 1aFOU001.92 at Route 120 (West Glebe Road). The Four Mile Run bacteria TMDL (POL0071) was approved by the EPA on 05/31/2002. The SWCB approved the TMDL on 06/17/2004. Federal ID 26433. The Four Mile Run bacteria TMDL Implementation Plan (ID 38) was completed on 03/31/2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_FOU01A00 / Four Mile Run / Segment begins at the headwaters of Four Mile Run and continues downstream until approximately 0.27 rivermile upstream from the Arlington Ridge Road bridge. Segment includes non-tidal waters of Four Mile Run.	4A	Escherichia coli	1994	L	7.96

Four Mile Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.96**

Sources:

Illicit Connections/Hook-ups to Storm Sewers Wastes from Pets Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-01-BEN** **Pimmit Run**

Cause Location: Begins at the Route 309 bridge crossing and continues downstream until the confluence with Little Pimmit Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2011 at station 1aPIM001.89 at Ranleigh Road resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_PIM02A00 / Pimmit Run / Segment begins at the Route 309 bridge crossing and continues downstream until the confluence with Little Pimmit Run.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	2.76

Pimmit Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.76**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-01-PCB** **Pimmit Run**

Cause Location: Includes the following tributaries between the Virginia/Maryland state line near the Route 340 bridge (Loudoun County) to the I-395 bridge in Arlington County (above the Woodrow Wilson Bridge): Pimmit Run up to the Route 309 bridge.

City / County: Arlington Co. Fairfax Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Fish Tissue / 4A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 12/13/04, limits American eel consumption to no more than two meals per month. The Tidal Potomac River PCB TMDL was approved by the EPA on 10/31/2007. The SWCB approved the TMDL on 04/11/2008. Federal ID 35018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_PIM01A00 / Pimmit Run / Segment begins at the confluence with Little Pimmit Run and continues downstream until the confluence with the Potomac River.	4A	PCB in Fish Tissue	2006	L	1.64
VAN-A12R_PIM02A00 / Pimmit Run / Segment begins at the Route 309 bridge crossing and continues downstream until the confluence with Little Pimmit Run.	4A	PCB in Fish Tissue	2006	L	2.76

Pimmit Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**4.40**

Sources:

Atmospheric Deposition - Toxics | Combined Sewer Overflows | Contaminated Sediments | Upstream Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-02-BAC** **Pimmit Run**

Cause Location: Begins at the headwaters of Pimmit Run, upstream from Route 7, and continues downstream until the confluence with the Potomac River.

City / County: Arlington Co. Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 30 samples - 23.3%) at station 1aPIM000.15 at Route 120 (Glebe Road). 2014 Assessment: E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at station 1aPIM001.89 at Ranleigh Road. 2016 Assessment: E. coli bacteria criterion excursions (3 of 9 samples - 33.3%) at station 1aPIM004.16 at Route 309. The Tributaries to the Potomac River bacteria TMDL for the Pimmit Run watershed (784) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53776.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_PIM01A00 / Pimmit Run / Segment begins at the confluence with Little Pimmit Run and continues downstream until the confluence with the Potomac River.	4A	Escherichia coli	2010	L	1.64
VAN-A12R_PIM02A00 / Pimmit Run / Segment begins at the Route 309 bridge crossing and continues downstream until the confluence with Little Pimmit Run.	4A	Escherichia coli	2010	L	2.76
VAN-A12R_PIM02B06 / Pimmit Run / Segment begins at the headwaters of Pimmit Run, upstream from Route 7, and continues downstream until the Route 309 bridge crossing.	4A	Escherichia coli	2010	L	3.33

Pimmit Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.73**

Sources:

Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)	Sewage Discharges in Unsewered Areas
Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-02-BEN** **Four Mile Run**

Cause Location: Begins at the headwaters of Four Mile Run and continues downstream until rivermile 1.46, approximately 0.27 rivermile upstream from the Arlington Ridge Road bridge. Segment includes non-tidal waters of Four Mile Run.

City / County: Alexandria City Arlington Co. Fairfax Co. Falls Church City

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2015 at station 1aFOU002.06 between West Glebe Rd. and I-395 and a total of two biological monitoring events in 2015 at station 1aFOU005.16 above bike trail bridge in Glencarlyn Park resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_FOU01A00 / Four Mile Run / Segment begins at the headwaters of Four Mile Run and continues downstream until approximately 0.27 rivermile upstream from the Arlington Ridge Road bridge. Segment includes non-tidal waters of Four Mile Run.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	7.96

Four Mile Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**7.96**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-03-BAC** **Long Branch**

Cause Location: Begins at the headwaters of Long Branch and continues downstream until the confluence with Four Mile Run.

City / County: Arlington Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (2 of 5 samples - 40.0%) at station 1aLBR000.04 at Route 120 (Glebe Road). A new TMDL is not required for this impaired segment of Long Branch because the downstream bacteria TMDL (26433, 05/31/2002) included modeling, source identification, and reductions that covered the entire Four Mile Run watershed (POL0071). The Four Mile Run bacteria TMDL Implementation Plan (ID 38) was completed on 03/31/2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_LBR01A08 / Long Branch / Segment begins at the headwaters of Long Branch and continues downstream until the confluence with Four Mile Run.	4A	Escherichia coli	2012	L	1.97

Long Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.97**

Sources:

Illicit Connections/Hook-ups to Storm Sewers

Wastes from Pets

Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-03-CDANE** **Pimmit Run**

Cause Location: Begins at the confluence with Little Pimmit Run and continues downstream until the confluence with the Potomac River.

City / County: Arlington Co. Fairfax Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Chlordane / 5A

2008 Assessment: Excursions greater than the water quality criterion based tissue value (TV) of 310 ppb for chlordane in fish tissue were recorded in tissue from one species of fish (American eel) sampled in 2001 and 2004 at station 1aPIM000.15.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_PIM01A00 / Pimmit Run / Segment begins at the confluence with Little Pimmit Run and continues downstream until the confluence with the Potomac River.	5A	Chlordane	2006	L	1.64

Pimmit Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlordane - Total Impaired Size by Water Type:			**1.64**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

Cause Group Code: A12R-03-HEPOXID Pimmit Run

Cause Location: Begins at the confluence with Little Pimmit Run and continues downstream until the confluence with the Potomac River.

City / County: Arlington Co. Fairfax Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Heptachlor epoxide / 5A

2010 Assessment: Excursions greater than the water quality criterion based tissue value (TV) of 4.4 parts per billion (ppb) for heptachlor epoxide in fish tissue were recorded in three total samples of two species of fish (American eel (2004) and white sucker (2004)) at station 1aPIM000.15.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_PIM01A00 / Pimmit Run / Segment begins at the confluence with Little Pimmit Run and continues downstream until the confluence with the Potomac River.	5A	Heptachlor epoxide	2006	L	1.64

Pimmit Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Heptachlor epoxide - Total Impaired Size by Water Type:			**1.64**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-04-BAC** **Little Pimmit Run**

Cause Location: Begins at the headwaters of Little Pimmit Run and continues downstream until its confluence with Pimmit Run.

City / County: Arlington Co. Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at station 1aLIO001.50 at Route 691 (Franklin Park Road). A new TMDL is not required for this impaired segment of Little Pimmit Run because the downstream Tributaries to the Potomac River bacteria TMDL (53776, 09/26/2013) included modeling, source identification, and reductions that covered the entire Pimmit Run watershed (784).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12R_LIO01A10 / Little Pimmit Run / Segment begins at the headwaters of Little Pimmit Run and continues downstream until its confluence with Pimmit Run.	4A	Escherichia coli	2012	L	2.35

Little Pimmit Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.35**

Sources:

Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)	Sewage Discharges in Unsewered Areas
Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-01-PCB** **Indian Run**

Cause Location: Includes the entire portion of Indian Run, from the headwaters until the confluence with Backlick Run.

City / County: Fairfax Co.

Use(s): Fish Consumption

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

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 7/27/05, limits consumption of creek chub to no more than two meals per month.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13R_INA01A06 / Indian Run / Segment begins at the headwaters of Indian Run and continues downstream until the confluence with Backlick Run.	5A	PCB in Fish Tissue	2006	L	3.18

Indian Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**3.18**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

Cause Group Code: **A13R-02-BAC** **Holmes Run**

Cause Location: Begins at the headwaters of Holmes Run and continues downstream until the start of Lake Barcroft. Begins again at the mouth of Lake Barcroft and continues downstream until the confluence with Backlick Run.

City / County: Alexandria City Fairfax Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aHOR001.04 at Pickett Street. E. coli bacteria criterion excursions (15 of 22 samples - 64.7%) at station 1aHOR005.48 at Route 613. The Holmes Run watershed (POL0760) bacteria TMDL was approved by the EPA on 11/10/2010. The SWCB approved the TMDL on 08/04/2011. Federal ID 39464.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13R_HOR01A00 / Holmes Run / Segment begins at the mouth of Lake Barcroft and continues downstream until the confluence with Backlick Run.	4A	Escherichia coli	2004	L	3.58

Holmes Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.58**

Sources:

Sanitary Sewer Overflows (Collection System Failures)	Sewage Discharges in Unsewered Areas	Urban Runoff/Storm Sewers	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-03-BAC** **Cameron Run/Hunting Creek**

Cause Location: Begins at the confluence with Backlick Run and continues downstream until the mouth of the embayment, at Jones Point and Belle View.

City / County: Alexandria City Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (16 of 31 samples - 51.6%) at station 1aHUT000.01 at George Washington Parkway. E. coli bacteria criterion excursions (5 of 31 samples - 16.1%) at station 1aCAM002.92 at Eisenhower Avenue. A bacteria TMDL for the Hunting Creek (POL0758) and Cameron Run (POL0759) watersheds was approved by the EPA on 11/10/2010. The SWCB approved the TMDL on 08/04/2011. Federal ID 39464.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13E_HUT01A02 / Hunting Creek / Segment includes all tidal waters of Hunting Creek; beginning at the Route 241 (Telegraph Road) bridge crossing and continuing downstream until the mouth of the embayment, at Jones Point and Belle View. Portion of CBP segment POTTF.	4A	Escherichia coli	1998	L	0.529
VAN-A13R_CAM01A04 / Cameron Run/Hunting Creek / Segment begins at the confluence with Backlick Run and continues downstream until the Route 241 (Telegraph Road) bridge crossing.	4A	Escherichia coli	2006	L	1.91

Cameron Run/Hunting Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:	**0.529**		**1.91**

Sources:

Combined Sewer Overflows	Sanitary Sewer Overflows (Collection System Failures)	Sewage Discharges in Unsewered Areas	Urban Runoff/Storm Sewers
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-03-BEN** **Holmes Run**

Cause Location: Begins at the headwaters of Holmes Run and continues downstream until the start of Lake Barcroft.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2016 Assessment: Two biological monitoring events in 2010 at station 1aHOR005.48, upstream of Route 613, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13R_HOR01B00 / Holmes Run / Segment begins at the headwaters of Holmes Run and continues downstream until the start of Lake Barcroft.	5A	Benthic-Macroinvertebrate Bioassessments	2004	M	6.09

Holmes Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.09**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-04-BAC** **Holmes Run**

Cause Location: Begins at the headwaters of Holmes Run and continues downstream until the start of Lake Barcroft.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (15 of 22 samples - 64.7%) at station 1aHOR005.48 at Route 613. A new TMDL is not required for this impaired segment of Holmes Run because the downstream bacteria TMDL (39464, 11/10/2010) included modeling, source identification, and reductions that covered the entire Holmes Run watershed (POL0760).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13R_HOR01B00 / Holmes Run / Segment begins at the headwaters of Holmes Run and continues downstream until the start of Lake Barcroft.	4A	Escherichia coli	2012	L	6.09

Holmes Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.09**

Sources:

Sanitary Sewer Overflows (Collection System Failures)	Sewage Discharges in Unsewered Areas	Urban Runoff/Storm Sewers	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-04-BEN** **Tripps Run**

Cause Location: Begins at the headwaters of Tripps Run and continues downstream until the start of Lake Barcroft.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2016 Assessment: Two biological monitoring events in 2010 at station 1aTRI001.50, upstream of Route 613, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13R_TRI01A00 / Tripps Run / Segment begins at the headwaters of Tripps Run and continues downstream until the start of Lake Barcroft.	5A	Benthic-Macroinvertebrate Bioassessments	2004	M	3.70

Tripps Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.70**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-05-BAC** **Backlick Run**

Cause Location: Begins at the headwaters of Backlick Run, upstream from Route 620, and continues downstream until the confluence with Holmes Run.

City / County: Alexandria City Fairfax Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (3 of 11 samples - 27.3%) at station 1aBAL001.40 at Route 401 (Van Dorn Street). A new TMDL is not required for this impaired segment of Backlick Run because the downstream bacteria TMDL (39463, 11/10/2010) included modeling, source identification, and reductions that covered the entire Cameron Run watershed (POL0759).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13R_BAL01A00 / Backlick Run / Segment begins at the headwaters of Backlick Run, upstream from Route 620, and continues downstream until the confluence with Holmes Run.	4A	Escherichia coli	2012	L	6.68

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

Sources:

Sanitary Sewer Overflows (Collection System Failures)	Sewage Discharges in Unsewered Areas	Urban Runoff/Storm Sewers	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

Cause Group Code: **A13R-06-BAC** **Tripps Run**

Cause Location: Begins at the headwaters of Tripps Run and continues downstream until the start of Lake Barcroft.

City / County: Fairfax Co.

Use(s): Recreation

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

Sufficient excursions from the maximum E. coli bacteria criterion were recorded to assess this stream segment as not supporting the recreation use for the 2018 water quality assessment: 21 of 24 (87.5%) at station 1aTRI001.50 at Route 613; 10 of 14 (71.4%) at station 1aTRI002.25 at Route 649; 11 of 14 (78.6%) at station 1aTRI002.75 at Chestnut Avenue; and 10 of 12 (83.3%) at station 1aTRI003.66 at South Oak Street. A new TMDL is not required for this impaired segment of Tripps Run because the downstream bacteria TMDL (39464, 11/10/2010) included modeling, source identification, and reductions that covered the entire Holmes Run watershed (POL0760).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A13R_TRI01A00 / Tripps Run / Segment begins at the headwaters of Tripps Run and continues downstream until the start of Lake Barcroft.	4A	Escherichia coli	2012	L	3.70

Tripps Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.70**

Sources:

Sanitary Sewer Overflows (Collection System Failures)	Sewage Discharges in Unsewered Areas	Urban Runoff/Storm Sewers	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-01-BAC** **Paul Springs Branch**

Cause Location: Begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.

City / County: Fairfax Co.

Use(s): Recreation

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

2014 Assessment: E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at station 1aPAU001.17 at Route 626.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A14R_PAU01A04 / Paul Springs Branch / Segment begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.	5A	Escherichia coli	2010	L	3.38

Paul Springs Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.38**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-01-BEN** **Paul Springs Branch**

Cause Location: Begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aPAU001.17 at Route 626 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A14R_PAU01A04 / Paul Springs Branch / Segment begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	3.38

Paul Springs Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.38**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-01-DO** **Paul Springs Branch**

Cause Location: Begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

Excursions less than the minimum dissolved oxygen criterion (6 of 42 samples - 14.3%%) were recorded at USGS station 01653717, downstream of Sherwood Hall Lane.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A14R_PAU01A04 / Paul Springs Branch / Segment begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.	5A	Oxygen, Dissolved	2014	L	3.38

Paul Springs Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.38**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-01-PCB** **Little Hunting Creek**

Cause Location: Begins at the confluence with an unnamed tributary, approximately 0.82 rivermile upstream from the Route 1 bridge, and continues downstream until tidal waters.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Water Column / 4A

2012 Assessment: Two exceedances of the human health criteria for total polychlorinated biphenyls (PCBs) in the water column were recorded in 2006 at DEQ station 1aLIF002.48 at Route 1. The Tidal Potomac River PCB TMDL for the Little Hunting Creek watershed (POL0474) was approved by the EPA on 10/31/2007. The SWCB approved the TMDL on 04/11/2008. Federal ID 33955.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A14R_LIF01A08 / Little Hunting Creek / Segment begins at the confluence with an unnamed tributary, approximately 0.82 rivermile upstream from the Route 1 bridge, and continues downstream until tidal waters.	4A	PCB in Water Column	2010	L	1.09

Little Hunting Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Water Column - Total Impaired Size by Water Type:			**1.09**

Sources:

Atmospheric Deposition - Toxics | Combined Sewer Overflows | Contaminated Sediments | Upstream Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-02-BAC** **Dogue Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Dogue Creek, approximately 0.3 rivermiles upstream from Rt. 622, and continues downstream until the end of the free-flowing waters of Dogue Creek.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at station 1aDOU003.17 at Route 622.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A14R_DOU01A04 / Dogue Creek / Segment begins at the confluence with an unnamed tributary to Dogue Creek, approximately 0.3 rivermiles upstream from Rt. 622, and continues downstream until the end of the free-flowing waters of Dogue Creek.	5A	Escherichia coli	2014	L	1.41

Dogue Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.41**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15E-01-PH** **Pohick Bay**

Cause Location: Segment includes tidal waters of Pohick Creek, from the boundary of watershed A15, and extends until rivermile 1.31 in Gunston Cove.
Portion of CBP segment POTTF.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2016 Assessment: Sufficient excursions greater than the upper limit of the pH criterion range (36 of 210 observations - 17.1%) at continuous monitoring station 1aPOH002.10 at the end of the dock at Pohick Regional Park.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15E_POH02A00 / Pohick Bay / Segment includes tidal waters of Pohick Creek, from the boundary of watershed A15, and extends until rivermile 1.31 in Gunston Cove. Portion of CBP segment POTTF.	5A	pH	2012	L	0.450

Pohick Bay **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	**0.450**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15L-01-HG** **Lake Accotink**

Cause Location: Includes all of Lake Accotink.

City / County: Fairfax Co.

Use(s): Fish Consumption

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

2014 Assessment: Three exceedances of the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury in fish tissue were recorded in two species of fish (largemouth bass and bluegill sunfish) collected in 2007 at monitoring station 1aACO012.78.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15L_ACO01A10 / Lake Accotink / Segment includes all of Lake Accotink.	5A	Mercury in Fish Tissue	2010	L	73.93

Lake Accotink **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**73.93**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15L-01-PCB** **Lake Accotink**

Cause Location: Includes all of Lake Accotink.

City / County: Fairfax Co.

Use(s): Fish Consumption

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

2014 Assessment: Three exceedances of the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in two species of fish (carp and gizzard shad) collected in 2007 at monitoring station 1aACO012.78.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15L_ACO01A10 / Lake Accotink / Segment includes all of Lake Accotink.	5A	PCB in Fish Tissue	2010	L	73.93

Lake Accotink **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:		**73.93**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-01-BAC** **Accotink Creek**

Cause Location: Begins at the confluence with Calamo Branch and continues downstream until the tidal waters of Accotink Bay.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 20 samples - 35.0%) at station 1aACO004.84 at Route 611 (Telegraph Road). The Lower Accotink Creek bacteria TMDL (POL0556) was approved by the EPA on 12/18/2008. The SWCB approved the TMDL on 04/28/2009. Federal ID 35782.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_ACO01A00 / Accotink Creek / Segment begins at the confluence with Calamo Branch and continues downstream until the tidal waters of Accotink Bay.	4A	Escherichia coli	2004	L	7.47

Accotink Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.47**

Sources:

Sewage Discharges in Unsewered Areas
Urban Runoff/Storm Sewers
Wastes from Pets
Waterfowl
Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-01-BEN** **Accotink Creek**

Cause Location: Begins at the outlet of Lake Accotink and continues downstream until the tidal waters of Accotink Bay.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2007 at station 1aACO002.50 at Route 1; two biological monitoring events in 2007 and two biological monitoring events in 2008 at station 1aACO006.10 at Route 790; and two biological monitoring events in 2008 at station 1aACO009.14 at Routes 636 and 286 (2014 Assessment), as well as one biological monitoring event in 2016 at station 1aACO011.27 (one mile upstream of Route 644 (Old Keene Mill Road)) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. The Accotink Creek Chloride (watershed 2120) and Sediment (watershed 2161) TMDLs for the Lower Accotink Creek watershed were approved by the EPA on 05/23/2018. The SWCB approved the TMDLs on 04/16/2018. No Federal TMDL IDs were assigned.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_ACO01A00 / Accotink Creek / Segment begins at the confluence with Calamo Branch and continues downstream until the tidal waters of Accotink Bay.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	7.47
VAN-A15R_ACO01B10 / Accotink Creek / Segment begins at the outlet of Lake Accotink and continues downstream until the confluence of Calamo Branch.	4A	Benthic-Macroinvertebrate Bioassessments	2010	L	2.62

Accotink Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.09**

Sources:

- Construction Stormwater Discharge (Permitted)
- Discharges from Municipal Separate Storm Sewer Systems (MS4)
- Industrial/Commercial Site Stormwater Discharge (Permitted)
- Streambank Modifications/destabilization
- Unspecified Urban Stormwater

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-01-CHLR** **Accotink Creek**

Cause Location: Begins at the confluence with Crook Branch, upstream from Route 846, and continues downstream until the start of Lake Accotink.

City / County: Fairfax Co.

Use(s): Aquatic Life Wildlife

Cause(s) / VA Category: Chloride / 4A

Three exceedances of the acute water quality criterion were recorded within a three-year period at USGS station 1aACO-1654000-MD; three exceedances of the acute water quality criterion recorded were recorded within a three-year period at DEQ station 1aACO014.57 at Route 620; and two exceedances of the chronic water quality criterion recorded within a three-year period at DEQ station 1aACO014.57 at Route 620. The Accotink Creek Chloride TMDL for the Upper Accotink Creek watershed (2139) was approved by the EPA on 05/23/2018. The SWCB approved the TMDL on 04/16/2018. No federal TMDL ID was assigned.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_ACO02A00 / Accotink Creek / Segment begins at the confluence with Crook Branch, upstream from Route 846, and continues downstream until the start of Lake Accotink.	4A	Chloride	2016	L	5.22

Accotink Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chloride - Total Impaired Size by Water Type:			**5.22**

Sources:

Discharges from Municipal Separate Storm Sewer Systems (MS4)	Industrial/Commercial Site Stormwater Discharge (Permitted)	Unspecified Urban Stormwater

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-01-PCB** **Accotink Creek**

Cause Location: Segment begins at the outlet of Lake Accotink and continues downstream until the tidal waters of Accotink Bay.

City / County: Fairfax Co.

Use(s): Fish Consumption

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

2010 Assessment: Excursions above the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in three species of fish (3 total samples): American eel (2004), redbreast sunfish (2004), and rainbow trout (2004) collected at monitoring station 1aACO004.86 (2010 Assessment). 2014 Assessment: Excursions for PCBs in fish tissue recorded in one species (American eel) of fish sampled (1 total excursion) at station 1aACO011.62 in 2008 and in one species (yellow bullhead catfish) of fish sampled (1 total excursion) at station 1aACO012.58 in 2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_ACO01A00 / Accotink Creek / Segment begins at the confluence with Calamo Branch and continues downstream until the tidal waters of Accotink Bay.	5A	PCB in Fish Tissue	2010	L	7.47
VAN-A15R_ACO01B10 / Accotink Creek / Segment begins at the outlet of Lake Accotink and continues downstream until the confluence of Calamo Branch.	5A	PCB in Fish Tissue	2010	L	2.62

Accotink Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**10.09**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-02-BAC** **Accotink Creek**

Cause Location: Begins at the confluence with Crook Branch, upstream from Route 846, and continues downstream until the start of Lake Accotink.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (28 of 72 samples - 38.9%) at station 1aACO014.57 at Route 620 and E. coli bacteria criterion excursions (1 of 4 samples - 25.0%) at USGS station 01654000. The Accotink Creek watershed (POL0062) bacteria TMDL was approved by the EPA on 05/31/2002. The SWCB approved the TMDL on 06/17/2004. Federal ID 24410.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_ACO02A00 / Accotink Creek / Segment begins at the confluence with Crook Branch, upstream from Route 846, and continues downstream until the start of Lake Accotink.	4A	Escherichia coli	1998	L	5.22

Accotink Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.22**

Sources:

Illicit Connections/Hook-ups to Storm Sewers

Impervious Surface/Parking Lot Runoff

Sewage Discharges in Unsewered Areas

Wastes from Pets

Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-02-CHLR** **Accotink Creek**

Cause Location: Begins at the confluence with Calamo Branch and continues downstream until the tidal waters of Accotink Bay.

City / County: Fairfax Co.

Use(s): Aquatic Life Wildlife

Cause(s) / VA Category: Chloride / 4A

Two exceedances of the chronic water quality criterion were recorded at station 1AACO004.84 at Route 611 (Telegraph Rd) within a three-year period. The Accotink Creek Chloride TMDL for the Lower Accotink Creek watershed (2120) was approved by the EPA on 05/23/2018. The SWCB approved the TMDL on 04/16/2018. No federal TMDL ID was assigned.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_ACO01A00 / Accotink Creek / Segment begins at the confluence with Calamo Branch and continues downstream until the tidal waters of Accotink Bay.	4A	Chloride	2018	L	7.47

Accotink Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chloride - Total Impaired Size by Water Type:			**7.47**

Sources:

Discharges from Municipal Separate Storm Sewer Systems (MS4)	Industrial/Commercial Site Stormwater Discharge (Permitted)	Unspecified Urban Stormwater

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

Potomac and Shenandoah River Basins

Cause Group Code: **A15R-03-BAC** **Accotink Creek**

Cause Location: Begins at the confluence with Daniels Run, in the City of Fairfax, and continues downstream until the confluence with Long Branch, at Eakin Park.

City / County: Fairfax City Fairfax Co.

Use(s): Recreation

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

2006 Assessment: E. coli bacteria criterion excursions (13 of 13 samples - 100%) at USGS station 01653900 at Pickett Street. A new TMDL is not required for this impaired segment of Accotink Creek because the downstream Accotink Creek bacteria TMDL (24410, 05/31/2002) included modeling, source identification, and reductions that covered the entire watershed (POL0062).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_ACO04A02 / Accotink Creek / Segment begins at the confluence with Daniels Run, in the City of Fairfax, and continues downstream until the confluence with Long Branch, at Eakin Park.	4A	Escherichia coli	2002	L	2.05

Accotink Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.05**

Sources:

Illicit Connections/Hook-ups to Storm Sewers

Impervious Surface/Parking Lot Runoff

Sewage Discharges in Unsewered Areas

Wastes from Pets

Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-03-CHLR** **Long Branch**

Cause Location: Begins at the confluence with an unnamed tributary to Long Branch, at the Route 651 (Guinea Road) bridge, and continues downstream until the confluence with Accotink Creek, just below Braddock Road.

City / County: Fairfax Co.

Use(s): Aquatic Life Wildlife

Cause(s) / VA Category: Chloride / 4A

Two exceedances of the chronic water quality criterion recorded within a three-year period at DEQ station 1aLOE000.26 at Route 620. The Accotink Creek Chloride TMDL for the Long Branch watershed (2119) was approved by the EPA on 05/23/2018. The SWCB approved the TMDL on 04/16/2018. No federal TMDL ID was assigned.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_LOE01A02 / Long Branch / Segment begins at the confluence with an unnamed tributary to Long Branch, at the Route 651 (Guinea Road) bridge, and continues downstream until the confluence with Accotink Creek, just below Braddock Road.	4A	Chloride	2018	L	2.37

Long Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chloride - Total Impaired Size by Water Type:			**2.37**

Sources:

Discharges from Municipal Separate Storm Sewer Systems (MS4)	Industrial/Commercial Site Stormwater Discharge (Permitted)	Unspecified Urban Stormwater

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-04-BEN** **Accotink Creek**

Cause Location: Begins at the headwaters of Accotink Creek and continues downstream until the start of Lake Accotink.

City / County: Fairfax City Fairfax Co.

Use(s): Aquatic Life

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

One biological monitoring event in 2016 at station 1aACO014.57 at Route 620 and EPA biological monitoring events in 2005 and 2006 at stations 1aACO-A-EPA, 1aACO-B-EPA, 1aACO-C-EPA, and 1aACO-D-EPA (2012 Assessment) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. The Accotink Creek Chloride (watershed 2139) and Sediment (watershed 2162) TMDLs for the Upper Accotink Creek watershed were approved by the EPA on 05/23/2018. The SWCB approved the TMDLs on 04/16/2018. No Federal TMDL IDs were assigned.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_ACO02A00 / Accotink Creek / Segment begins at the confluence with Crook Branch, upstream from Route 846, and continues downstream until the start of Lake Accotink.	4A	Benthic-Macroinvertebrate Bioassessments	2010	L	5.22
VAN-A15R_ACO03A02 / Accotink Creek / Segment begins at the confluence with Long Branch, at Eakin Park, and continues downstream until the confluence with Crook Branch, upstream from Route 846.	4A	Benthic-Macroinvertebrate Bioassessments	2010	L	0.98
VAN-A15R_ACO04A02 / Accotink Creek / Segment begins at the confluence with Daniels Run, in the City of Fairfax, and continues downstream until the confluence with Long Branch, at Eakin Park.	4A	Benthic-Macroinvertebrate Bioassessments	2010	L	2.05
VAN-A15R_ACO05A04 / Accotink Creek / Segment begins at the headwaters of Accotink Creek, and continues downstream until the confluence with Daniels Run.	4A	Benthic-Macroinvertebrate Bioassessments	2008	L	3.34

Accotink Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.59**

Sources:

- Construction Stormwater Discharge (Permitted)
- Discharges from Municipal Separate Storm Sewer Systems (MS4)
- Industrial/Commercial Site Stormwater Discharge (Permitted)
- Streambank Modifications/destabilization
- Unspecified Urban Stormwater

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-05-BEN** **Long Branch**

Cause Location: Begins at the confluence with an unnamed tributary to Long Branch, at the Route 651 (Guinea Road) bridge, and continues downstream until the confluence with Accotink Creek, just below Braddock Road.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2012 Assessment: Two biological monitoring events in 2006 at station 1aLOE001.99 (downstream from Route 651/Guinea Road) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. The Accotink Creek Chloride (watershed 2119) and Sediment (watershed 2160) TMDLs for the Upper Accotink Creek watershed were approved by the EPA on 05/23/2018. The SWCB approved the TMDLs on 04/16/2018. No Federal TMDL IDs were assigned.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_LOE01A02 / Long Branch / Segment begins at the confluence with an unnamed tributary to Long Branch, at the Route 651 (Guinea Road) bridge, and continues downstream until the confluence with Accotink Creek, just below Braddock Road.	4A	Benthic-Macroinvertebrate Bioassessments	2008	L	2.37

Long Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.37**

Sources:

- Construction Stormwater Discharge (Permitted)
- Discharges from Municipal Separate Storm Sewer Systems (MS4)
- Industrial/Commercial Site Stormwater Discharge (Permitted)
- Streambank Modifications/destabilization
- Unspecified Urban Stormwater

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

Potomac and Shenandoah River Basins

Cause Group Code: **A15R-06-BAC** **Long Branch**

Cause Location: Begins at the headwaters of Long Branch and continues downstream until the confluence with Accotink Creek, at rivermile 4.41.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 11 samples - 27.3%) at station 1aLOA000.17 at Route 611. A new TMDL is not required for this impaired segment of Long Branch because the downstream bacteria TMDL (35782, 12/18/2008) included modeling, source identification, and reductions that covered the entire Lower Accotink Creek watershed (POL0556).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_LOA01A08 / Long Branch / Segment begins at the headwaters of Long Branch and continues downstream until the confluence with Accotink Creek, at rivermile 4.41.	4A	Escherichia coli	2008	L	4.47

Long Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.47**

Sources:

Sewage Discharges in Unsewered Areas
Urban Runoff/Storm Sewers
Wastes from Pets
Waterfowl
Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-07-BAC** **Long Branch**

Cause Location: Begins at the confluence with an unnamed tributary to Long Branch, at the Route 651 (Guinea Road) bridge, and continues downstream until the confluence with Accotink Creek, just below Braddock Road.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 5 samples 40.0%) at station 1aLOE000.26 at Route 620. A new TMDL is not required for this impaired segment of Long Branch because the downstream Accotink Creek bacteria TMDL (24410, 05/31/2002) included modeling, source identification, and reductions that covered the entire watershed (POL0062).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A15R_LOE01A02 / Long Branch / Segment begins at the confluence with an unnamed tributary to Long Branch, at the Route 651 (Guinea Road) bridge, and continues downstream until the confluence with Accotink Creek, just below Braddock Road.	4A	Escherichia coli	2018	L	2.37

Long Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.37**

Sources:

Illicit Connections/Hook-ups to Storm Sewers	Impervious Surface/Parking Lot Runoff	Sewage Discharges in Unsewered Areas	Wastes from Pets
Waterfowl			

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A16E-01-BZOKFL** **Pohick Creek**

Cause Location: Includes tidal waters of Pohick Creek upstream from the boundary of watershed A16.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Benzo[k]fluoranthene / 5A

2002 Assessment: Exceedances of the water quality criterion based tissue value (TV) of 5.5 ppb for benzo(k) fluoranthene in fish tissue (bullhead catfish, white perch, and sunfish) at station 1aPOH003.56 in 1996.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A16E_POH01A06 / Pohick Bay / Segment includes tidal waters of Pohick Creek upstream from the boundary of watershed A16. Portion of CBP segment POTTF.	5A	Benzo[k]fluoranthene	2002	L	0.461

Pohick Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benzo[k]fluoranthene - Total Impaired Size by Water Type:	**0.461**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-01-BAC** **Pohick Creek**

Cause Location: Begins at the confluence with South Run, approximately 0.25 rivermile upstream from I-95, and continues downstream until the end of the free-flowing portion of Pohick Creek.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (16 of 39 samples - 41.0%) at station 1aPOH005.36 at Route 1.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A16R_POH01A00 / Pohick Creek / Segment begins at the confluence with South Run, approximately 0.25 rivermile upstream from I-95, and continues downstream until the end of the free-flowing portion of Pohick Creek.	5A	Escherichia coli	2006	M	3.78

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

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-01-BEN** **Pohick Creek**

Cause Location: Begins at the confluence with Middle Run and continues downstream to the confluence with South Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2011 at station 1aPOH008.54, upstream of Route 641, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A16R_POH01B14 / Pohick Creek / Segment begins at the confluence with Middle Run and continues downstream to the confluence with South Run.	5A	Benthic-Macroinvertebrate Bioassessments	2014	M	2.61

Pohick Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.61**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-02-BAC** **Pohick Creek**

Cause Location: Begins at the confluence with Sideburn Branch and continues downstream until the confluence with South Run.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at station 1aPOH015.09 at Route 645; excursions (5 of 12 samples - 41.7%) at station 1aPOH013.12 at Route 644; and excursions (7 of 12 samples - 58.3%) at station 1aPOH007.65 at Route 641.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A16R_POH01B14 / Pohick Creek / Segment begins at the confluence with Middle Run and continues downstream to the confluence with South Run.	5A	Escherichia coli	2016	M	2.61
VAN-A16R_POH02A02 / Pohick Creek / Segment begins at the confluence of an unnamed tributary to Pohick Creek, at rivermile 14.18, and continues downstream until the confluence with Middle Run.	5A	Escherichia coli	2012	M	5.41
VAN-A16R_POH03A04 / Pohick Creek / Segment begins at the confluence with Sideburn Branch and continues downstream until the confluence with an unnamed tributary to Pohick Creek, at rivermile 14.18.	5A	Escherichia coli	2006	M	1.77

Pohick Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.79**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-03-BAC** **South Run**

Cause Location: Begins at the confluence with an unnamed tributary, at rivermile 3.6, and continues downstream to the confluence with Pohick Creek.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at station 1aSOH001.71 at Route 6070.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A16R_SOH01A12 / South Run / Segment begins at the confluence with an unnamed tributary, at rivermile 3.6, and continues downstream to the confluence with Pohick Creek.	5A	Escherichia coli	2016	L	4.16

South Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.16**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-04-BAC** **Middle Run**

Cause Location: Begins at the confluence of Cherry Run and Peyton Run, creating Middle Run, and continues downstream to the confluence with Pohick Creek.

City / County: Fairfax City Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 11 samples - 54.5%) at station 1aMID000.75 at Route 640.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A16R_MID01A16 / Middle Run / Segment begins at the confluence of Cherry Run and Peyton Run, creating Middle Run, and continues downstream to the confluence with Pohick Creek.	5A	Escherichia coli	2016	L	2.85

Middle Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.85**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A17R-01-BAC** **Cedar Run**

Cause Location: Begins at the confluence with Mill Run, approximately 1.2 rivermiles downstream from Route 672, and continues downstream until the confluence with the Occoquan River/Lake Jackson.

City / County: Fauquier Co. Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 33 samples - 24.2%) at station 1aCER006.00 at Route 646; E. coli bacteria criterion excursions (3 of 7 samples - 42.9%) at station 1aCER009.52 at Route 611 (2010 Assessment); E. coli bacteria criterion excursions (10 of 32 samples - 31.3%) at station 1aCER016.46 at Route 806; and E. coli bacteria criterion excursions (7 of 15 samples - 46.7%) at station 1aCER025.25 at Route 602 (2010 Assessment). The Cedar Run and Licking Run bacteria TMDL for the Cedar Run watershed (POL0012) was approved by the EPA on 07/06/2004. The SWCB approved the TMDL on 12/02/2004. Federal ID 24411.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A17R_CER01A02 / Cedar Run / Segment begins at the confluence with Walnut Branch and continues downstream until the mouth of waterbody A17R.	4A	Escherichia coli	1996	L	1.64
VAN-A17R_CER02A02 / Cedar Run / Segment begins at the confluence with Turkey Run, approximately 0.15 rivermile upstream from Route 603, and continues downstream until the confluence with Walnut Branch.	4A	Escherichia coli	1998	L	6.46
VAN-A17R_CER03A02 / Cedar Run / Segment begins at the boundary of the PWS designation area, approximately rivermile 25.20, and continues downstream until the confluence with Turkey Run, approximately 0.15 rivermile upstream from Route 603.	4A	Escherichia coli	1998	L	4.22
VAN-A17R_CER03B06 / Cedar Run / Segment begins at the confluence with Mill Run, approximately 1.2 rivermiles downstream from Route 672, and continues downstream until the boundary of the PWS designation area, at approximately rivermile 25.20.	4A	Escherichia coli	1998	L	2.49
VAN-A18R_CER01A02 / Cedar Run / Segment begins at the boundary of the PWS designation area, at rivermile 7.86, and continues downstream until the confluence with the Occoquan River/Lake Jackson.	4A	Escherichia coli	1996	L	7.80
VAN-A18R_CER01B06 / Cedar Run / Segment begins at the confluence with Goslin Run and continues downstream until the boundary of the PWS designation area, at rivermile 7.86.	4A	Escherichia coli	1996	L	1.24
VAN-A18R_CER02A02 / Cedar Run / Segment begins at the boundary of the PWS designation area, at rivermile 12.81, and continues downstream until the confluence with Goslin Run.	4A	Escherichia coli	1996	L	3.64
VAN-A18R_CER02B06 / Cedar Run / Segment begins at the mouth of watershed A17R and continues downstream until the boundary of the PWS designation area, at rivermile 12.81.	4A	Escherichia coli	1996	L	0.77

Cedar Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**28.26**

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

Potomac and Shenandoah River Basins

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

Cause Group Code: **A17R-02-BAC** **Licking Run**

Cause Location: Begins at Route 602, below the mouth of Germantown Lake, and continues downstream until the confluence with Cedar Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at station 1aLIL001.43 at Route 616. The Cedar Run and Licking Run bacteria TMDL for the Licking Run watershed (POL0013) was approved by the EPA on 07/06/2004. The SWCB approved the TMDL on 12/02/2004. Federal ID 23321.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A17R_LIL01A00 / Licking Run / Segment begins at the outlet of the Germantown Lake impoundment and continues downstream until the confluence with Cedar Run.	4A	Escherichia coli	1998	L	6.52

Licking Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.52**

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A17R-03-BAC** **Licking Run**

Cause Location: Begins at the headwaters of Licking Run and continues downstream until the start of Germantown Lake.

City / County: Fauquier Co.

Use(s): Recreation

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

2010 Assessment: E. coli bacteria criterion excursions (5 of 18 samples - 27.8%) at station 1aLIL008.23 at Route 663. 2014 Assessment: E. coli bacteria criterion excursions (3 of 9 samples - 33.3%) at station 1aLIL009.92 at Route 674. A new TMDL is not required for this impaired segment of Licking Run because the downstream bacteria TMDL (23321, 07/06/2004) included modeling, source identification, and reductions that covered the entire Licking Run watershed (POL0013).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A17R_LIL02A04 / Licking Run / Segment begins at the boundary of the PWS designation area, at rivermile 11.32, and continues downstream until the start of Germantown Lake.	4A	Escherichia coli	2006	L	3.51
VAN-A17R_LIL02B06 / Licking Run / Segment begins at the headwaters of Licking Run and continues downstream until the boundary of the PWS designation area, at rivermile 11.32.	4A	Escherichia coli	2006	L	3.50

Licking Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.01**

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

Cause Group Code: **A17R-04-BAC** **Turkey Run**

Cause Location: Begins at the confluence with an unnamed tributary to Turkey Run, approximately 0.25 rivermile upstream from the Route 602 crossing, and continues downstream until the confluence with Cedar Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 23 samples - 17.4%) at station 1aTUK003.37 at Route 602. A new TMDL is not required for this impaired segment of Turkey Run because the downstream Cedar Run and Licking Run bacteria TMDL (24411, 07/06/2004) included modeling, source identification, and reductions that covered the entire Cedar Run watershed (POL0012).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A17R_TUK01A06 / Turkey Run / Segment begins at the confluence with an unnamed tributary to Turkey Run, approximately 0.25 rivermile upstream from the Route 602 crossing, and continues downstream until the confluence with Cedar Run.	4A	Escherichia coli	2006	L	3.61

Turkey Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.61**

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A17R-05-BAC** **Cedar Run**

Cause Location: Begins at the outlet of the Warrenton Reservoir and continues downstream to the confluence with Mill Run.

City / County: Fauquier Co. Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1ACER030.62 at Route 674 and E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aCER032.15 at Route 672 (2010 Assessment). A new TMDL is not required for this impaired segment of Cedar Run because the downstream bacteria TMDL (24411, 07/06/2004) included modeling, source identification, and reductions that covered the entire Cedar Run watershed (POL0012).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A17R_CER03C12 / Cedar Run / Segment begins at the boundary of the PWS designation area, approximately 0.6 rivermile downstream from the Route 678 crossing, and continues downstream to the confluence with Mill Run.	4A	Escherichia coli	2012	L	2.41
VAN-A17R_CER04A06 / Cedar Run / Segment begins at the outlet of the Warrenton Reservoir and continues downstream until the boundary of the PWS designation area, approximately 0.6 rivermile downstream from the Route 678 crossing.	4A	Escherichia coli	2008	L	2.49

Cedar Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.90**

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A17R-06-BAC** **Walnut Branch**

Cause Location: Begins at the confluence with an unnamed tributary, just upstream from the railroad crossing, and continues downstream until the confluence with Cedar Run.

City / County: Fauquier Co.

Use(s): Recreation

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

2014 Assessment: E. coli bacteria criterion excursions (2 of 7 samples - 28.6%) at station 1aWAL000.79 at Route 767. A new TMDL is not required for this impaired segment of Walnut Branch because the downstream Cedar Run and Licking Run bacteria TMDL (24411, 07/06/2004) included modeling, source identification, and reductions that covered the entire Cedar Run watershed (POL0012).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A17R_WAL01A06 / Walnut Branch / Segment begins at the confluence with an unnamed tributary, just upstream from the railroad crossing, and continues downstream until the confluence with Cedar Run.	4A	Escherichia coli	2008	L	1.69

Walnut Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.69**

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A17R-07-BAC** **Owl Run**

Cause Location: Begins at the headwaters of Owl Run and continues downstream until the confluence with Cedar Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 9 samples - 33.3%) at station 1aOWL001.85 at Route 616. A new TMDL is not required for this impaired segment of Owl Run because the downstream Cedar Run and Licking Run bacteria TMDL (24411, 07/06/2004) included modeling, source identification, and reductions that covered the entire Cedar Run watershed (POL0012).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A17R_OWL01A14 / Owl Run / Segment begins at the headwaters of Owl Run and continues downstream until the confluence with Cedar Run.	4A	Escherichia coli	2014	L	5.85

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

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A18R-01-BAC** **Elk Run**

Cause Location: Begins at the confluence with Furrs Run and continues downstream until the confluence with Town Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 8 samples - 50.0%) at station 1aELK000.10 at Route 806 (Elk Run Road). A new TMDL is not required for this impaired segment of Elk Run because the downstream bacteria TMDL (24411, 07/06/2004) included modeling, source identification, and reductions that covered the entire Cedar Run watershed (POL0012).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A18R_ELK01A08 / Elk Run / Segment begins at the confluence with Furrs Run and continues downstream until the confluence with Town Run.	4A	Escherichia coli	2008	L	2.27

Elk Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.27**

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

Cause Group Code: **A18R-02-BAC** **Town Run**

Cause Location: Begins at the confluence with Negro Run and continues downstream until the confluence with Elk Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 19 samples - 31.6%) at station 1aTON003.77 at Route 611. A new TMDL is not required for this impaired segment of Town Run because the downstream bacteria TMDL (24411, 07/06/2004) included modeling, source identification, and reductions that covered the entire Cedar Run watershed (POL0012).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A18R_TON01A08 / Town Run / Segment begins at the confluence with Negro Run and continues downstream until the confluence with Elk Run.	4A	Escherichia coli	2008	L	2.51

Town Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.51**

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A18R-02-BEN** **Lucky Run**

Cause Location: Begins at the headwaters of Lucky Run and continues downstream until the confluence with Cedar Run.

City / County: Prince William Co.

Use(s): Aquatic Life

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

2008 Assessment: Two biological monitoring events in 2001 at station 1aLUC000.95 off Route 611 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A18R_LUC01A04 / Lucky Run / Segment begins at the headwaters of Lucky Run and continues downstream until the confluence with Cedar Run.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	3.48

Lucky Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.48**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

Cause Group Code: **A18R-03-BAC** **Slate Run**

Cause Location: Begins at the headwaters of Slate Run and continues downstream until the confluence with Cedar Run.

City / County: Prince William Co.

Use(s): Recreation

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

2014 Assessment: E. coli bacteria criterion excursions (2 of 10 samples - 20.0%) at station 1aSLE000.36 at Route 649 (Old Church Road). A new TMDL is not required for this impaired segment of Slate Run because the downstream bacteria TMDL (24411, 07/06/2004) included modeling, source identification, and reductions that covered the entire Cedar Run watershed (POL0012).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A18R_SLE01A08 / Slate Run / Segment begins at the headwaters of Slate Run and continues downstream until the confluence with Cedar Run.	4A	Escherichia coli	2010	L	6.97

Slate Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.97**

Sources:

Grazing in Riparian or Shoreline Zones	Manure Runoff	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A19R-01-BAC** **Broad Run**

Cause Location: Begins at the confluence with Rocky Branch and continues downstream until the confluence with Cannon Branch.

City / County: Manassas City Prince William Co.

Use(s): Recreation

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

2014 Assessment: E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at station 1aBRU011.48 at Sudley Manor Road. The Occoquan River bacteria TMDL for the Broad Run (1) watershed (POL0404) was approved by the EPA on 11/15/2006. The SWCB approved the TMDL on 07/31/2008. Federal ID 31993.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_BRU02A00 / Broad Run / Segment begins at the confluence with Rocky Branch and continues downstream until the confluence with Cannon Branch.	4A	Escherichia coli	2002	L	7.59

Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.59**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

Cause Group Code: **A19R-02-BAC** **Broad Run**

Cause Location: Begins at the confluence with an unnamed tributary to Broad Run, at approximately rivermile 21.3, and continues downstream until the start, western end, of Lake Manassas.

City / County: Fauquier Co. Prince William Co.

Use(s): Recreation

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

2010 Assessment: E. coli bacteria criterion excursions (4 of 14 samples - 41.7%) at station 1aBRU020.12 at Route 29/15. The Occoquan River bacteria TMDL for the Broad Run (2) watershed (POL0405) was approved by the EPA on 11/15/2006. The SWCB approved the TMDL on 07/31/2008. Federal ID 31994.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_BRU07A02 / Broad Run / Segment begins 5 miles upstream of the Lake Manassas Dam and continues downstream until the start, western end, of Lake Manassas.	4A	Escherichia coli	2002	L	1.33

Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.33**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A19R-03-BAC** **Kettle Run**

Cause Location: Begins at the confluence with an unnamed tributary to Kettle Run, just upstream from Route 602, and continues downstream until the confluence with Broad Run.

City / County: Fauquier Co. Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 10 samples - 30.0%) at station 1aKET002.06 at Route 611; E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at station 1aKET004.27 at Route 646; E. coli bacteria criterion excursions (4 of 10 samples - 40.0%) at station 1aKET009.91 at Route 604; E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aKET012.03 at Route 761. The Occoquan River bacteria TMDL for the Kettle Run watershed (POL0408) was approved by the EPA on 11/15/2006. The SWCB approved the TMDL on 07/31/2008. Federal ID 31996.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_KET01A00 / Kettle Run / Segment begins at the confluence with an unnamed tributary to Kettle Run, just upstream from Route 708, and continues downstream until the confluence with Broad Run.	4A	Escherichia coli	2002	L	7.76
VAN-A19R_KET01B12 / Kettle Run / Segment begins at the confluence with an unnamed tributary to Kettle Run, at approximately rivermile 10.5, and continues downstream until the confluence with an unnamed tributary to Kettle Run, just upstream from Route 708.	4A	Escherichia coli	2014	L	2.45
VAN-A19R_KET02A04 / Kettle Run / Segment begins at the confluence with an unnamed tributary to Kettle Run, just upstream from Route 602, and continues downstream until the confluence with another unnamed tributary to Kettle Run, at approximately rivermile 10.5.	4A	Escherichia coli	2006	L	3.61

Kettle Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**13.82**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A19R-04-BAC** **South Run**

Cause Location: Begins downstream of Lake Brittle on South Run and continues downstream until the confluence with Lake Manassas (Broad Run).

City / County: Fauquier Co. Prince William Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (4 of 9 samples - 44.4%) at station 1aSOT001.44 at Route 215. The Occoquan River bacteria TMDL for the South Run watershed (POL0407) was approved by the EPA on 11/15/2006. The SWCB approved the TMDL on 07/31/2008. Federal ID 32108.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_SOT01A00 / South Run / Segment begins downstream of Lake Brittle on South Run and continues downstream until the confluence with Lake Manassas (Broad Run).	4A	Escherichia coli	2012	L	2.34

South Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.34**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A19R-04-BEN** **South Run**

Cause Location: Begins downstream of Lake Brittle on South Run and continues downstream until the confluence with Lake Manassas (Broad Run).

City / County: Fauquier Co. Prince William Co.

Use(s): Aquatic Life

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

2012 Assessment: Two biological monitoring events in 2005 at station 1aSOT001.65 at Route 652 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. The South Run benthic TMDL (POL0374) was approved by the EPA on 08/02/2006. The SWCB approved the TMDL on 03/09/2007. The primary stressor identified for South Run was determined based on evaluations of candidate stressors that potentially could be impacting the stream. Based on the stressor identification analysis, the most probable stressor for the benthic community of South Run was identified as total phosphorus enrichment. Federal ID 24412.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_SOT01A00 / South Run / Segment begins downstream of Lake Brittle on South Run and continues downstream until the confluence with Lake Manassas (Broad Run).	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	2.34

South Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.34**

Sources:

Agriculture	Lake Fertilization	Municipal Point Source Discharges	Urban Runoff/Storm Sewers

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A19R-05-BAC** **Broad Run**

Cause Location: Begins at the confluence with Mill Run and continues downstream until the confluence with Catletts Branch.

City / County: Fauquier Co. Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aBRU025.35 at Route 55 (2014 Assessment), and E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aBRU026.40 at Route 628. The Occoquan River bacteria TMDL for the Broad Run watershed was approved by the EPA on 11/15/2006. The SWCB approved the TMDL on 07/31/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_BRU07B06 / Broad Run / Segment begins at the confluence with Trapp Branch and continues downstream until the confluence with Catletts Branch.	4A	Escherichia coli	2006	L	1.15
VAN-A19R_BRU08A04 / Broad Run / Segment begins at the confluence with Mill Run and continues downstream to the confluence with Trapp Run.	4A	Escherichia coli	2004	L	1.16

Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.31**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A19R-06-BAC** **Broad Run**

Cause Location: Begins at the confluence with Kettle Run and continues downstream until the confluence with Cedar Run, forming the Occoquan River/Lake Jackson.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 32 samples - 18.8%) at station 1aBRU001.59 at Route 692. A new TMDL is not required for this impaired segment of Broad Run because the downstream bacteria TMDL (32111, 11/15/2006) included modeling, source identification, and reductions that covered the entire Occoquan River watershed (POL0409).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_BRU01A04 / Broad Run / Segment begins at the confluence with Kettle Run and continues downstream until the confluence with Cedar Run, forming the Occoquan River/Lake Jackson.	4A	Escherichia coli	2006	L	2.40

Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.40**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

Cause Group Code: **A19R-07-BAC** **Trapp Branch**

Cause Location: Begins at the confluence with an unnamed tributary to Trapp Branch, approximately 0.08 rivermile downstream from the Route 696 crossing, and continues downstream until the confluence with Broad Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at station 1aTRA000.09 at Route 55. E. coli bacteria criterion excursions (10 of 12 samples - 83.3%) at station 1aTRA001.02 at Route 674. A new TMDL is not required for this impaired segment of Trapp Branch because the downstream Occoquan River bacteria TMDL (31994, 11/15/2006) included modeling, source identification, and reductions that covered the entire Broad Run (2) watershed (POL0405).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_TRA01A06 / Trapp Branch / Segment begins at the confluence with an unnamed tributary to Trapp Branch, approximately 0.08 rivermile downstream from the Route 696 crossing, and continues downstream until the confluence with Broad Run.	4A	Escherichia coli	2006	L	1.78

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

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A19R-09-BAC** **Broad Run**

Cause Location: Begins at the confluence with an unnamed tributary to Broad Run and continues downstream until the confluence with Mill Run.

City / County: Fauquier Co.

Use(s): Recreation

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

2014 Assessment: E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aBRU029.80 at Route 55 (upstream). A new TMDL is not required for this impaired segment of Broad Run because the downstream bacteria TMDL (31995, 11/15/2006) included modeling, source identification, and reductions that covered the entire watershed (POL0406).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_BRU08B10 / Broad Run / Segment begins at the confluence with an unnamed tributary to Broad Run and continues downstream until the confluence with Mill Run.	4A	Escherichia coli	2010	L	4.17

Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.17**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A19R-10-BAC** **North Fork Broad Run**

Cause Location: Begins at the confluence with an unnamed tributary to North Fork and continues downstream until the confluence with Lake Manassas (Broad Run).

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aNOF002.14 at Route 29/211. A new TMDL is not required for this impaired segment of North Fork Broad Run because the downstream Occoquan River bacteria TMDL (31993, 11/15/2006) included modeling, source identification, and reductions that covered the entire Broad Run (1) watershed (POL0404).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A19R_NOF01A10 / North Fork Broad Run / Segment begins at the confluence with an unnamed tributary to North Fork and continues downstream until the confluence with Lake Manassas	4A	Escherichia coli	2016	L	3.66

North Fork Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.66**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A20R-01-BAC** **Occoquan River**

Cause Location: Begins at the confluence with Purcell Branch and continues downstream until the start of the Occoquan Reservoir.

City / County: Manassas City Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 16 samples - 18.8%) at station 1aOCC021.35 at Route 3000. The Occoquan River bacteria TMDL (POL0409) was approved by the EPA on 11/15/2006. The SWCB approved the TMDL on 07/31/2008. Federal ID 32111.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A20R_OCC01A04 / Occoquan River / Segment begins at the confluence with Purcell Branch and continues downstream until the start of the Occoquan Reservoir.	4A	Escherichia coli	2006	L	3.35

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

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A20R-02-BAC** **Purcell Branch**

Cause Location: Begins at the headwaters of Purcell Branch, near Woodbine School, and continues downstream until the confluence with the Occoquan River.

City / County: Prince William Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at station 1aPUR001.20 at Route 643. A new TMDL is not required for this impaired segment of Purcell Branch because the downstream bacteria TMDL (32111, 11/15/2006) included modeling, source identification, and reductions that covered the entire Occoquan River watershed (POL0409).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A20R_PUR01A06 / Purcell Branch / Segment begins at the headwaters of Purcell Branch, near Woodbine School, and continues downstream until the confluence with the Occoquan River.	4A	Escherichia coli	2006	L	3.85

Purcell Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.85**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-01-BEN** **Catharpin Creek**

Cause Location: Begins at the Route 601 crossing and continues downstream until the confluence with Little Bull Run.

City / County: Prince William Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2009 at station 1aCAA001.18 at Route 676 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_CAA01A02 / Catharpin Creek / Segment begins at the Route 601 crossing and continues downstream until the confluence with Little Bull Run.	5A	Benthic-Macroinvertebrate Bioassessments	2012	M	6.80

Catharpin Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.80**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-01-PCB** **Bull Run**

Cause Location: Includes Bull Run near Manassas Park from the I-66 bridge downstream approximately fourteen miles to the Route 612 (Yates Ford Road) bridge.

City / County: Fairfax Co. Manassas Park City Prince William Co.

Use(s): Fish Consumption

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

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 12/13/04 and modified 07/27/05, limits consumption of carp and channel catfish to no more than two meals per month.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_BUL01A06 / Bull Run / Segment begins at the confluence with Flat Branch and continues downstream until the confluence with Cub Run.	5A	PCB in Fish Tissue	2006	L	0.19
VAN-A21R_BUL01B06 / Bull Run / Segment begins at the I-66 crossing and continues downstream until the confluence with Flat Branch.	5A	PCB in Fish Tissue	2006	L	2.63
VAN-A23R_BUL01A06 / Bull Run / Segment begins at the Route 612 crossing, at rivermile 5.8, and continues downstream until the beginning of the Occoquan Reservoir.	5A	PCB in Fish Tissue	2006	L	2.90
VAN-A23R_BUL01C04 / Bull Run / Segment begins at the confluence of Popes Head Creek with Bull Run and continues downstream until rivermile 5.8.	5A	PCB in Fish Tissue	2004	L	0.95
VAN-A23R_BUL02A02 / Bull Run / Segment begins at the confluence with Cub Run, at the start of watershed A23R, and continues downstream until the confluence with Popes Head Creek.	5A	PCB in Fish Tissue	2004	L	4.86

Bull Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**11.53**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-02-BAC** **Bull Run**

Cause Location: Begins at the confluence with Chestnut Lick, approximately 0.7 rivermile upstream from Route 705, and continues downstream until the confluence with an unnamed tributary to Bull Run, at rivermile 22.34.

City / County: Loudoun Co. Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 31 samples - 16.1%) from station 1aBUL025.94 at Route 705. A new TMDL is not required for this impaired segment of Bull Run because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_BUL02A00 / Bull Run / Segment begins at the confluence with Chestnut Lick, approximately 0.7 rivermile upstream from Route 705, and continues downstream until the confluence with an unnamed tributary to Bull Run, at rivermile 22.34.	4A	Escherichia coli	2006	L	4.66

Bull Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.66**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-02-BEN** **Bull Run**

Cause Location: Begins at the confluence with Chestnut Lick, approximately 0.7 rivermile upstream from Route 705, and continues downstream until the confluence with an unnamed tributary to Bull Run, at rivermile 22.34.

City / County: Loudoun Co. Prince William Co.

Use(s): Aquatic Life

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

Four biological monitoring events in 2014 and 2015 at station 1aBUL025.94 at Route 705 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_BUL02A00 / Bull Run / Segment begins at the confluence with Chestnut Lick, approximately 0.7 rivermile upstream from Route 705, and continues downstream until the confluence with an unnamed tributary to Bull Run, at rivermile 22.34.	5A	Benthic-Macroinvertebrate Bioassessments	2016	L	4.66

Bull Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.66**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-03-BAC** **Catharpin Creek**

Cause Location: Begins at the Route 601 crossing and continues downstream until the confluence with Little Bull Run.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aCAA001.18 at Route 676. A new TMDL is not required for this impaired segment of Catharpin Creek because the downstream Occoquan River bacteria TMDL (32109, 11/15/2006) included modeling, source identification, and reductions that covered the entire Little Bull Run watershed (POL0410).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_CAA01A02 / Catharpin Creek / Segment begins at the Route 601 crossing and continues downstream until the confluence with Little Bull Run.	4A	Escherichia coli	2008	L	6.80

Catharpin Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.80**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-03-BEN** **Unnamed Tributary to Bull Run**

Cause Location: Begins below the downstream pond near the headwaters and continues downstream to the confluence with Bull Run.

City / County: Prince William Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2016 at station 1aXOB000.17 at 0.1 mile downstream from Route 677 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_XOB01A18 / Unnamed Tributary to Bull Run / Segment begins below the downstream pond near the headwaters and continues downstream to the confluence with Bull Run.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	3.73

Unnamed Tributary to Bull Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.73**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-04-BAC** **Youngs Branch**

Cause Location: Begins at the headwaters of Youngs Branch and continues downstream until the confluence with Bull Run.

City / County: Prince William Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aYOU001.50 at Route 29. A new TMDL is not required for this impaired segment of Youngs Branch because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_YOU01A02 / Youngs Branch / Segment begins at the headwaters of Youngs Branch and continues downstream until the confluence with Bull Run.	4A	Escherichia coli	2012	L	6.05

Youngs Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.05**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-04-BEN** **Little Bull Run**

Cause Location: Begins at the confluence with Catharpin Creek and continues downstream until the confluence with Bull Run.

City / County: Prince William Co.

Use(s): Aquatic Life

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

Three biological monitoring events in 2015 and 2016 at station 1aLII001.07 at Robin Drive resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_LII01A02 / Little Bull Run / Segment begins at the confluence with Lick Branch and continues downstream until the confluence with Bull Run.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	1.95
VAN-A21R_LII02A02 / Little Bull Run / Segment begins at the confluence with Catharpin Creek and continues downstream until the confluence with Lick Branch.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	3.17

Little Bull Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.12**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-05-BAC** **Bull Run**

Cause Location: Begins at the confluence with Little Bull Run and continues downstream until the confluence with Youngs Branch.

City / County: Fairfax City Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aBUL016.31 at Route 29/211. A new TMDL is not required for this impaired segment of Bull Run because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_BUL01D08 / Bull Run / Segment begins at the confluence with Little Bull Run and continues downstream until the confluence with Youngs Branch.	4A	Escherichia coli	2016	L	4.02

Bull Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.02**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-06-BAC** **Unnamed Tributary to Bull Run**

Cause Location: Begins below the downstream pond near the headwaters and continues downstream to the confluence with Bull Run.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 11 samples 18.2%) at station 1aXOB000.23 at Route 677. A new TMDL is not required for this impaired segment of an unnamed tributary to Bull Run because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_XOB01A18 / Unnamed Tributary to Bull Run / Segment begins below the downstream pond near the headwaters and continues downstream to the confluence with Bull Run.	4A	Escherichia coli	2018	L	3.73

Unnamed Tributary to Bull Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.73**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-07-BAC** **Little Bull Run**

Cause Location: Begins at the headwaters of Little Bull Run and continues downstream until the confluence with Catharpin Creek.

City / County: Fauquier Co. Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aLII006.75 at Route 676. A new TMDL is not required for this impaired segment of Little Bull Run because the downstream Occoquan River bacteria TMDL (32109, 11/15/2006) included modeling, source identification, and reductions that covered the entire Little Bull Run watershed (POL0410).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A21R_LII03A06 / Little Bull Run / Segment begins at the headwaters of Little Bull Run and continues downstream until the confluence with Catharpin Creek.	4A	Escherichia coli	2018	L	9.93

Little Bull Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.93**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-01-BAC** **Cub Run**

Cause Location: Begins at the confluence with Elklick Run and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 33 samples - 18.2%) at station 1aCUB002.61 at Route 658. A new TMDL is not required for this impaired segment of Cub Run because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_CUB01A00 / Cub Run / Segment begins at the confluence with Elklick Run and continues downstream until the confluence with Bull Run.	4A	Escherichia coli	2006	L	6.89

Cub Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.89**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-01-BEN** **Flatlick Branch**

Cause Location: Begins at the confluence with Frog Branch and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2008 Assessment: Two biological monitoring events in 2001 at station 1aFLL000.62 (between Route 609 and Route 620) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_FLL01A04 / Flatlick Branch / Segment begins at the confluence with Frog Branch and continues downstream until the confluence with Cub Run.	5A	Benthic-Macroinvertebrate Bioassessments	2008	M	3.22

Flatlick Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.22**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-01-PCB** **Cub Run**

Cause Location: Begins at the confluence with Elklick Run and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Fish Consumption

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

Two exceedances of the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in one species of fish (American eel) in three total samples collected in 2015 at monitoring station 1aCUB002.61 at Route 658.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_CUB01A00 / Cub Run / Segment begins at the confluence with Elklick Run and continues downstream until the confluence with Bull Run.	5A	PCB in Fish Tissue	2018	L	6.89

Cub Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**6.89**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-02-BAC** **Elklick Run**

Cause Location: Begins at the confluence with an unnamed tributary to Elklick Run, approximately 0.65 rivermile downstream from the Route 620 crossing, and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 10 samples - 30.0%) at station 1aELC001.39 at Route 609. A new TMDL is not required for this impaired segment of Elklick Run because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_ELC01A04 / Elklick Run / Segment begins at the confluence with an unnamed tributary to Elklick Run, approximately 0.65 rivermile downstream from the Route 620 crossing, and continues downstream until the confluence with Cub Run.	4A	Escherichia coli	2006	L	2.27

Elklick Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.27**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-02-BEN** **Big Rocky Run**

Cause Location: Begins at the confluence with an unnamed tributary to Big Rocky Run, at approximately rivermile 4.03, and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aBIR003.02 at Route 657 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_BIR01A02 / Big Rocky Run / Segment begins at the confluence with an unnamed tributary to Big Rocky Run, at approximately rivermile 4.03, and continues downstream until the confluence with Cub Run.	5A	Benthic-Macroinvertebrate Bioassessments	2010	M	4.34

Big Rocky Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.34**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-03-BAC** **Flatlick Branch**

Cause Location: Begins at the confluence with Frog Branch and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 10 samples - 40.0%) for station 1aFLL000.88 at Route 620. A new TMDL is not required for this impaired segment of Flatlick Branch because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_FLL01A04 / Flatlick Branch / Segment begins at the confluence with Frog Branch and continues downstream until the confluence with Cub Run.	4A	Escherichia coli	2014	L	3.22

Flatlick Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.22**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-03-BEN** **Cub Run**

Cause Location: Begins at the confluence with an unnamed tributary to Cub Run at rivermile 13.23 and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2009 and one biological monitoring event in 2010 at station 1aCUB004.63, upstream of Route 28 (2016 Assessment) and a total of four biological monitoring events in 2015 and 2016 at station 1aCUB011.25 at Route 50 and a total of two biological monitoring events in 2016 at station 1aCUB011.78, above the confluence with Sand Branch, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_CUB01A00 / Cub Run / Segment begins at the confluence with Elklick Run and continues downstream until the confluence with Bull Run.	5A	Benthic-Macroinvertebrate Bioassessments	2012	M	6.89
VAN-A22R_CUB02A02 / Cub Run / Segment begins at the confluence with an unnamed tributary to Cub Run at rivermile 13.23 (perennial headwaters) and continues downstream until the confluence with Elklick Run.	5A	Benthic-Macroinvertebrate Bioassessments	2016	M	6.34

Cub Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**13.23**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-04-BAC** **Big Rocky Run**

Cause Location: Begins at the confluence with an unnamed tributary to Big Rocky Run, at approximately rivermile 4.03, and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 10 samples - 40.0%) at station 1aBIR002.19 at Route 620. A new TMDL is not required for this impaired segment of Big Rocky Run because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_BIR01A02 / Big Rocky Run / Segment begins at the confluence with an unnamed tributary to Big Rocky Run, at approximately rivermile 4.03, and continues downstream until the confluence with Cub Run.	4A	Escherichia coli	2014	L	4.34

Big Rocky Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.34**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-04-BEN** **Elklick Run**

Cause Location: Begins at the confluence with an unnamed tributary to Elklick Run, approximately 0.65 rivermile downstream from the Route 620 crossing, and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2012 at station 1aELC001.39 at Route 609 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_ELC01A04 / Elklick Run / Segment begins at the confluence with an unnamed tributary to Elklick Run, approximately 0.65 rivermile downstream from the Route 620 crossing, and continues downstream until the confluence with Cub Run.	5A	Benthic-Macroinvertebrate Bioassessments	2014	M	2.27

Elklick Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.27**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-05-BAC** **Sand Branch**

Cause Location: Begins at the intermittent headwaters and continues downstream to the confluence with Cub Run.

City / County: Fairfax Co. Loudoun Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 14 samples 42.9%) at station 1aSAN000.34 at Route 609. E. coli bacteria criterion excursions (4 of 14 samples 28.6%) at station 1aSAN001.45 at Route 609. A new TMDL is not required for this impaired segment of Sand Branch because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entre Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_SAN01A18 / Sand Branch / Segment begins at the confluence with an unnamed tributary at the perennial headwaters and continues downstream to the confluence with Cub Run.	4A	Escherichia coli	2018	L	0.61
VAN-A22R_SAN02A18 / Sand Branch / Segment begins at the intermittent headwaters and continues downstream to the confluence with an unnamed tributary at the perennial headwaters.	4A	Escherichia coli	2018	L	0.93

Sand Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.54**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-05-BEN** **Sand Branch**

Cause Location: Begins at the intermittent headwaters and continues downstream to the confluence with Cub Run.

City / County: Fairfax Co. Loudoun Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2016 at station 1aSAN000.34 at Route 609 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. A total of two biological monitoring events in 2016 at station 1aSAN001.45 at Route 639 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A22R_SAN01A18 / Sand Branch / Segment begins at the confluence with an unnamed tributary at the perennial headwaters and continues downstream to the confluence with Cub Run.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	0.61
VAN-A22R_SAN02A18 / Sand Branch / Segment begins at the intermittent headwaters and continues downstream to the confluence with an unnamed tributary at the perennial headwaters.	5A	Benthic-Macroinvertebrate Bioassessments	2018	L	0.93

Sand Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.54**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A23R-01-BEN** **Bull Run**

Cause Location: Begins at the confluence with Cub Run, at the start of watershed A23R, and continues downstream until the confluence with Popes Head Creek.

City / County: Fairfax Co. Manassas Park City Prince William Co.

Use(s): Aquatic Life

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

2012 Assessment: Two biological monitoring events in 2005 at 1aBUL009.61, downstream of Route 28; one biological monitoring event in 2005 at 1aBUL010.28 at Route 28; and two biological monitoring events in 2005 at 1aBUL011.12, upstream of Route 616, resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. The Bull Run sediment TMDL (POL0402) was approved by the EPA on 09/26/2006. The SWCB approved the TMDL on 06/27/2007. Federal ID 30362.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A23R_BUL02A02 / Bull Run / Segment begins at the confluence with Cub Run, at the start of watershed A23R, and continues downstream until the confluence with Popes Head Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	4.86

Bull Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.86**

Sources:

Post-development Erosion and Sedimentation

Streambank Modifications/destabilization

Urban Runoff/Storm Sewers

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A23R-02-BAC** **Popes Head Creek**

Cause Location: Begins at the confluence with Piney Branch and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 33 samples - 24.2%) at station 1aPOE002.00 at Route 645. The Occoquan River bacteria TMDL for the Popes Head Creek watershed (POL0412) was approved by the EPA on 11/15/2006. The SWCB approved the TMDL on 07/31/2008. Federal ID 32107.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A23R_POE01A00 / Popes Head Creek / Segment begins at the confluence with Piney Branch and continues downstream until the confluence with Bull Run.	4A	Escherichia coli	2004	L	5.63

Popes Head Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.63**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A23R-02-BEN** **Popes Head Creek**

Cause Location: Begins at the confluence with Piney Branch and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2012 Assessment: Two biological monitoring events in 2005 at station 1aPOE002.00 at Route 645 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. The Popes Head Creek sediment TMDL (POL0403) was approved by the EPA on 09/26/2006. The SWCB approved the TMDL on 06/27/2007. Federal ID 30363.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A23R_POE01A00 / Popes Head Creek / Segment begins at the confluence with Piney Branch and continues downstream until the confluence with Bull Run.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	5.63

Popes Head Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.63**

Sources:

Post-development Erosion and Sedimentation	Streambank Modifications/destabilization	Urban Runoff/Storm Sewers

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A23R-03-BAC** **Little Rocky Run**

Cause Location: Begins at the confluence with Willow Springs and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (3 of 15 samples - 20.0%) at station 1aLIP001.00 at Route 658 (Compton Road). A new TMDL is not required for this impaired segment of Little Rocky Run because the downstream Occoquan River bacteria TMDL (32110, 11/15/2006) included modeling, source identification, and reductions that covered the entire Bull Run watershed (POL0411).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A23R_LIP01A06 / Little Rocky Run / Segment begins at the confluence with Willow Springs and continues downstream until the confluence with Bull Run.	4A	Escherichia coli	2008	L	5.23

Little Rocky Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.23**

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A23R-03-BEN** **Little Rocky Run**

Cause Location: Begins at the confluence with Willow Springs and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2014 Assessment: Two biological monitoring events in 2007 at station 1aLIP001.00 at Route 658 (Compton Road), resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A23R_LIP01A06 / Little Rocky Run / Segment begins at the confluence with Willow Springs and continues downstream until the confluence with Bull Run.	5A	Benthic-Macroinvertebrate Bioassessments	2010	M	5.23

Little Rocky Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.23**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A24L-01-PCB** **Occoquan Reservoir**

Cause Location: Segment includes the upper Bull Run arm of the Occoquan Reservoir; extending from rivermile 2.89 on Bull Run downstream until the crossing of the Route 612 (Yates Ford Road) bridge.

City / County: Fairfax Co. Prince William Co.

Use(s): Fish Consumption

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

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory and also due to six excursions above the fish tissue value (TV) of 20 ppb for PCBs in fish tissue. Three excursions were recorded in tissue from Channel Catfish and three excursions in tissue from Carp, both sampled in 2015 at DEQ fish tissue/sediment monitoring station 1ABUL001.57.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A24L_OCC02A06 / Occoquan Reservoir / Segment includes the upper Bull Run arm of the Occoquan Reservoir; extending from rivermile 2.89 on Bull Run downstream until the crossing of the Route 612 (Yates Ford Road) bridge.	5A	PCB in Fish Tissue	2006	L	63.12

Occoquan Reservoir **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:		**63.12**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A24L-02-PCB** **Occoquan Reservoir**

Cause Location: Segment includes most of the Occoquan Reservoir; extending from rivermile 19.83 on the Occoquan River and rivermile 1.57 on Bull Run, at the crossing of the Route 612 bridge, downstream until the water supply dam of the Fairfax County Water Authority.

City / County: Fairfax Co. Prince William Co.

Use(s): Fish Consumption

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

The fish consumption use is considered impaired based upon five excursions above the fish tissue value (TV) of 20 ppb for PCBs in fish tissue. Four excursions were recorded in tissue from Channel Catfish and one excursion in tissue from American Eel, both sampled in 2015 at DEQ fish tissue/sediment monitoring station 1AOCC008.80.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A24L_OCC01A02 / Occoquan Reservoir / Segment includes most of the Occoquan Reservoir; extending from rivermile 19.83 on the Occoquan River and rivermile 1.57 on Bull Run, at the crossing of the Route 612 bridge, downstream until the water supply dam of the Fairfax County Water Authority.	5A	PCB in Fish Tissue	2018	L	######

Occoquan Reservoir **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:		**1,250.03**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

Cause Group Code: **A24R-01-BAC** **Wolf Run**

Cause Location: Begins at the confluence with Maple Branch and continues downstream until the end of the free-flowing waters at the inundated waters of the Occoquan Reservoir.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at station 1aWOL001.26 at Route 643.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A24R_WOL01A06 / Wolf Run / Segment begins at the confluence with Maple Branch and continues downstream until the end of the free-flowing waters at the inundated waters of the Occoquan Reservoir.	5A	Escherichia coli	2006	L	2.50

Wolf Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.50**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A24R-02-BAC** **Sandy Run**

Cause Location: Begins at the headwaters of Sandy Run and continues downstream until the end of the free-flowing waters at the inundated waters of the Occoquan Reservoir.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aSAD001.76 at Cathedral Forest Drive.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A24R_SAD01A04 / Sandy Run / Segment begins at the boundary of the PWS designation, at rivermile 3.1 and continues downstream until the end of the free-flowing waters at the inundated waters of the Occoquan Reservoir.	5A	Escherichia coli	2008	L	2.10
VAN-A24R_SAD01A10 / Sandy Run / Segment begins at the headwaters of Sandy Run and continues downstream until the boundary of the PWS designation, at rivermile 3.1.	5A	Escherichia coli	2008	L	3.98

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

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

Cause Group Code: **A24R-03-BAC** **Hooes Run**

Cause Location: Begins at the outlet from Lake Omiscol and continues downstream until the beginning of the inundated waters of the Occoquan Reservoir.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 10 samples - 20.0%) at station 1aHOO000.34 at Route 641 (Old Bridge Road).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A24R_HOO01A02 / Hooes Run / Segment begins at the outlet from Lake Omiscol and continues downstream until the beginning of the inundated waters of the Occoquan Reservoir.	5A	Escherichia coli	2012	L	0.98

Hooes Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.98**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25E-02-BAC** **Neabsco Creek**

Cause Location: Segment includes the tidal waters of Neabsco Bay, beginning at rivermile 1.37, downstream until the confluence with Occoquan Bay.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 50 samples - 16.0%) at station 1aNEA000.57 at the railroad bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25E_NEA01A00 / Neabsco Bay / Segment includes the tidal waters of Neabsco Bay, beginning at rivermile 1.37, downstream until the confluence with Occoquan Bay. Portion of CBP segment POTTF.	5A	Escherichia coli	2004	L	0.545

Neabsco Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:	**0.545**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25E-03-BAC** **Occoquan River**

Cause Location: Extends from the end of the free-flowing waters to 0.5 rivermile downstream of monitoring station 1aOCC006.64.

City / County: Fairfax Co. Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 18 samples - 16.7%) combined from stations 1aOCC006.47, upstream of the Occoquan Regional Park boat ramp, and 1aOCC006.71 at Route 123 (Gordon Boulevard).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25E_OCC05A02 / Occoquan River / Segment extends from the end of the free-flowing waters to 0.5 rivermile upstream of monitoring station 1aOCC005.16. Portion of CBP segment POTTF.	5A	Escherichia coli	2014	L	0.086

Occoquan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:	**0.086**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25E-04-BAC** **Marumsco Creek**

Cause Location: Includes all the tidal waters of Marumsco Creek from the end of the free-flowing stream to the open Occoquan Bay.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aMAU001.16 at Featherstone Drive.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25E_MAU01A12 / Marumsco Creek / Segment includes all the tidal waters of Marumsco Creek from the end of the free-flowing stream to the open Occoquan Bay. Portion of CBP segment POTTF.	5A	Escherichia coli	2012	L	0.025

Marumsco Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:	**0.025**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25E-04-EBEN** **Occoquan River**

Cause Location: Extends 0.5 mile around Coastal 2000 monitoring station 1aOCC002.62.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2008 Assessment: Coastal 2000 weight of evidence analysis for station 1aOCC002.62, utilizing bulk chemical data, toxicity test data, and an evaluation of benthic community conditions, resulted in an impaired determination for the aquatic life use. Results from the estuarine bioassessment were the primary factor for this determination.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25E_OCC03A04 / Belmont Bay (Occoquan River) / Segment extends 0.5 mile around Coastal 2000 monitoring station 1aOCC002.62 (coordinates 38.6382, -77.208). Portion of CBP segment POTTF.	5A	Estuarine Bioassessments	2006	L	0.286

Occoquan River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**0.286**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-01-BEN** **Giles Run**

Cause Location: Begins at the headwaters of Giles Run and continues downstream until the end of the free-flowing waters of Giles Run, at Massey Creek.

City / County: Fairfax Co.

Use(s): Aquatic Life

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

2016 Assessment: Two biological monitoring events in 2010 at station 1aGIL003.10 at Route 642 (Lorton Road) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25R_GIL01A04 / Giles Run / Segment begins at the headwaters of Giles Run and continues downstream until the end of the free-flowing waters of Giles Run, at Massey Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	6.48

Giles Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.48**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-01-PCB** **Giles Run**

Cause Location: Begins at the headwaters of Giles Run and continues downstream until the end of the free-flowing waters of Giles Run, at Massey Creek.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Water Column / 4A

2012 Assessment: Three exceedances of the human health criteria for total polychlorinated biphenyls (PCBs) in the water column were recorded in 2005 and 2006 at station 1aGIL000.70 at Route 611. The Tidal Potomac River PCB TMDL for the Occoquan River watershed (POL0476) was approved by the EPA on 10/31/2007. The SWCB approved the TMDL on 04/11/2008. Federal ID 35565.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25R_GIL01A04 / Giles Run / Segment begins at the headwaters of Giles Run and continues downstream until the end of the free-flowing waters of Giles Run, at Massey Creek.	4A	PCB in Water Column	2010	L	6.48

Giles Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Water Column - Total Impaired Size by Water Type:			**6.48**

Sources:

Atmospheric Deposition - Toxics | Combined Sewer Overflows | Contaminated Sediments | Upstream Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-02-BAC** **Mills Branch**

Cause Location: Begins at the headwaters of Mills Branch and continues downstream until the confluence with the Occoquan River.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aWLB000.06 at Occoquan Regional Park.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25R_WLB01A02 / Mills Branch / Segment begins at the headwaters of Mills Branch and continues downstream until the confluence with the Occoquan River. Mills Branch, a channeled flow under the Lorton landfill, is an unnamed tributary on the Occoquan/Ft. Belvoir quads.	5A	Escherichia coli	2014	L	1.72

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

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-02-PCB** **Mills Branch**

Cause Location: Begins at the headwaters of Mills Branch and continues downstream until the confluence with the Occoquan River.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Water Column / 4A

2012 Assessment: Two exceedances of the human health criteria for total polychlorinated biphenyls (PCBs) in the water column were recorded in 2006 at station 1aWLB000.06 at Occoquan Regional Park. The Tidal Potomac River PCB TMDL for the Occoquan River watershed (POL0476) was approved by the EPA on 10/31/2007. The SWCB approved the TMDL on 04/11/2008. Federal ID 35565.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25R_WLB01A02 / Mills Branch / Segment begins at the headwaters of Mills Branch and continues downstream until the confluence with the Occoquan River. Mills Branch, a channeled flow under the Lorton landfill, is an unnamed tributary on the Occoquan/Ft. Belvoir quads.	4A	PCB in Water Column	2010	L	1.72

Mills Branch **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Water Column - Total Impaired Size by Water Type:			**1.72**

Sources:

Atmospheric Deposition - Toxics

Combined Sewer Overflows

Contaminated Sediments

Upstream Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-03-BAC** **Giles Run**

Cause Location: Begins at the headwaters of Giles Run and continues downstream until the end of the free-flowing waters of Giles Run, at Massey Creek.

City / County: Fairfax Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aGIL000.85 at Route 1 (Jefferson Davis Highway).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25R_GIL01A04 / Giles Run / Segment begins at the headwaters of Giles Run and continues downstream until the end of the free-flowing waters of Giles Run, at Massey Creek.	5A	Escherichia coli	2014	L	6.48

Giles Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.48**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-04-BAC** **Marumsco Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Marumsco Creek, just upstream from Easy Street, and continues downstream until the end of the free-flowing waters.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 11 samples - 45.5%) at station 1aMAU001.67 at Route 1 (Jefferson Davis Highway).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25R_MAU01A04 / Marumsco Creek / Segment begins at the confluence with an unnamed tributary to Marumsco Creek, just upstream from Easy Street, and continues downstream until the end of the free-flowing waters.	5A	Escherichia coli	2014	L	0.53

Marumsco Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.53**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-05-BAC** **Unnamed Tributary to Occoquan River**

Cause Location: Begins at the headwaters of an unnamed tributary and continues downstream until the confluence with the Occoquan River.

City / County: Fairfax Co. Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at station 1aXMK000.37 at Route 2100.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A25R_XMK01A16 / Unnamed Tributary to Occoquan River / Segment begins at the headwaters of an unnamed tributary and continues downstream until the confluence with the Occoquan River.	5A	Escherichia coli	2016	L	1.11

Unnamed Tributary to Occoquan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.11**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26E-01-BZOKFL Powells Creek**

Cause Location: Extends to a 0.5 mile radius around the ACB station 1aPOW-765-ALL.

City / County: Prince William Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Benzo[k]fluoranthene / 5A

2002 Assessment: Exceedances of the water quality criterion based tissue value (TV) of 5.5 ppb for benzo(k) fluoranthene in fish tissue (largemouth bass and sunfish) at station 1aPOW001.20 in 1996.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26E_POW02A02 / Powells Creek / Segment extends to a 0.5 mile radius around the ACB station 1aPOW-765-ALL (38.5842, -77.2647). Portion of CBP segment POTTF.	5A	Benzo[k]fluoranthene	2002	L	0.402

Powells Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benzo[k]fluoranthene - Total Impaired Size by Water Type:	**0.402**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26L-01-HG** **Lake Montclair**

Cause Location: Includes all of Lake Montclair.

City / County: Prince William Co.

Use(s): Fish Consumption

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

2012 Assessment: Exceedances of the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury in fish tissue were recorded in three species of fish (9 total samples): largemouth bass (2006), channel catfish (2006) and black crappie (2006) collected at monitoring station 1aPOW009.08.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26L_POW01A06 / Lake Montclair / Segment includes all of Lake Montclair.	5A	Mercury in Fish Tissue	2010	L	103.54

Lake Montclair **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**103.54**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26L-01-PCB** **Lake Montclair**

Cause Location: Includes all of Lake Montclair.

City / County: Prince William Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Fish Tissue / 4A

2010 Assessment: Exceedances of the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in three species of fish (4 total samples): carp (2004), brown bullhead catfish (2004) and channel catfish (2004, 2006) collected at monitoring station 1aPOW009.08. The Tidal Potomac River PCB TMDL for the Powells Creek watershed was approved by the EPA on 10/31/2007. The SWCB approved the TMDL on 04/11/2008. Federal ID 34374.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26L_POW01A06 / Lake Montclair / Segment includes all of Lake Montclair.	4A	PCB in Fish Tissue	2010	L	103.54

Lake Montclair **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:		**103.54**	

Sources:

Atmospheric Deposition - Toxics | Combined Sewer Overflows | Contaminated Sediments | Upstream Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26R-02-BAC** **Powells Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Powells Creek, at rivermile 12.77 and continues downstream until the end of the free-flowing waters of Powells Creek, however does not include Lake Montclair and the first 0.2 rivermiles below the lake.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 13 samples - 23.1%) at station 1aPOW003.11 at Route 1. E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at station 1aPOW009.99 at Route 643. The Potomac River Tributaries bacteria TMDL for the Powells Creek watershed (766) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53801.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26R_POW01A00 / Powells Creek / Segment begins approximately 0.2 rivermiles below Lake Montclair and continues downstream until the end of the free-flowing waters of Powells Creek.	4A	Escherichia coli	2006	L	5.37
VAN-A26R_POW02A02 / Powells Creek / Segment begins at the confluence with an unnamed tributary to Powells Creek, at rivermile 12.77, and continues downstream until the beginning of Lake Montclair.	4A	Escherichia coli	2014	L	3.91

Powells Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.28**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)
Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26R-02-PH** **Unnamed tributary to Potomac River**

Cause Location: Begins at the headwaters of the unnamed tributary and continues downstream until its confluence with the Potomac River

City / County: Stafford Co.

Use(s): Aquatic Life

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

Excursions less than the lower limit of the pH criterion range (4 of 12 samples - 33.3%) at station 1aXLF000.13 at Route 633 (Arkendale Road).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26R_XLF01A10 / Unnamed tributary to Potomac River / Segment begins at the headwaters of the unnamed tributary and continues downstream until its confluence with the Potomac River.	5A	pH	2014	L	3.67

Unnamed tributary to Potomac River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.67**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26R-03-BAC** **Quantico Creek**

Cause Location: Begins at the confluence with South Fork Quantico Creek, approximately 0.75 rivermile upstream from I-95, and continues downstream until the start of the tidal waters of Quantico Bay.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 33 samples - 21.2%) at station 1aQUA004.46 at Route 1 Business. The Potomac River Tributaries bacteria TMDL for the Powells Creek watershed (768) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53797.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26R_QUA01A00 / Quantico Creek / Segment begins at the confluence with South Fork Quantico Creek, approximately 0.75 rivermile upstream from I-95, and continues downstream until the start of the tidal waters of Quantico Bay.	4A	Escherichia coli	2004	L	1.47

Quantico Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.47**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)
Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26R-04-BAC** **North Branch Chopawamsic Creek**

Cause Location: Begins at the headwaters of North Branch Chopawamsic Creek and continues downstream until the confluence with Middle Branch.

City / County: Prince William Co. Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 13 samples - 23.1%) at station 1aNOR009.87 at the MCB-1 bridge crossing. The Potomac River Tributaries bacteria TMDL for the North Branch Chopawamsic Creek watershed (769) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53788.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26R_NOR01A02 / North Branch Chopawamsic Creek / Segment begins at the headwaters of North Branch Chopawamsic Creek and continues downstream until the confluence with Middle Branch.	4A	Escherichia coli	2004	L	7.26

North Branch Chopawamsic Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.26**

Sources:

Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)	Urban Runoff/Storm Sewers
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26R-05-BAC** **South Fork Quantico Creek**

Cause Location: Begins at the headwaters of the South Fork Quantico Creek and continues downstream until the start of the impounded waters, adjacent to what is labeled as Mawavi Camp No 2 on the Joplin quad.

City / County: Prince William Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 13 samples - 15.4%) at station 1aSOQ006.73 at Route 619. The Potomac River tributaries bacteria TMDL for the South Fork Quantico Creek watershed (767) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53796.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26R_SOQ01B02 / South Fork Quantico Creek / Segment begins at the headwaters of the South Fork Quantico Creek and continues downstream until the start of the impounded waters, adjacent to what is labeled as Mawavi Camp No 2 on the Joplin quad.	4A	Escherichia coli	2004	L	4.82

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

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)
Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26R-07-BAC** **Unnamed tributary to Potomac River**

Cause Location: Begins at the headwaters of the unnamed tributary and continues downstream until its confluence with the Potomac River

City / County: Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at station 1aXLF000.13 at Route 633 (Arkendale Road). The Potomac River tributaries bacteria TMDL for the Unnamed Tributary (XLF) watershed (770) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53790.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26R_XLF01A10 / Unnamed tributary to Potomac River / Segment begins at the headwaters of the unnamed tributary and continues downstream until its confluence with the Potomac River.	4A	Escherichia coli	2010	L	3.67

Unnamed tributary to Potomac River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.67**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Urban Runoff/Storm Sewers
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A26R-08-BAC** **South Branch Chopawamsic Creek**

Cause Location: Begins at the headwaters of the South Branch Chopawamsic Creek, and continues downstream to the inundated waters of the Breckenridge Reservoir.

City / County: Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 13 samples 23.1%) at station 1aSOB001.80 at MCB-1.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A26R_SOB01A12 / South Branch Chopawamsic Creek / Segment begins at the headwaters of the South Branch Chopawamsic Creek, and continues downstream to the inundated waters of the Breckenridge Reservoir.	5A	Escherichia coli	2018	L	4.66

South Branch Chopawamsic Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.66**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A27R-01-DO** **Unnamed tributary to Aquia Creek**

Cause Location: Begins at the headwaters of the unnamed tributary and continues downstream until its confluence with Aquia Creek.

City / County: Stafford Co.

Use(s): Aquatic Life

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

Excursions less than the minimum dissolved oxygen criterion (4 of 16 samples - 25.0%) at citizen station 1aXLN-SCVDOT-ALL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A27R_XLN01A10 / Unnamed tributary to Aquia Creek / Segment begins at the headwaters of the unnamed tributary and continues downstream until its confluence with Aquia Creek.	5A	Oxygen, Dissolved	2010	L	2.25

Unnamed tributary to Aquia Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.25**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A27R-02-BAC** **Aquia Creek**

Cause Location: Begins at the headwaters of Aquia Creek and continues downstream until the confluence with Cannon Creek, approximately 0.1 rivermile downstream from Route 610.

City / County: Fauquier Co. Stafford Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (2 of 10 samples - 20.0%) at station 1aAUA023.09 at Route 644.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A27R_AUA02A02 / Aquia Creek / Segment begins at the headwaters of Aquia Creek and continues downstream until the confluence with Cannon Creek, approximately 0.1 rivermile downstream from Route 610.	5A	Escherichia coli	2012	L	8.81

Aquia Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.81**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A28R-01-BAC** **Austin Run**

Cause Location: Begins at the confluence with an unnamed tributary to Austin Run, just upstream of the Route 1 crossing, and continues downstream until the confluence with Aquia Creek.

City / County: Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aAUS000.49 at the end of Aquia Drive (2016 Assessment) and E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aAUS001.60 at Route 1 (Jefferson Davis Highway). The Potomac River tributaries bacteria TMDL for the Austin Run watershed (771) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53793.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A28R_AUS01A04 / Austin Run / Segment begins at the confluence with an unnamed tributary to Austin Run (streamcode XGQ) and continues downstream until the confluence with Aquia Creek.	4A	Escherichia coli	2004	L	0.85
VAN-A28R_AUS02A06 / Austin Run / Segment begins at the confluence with an unnamed tributary to Austin Run, just upstream of the Route 1 crossing, and continues downstream until the confluence with another unnamed tributary to Austin Run (streamcode XGQ).	4A	Escherichia coli	2014	L	0.69

Austin Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.54**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)
Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A29E-01-PH** **Potomac Creek**

Cause Location: Segment extends from rivermile 1.91 until rivermile 1.09 along Potomac Creek and includes the lower portion of the Accokeek Creek arm of Potomac Creek, approximately 0.35 rivermile upstream.

City / County: King George Co. Stafford Co.

Use(s): Aquatic Life

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

2014 Assessment: Sufficient excursions greater than the upper limit of the pH criterion range were recorded at continuous monitoring station 1aPOM-000.97-VIMS (69 of 606 observations, 11.4%).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29E_POM01B06 / Potomac Creek / Segment extends from rivermile 1.91 until rivermile 1.09 along Potomac Creek. Portion of CBP segment POTOH.	5A	pH	2014	L	0.587

Potomac Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	**0.587**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

Cause Group Code: **A29E-02-BAC** **Fairview Beach (Potomac River)**

Cause Location: Includes all of Fairview Beach on the Potomac River.

City / County: King George Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 5R

14 exceedances of the monthly geometric mean enterococci criterion were recorded at the Virginia Department of Health station (VA351214) at Fairview Beach. During 2011 through 2016, VDH issued a total of 30 beach monitoring advisories for Fairview Beach based on the results of enterococci bacteria sampling at station VA351214. The Fairview Beach bacteria Watershed Plan was approved by the EPA on 12/04/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29E_POT01A06 / Fairview Beach/Potomac River / Segment includes all of Fairview Beach on the Potomac River. Portion of CBP segment POTOH.	5R	Enterococcus	2006	L	0.005

Fairview Beach (Potomac River) **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.005**		

Sources:

Sediment Resuspension (Contaminated Sediment)	Unspecified Domestic Waste	Unspecified Urban Stormwater	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A29E-03-BAC** **Chotank Creek**

Cause Location: Includes the tidal portion of Chotank Creek, from its headwaters until the fire road crossing inside of Caledon State Park.

City / County: King George Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 5A

2016 Assessment: Enterococci bacteria criterion excursions (3 of 12 samples - 25.0%) at station 1aCHN002.97 at the fire road in Caledon State Park.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29E_CHN02A10 / Chotank Creek / Segment includes the tidal portion of Chotank Creek, from its headwaters until the fire road crossing inside of Caledon State Park. Portion of CBP segment POTOH.	5A	Enterococcus	2012	L	0.054

Chotank Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.054**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A29R-01-BAC** **Accokeek Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Accokeek Creek, approximately 0.33 rivermile downstream from Route 1 at rivermile 8.62, and continues downstream until the end of the free-flowing waters.

City / County: Stafford Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at station 1aACC006.13 at Route 608. The Potomac River tributaries bacteria TMDL for the Accokeek Creek watershed (772) was developed and approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53785.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29R_ACC01A00 / Accokeek Creek / Segment begins at the confluence with an unnamed tributary to Accokeek Creek (rivermile 8.62), approximately 0.33 rivermile downstream from Route 1, and continues downstream until the end of the free-flowing waters.	4A	Escherichia coli	2002	L	4.48

Accokeek Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.48**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)
Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A29R-01-BEN** **Unnamed tributary to Long Branch**

Cause Location: Begins at the headwaters of an unnamed tributary to Long Branch and continues downstream until the confluence with Long Branch, at rivermile 3.58.

City / County: Stafford Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2014 at station 1aXLB000.05 (0.05 mile upstream of confluence with Long Branch) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29R_XLB01A08 / Unnamed tributary to Long Branch / Segment begins at the headwaters of an unnamed tributary to Long Branch and continues downstream until the confluence with Long Branch, at rivermile 3.58.	5A	Benthic-Macroinvertebrate Bioassessments	2016	L	2.30

Unnamed tributary to Long Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.30**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A29R-02-BAC** **Potomac Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Potomac Creek, at rivermile 9.12, and continues downstream until the east end of swamp.

City / County: Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at station 1aPOM008.24 at Route 626 (Potomac Run Road) and E. coli bacteria criterion excursions (2 of 8 samples - 25.0%) at station 1aPOM006.72 at Route 608 (2016 Assessment). The Potomac River tributaries bacteria TMDL for the Potomac Creek watershed (774) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53786.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29R_POM01A00 / Potomac Creek / Segment begins at the railroad crossing at the west end of swamp, upstream from Route 608, and continues downstream until the east end of swamp.	4A	Escherichia coli	2004	L	2.18
VAN-A29R_POM02A06 / Potomac Creek / Segment begins at the confluence with an unnamed tributary to Potomac Creek, at rivermile 9.12, and continues downstream until the railroad crossing at the west end of swamp, upstream from Route 608.	4A	Escherichia coli	2014	L	1.91

Potomac Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.09**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sanitary Sewer Overflows (Collection System Failures)
Urban Runoff/Storm Sewers	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A29R-03-BAC** **Potomac Run**

Cause Location: Begins at the headwaters of Potomac Run and continues downstream until the confluence with Long Branch.

City / County: Stafford Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (16 of 18 samples - 88.9%) at station 1aPOR000.40 at Route 648. The Potomac River tributaries bacteria TMDL for the Potomac Run watershed (773) was approved by the EPA on 09/26/2013. The SWCB approved the TMDL on 04/04/2014. Federal ID 53792.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29R_POR01A06 / Potomac Run / Segment begins at the headwaters of Potomac Run and continues downstream until the confluence with Long Branch.	4A	Escherichia coli	2006	L	6.59

Potomac Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.59**

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Urban Runoff/Storm Sewers
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A29R-03-DO** **Potomac Run**

Cause Location: Begins at the headwaters of Potomac Run and continues downstream until the confluence with Long Branch.

City / County: Stafford Co.

Use(s): Aquatic Life

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

2016 Assessment: Excursions less than the minimum dissolved oxygen criterion (2 of 18 samples - 11.1%) at station 1aPOR000.40 at Route 648.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29R_POR01A06 / Potomac Run / Segment begins at the headwaters of Potomac Run and continues downstream until the confluence with Long Branch.	5A	Oxygen, Dissolved	2014	L	6.59

Potomac Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**6.59**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A29R-05-BAC** **Dirt Bridge Run**

Cause Location: Begins at the confluence of two unnamed tributaries and continues downstream until the confluence with Passapatanzy Creek.

City / County: King George Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 10 samples 20.0%) at station 1aDBR001.37 at Route 218.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A29R_DBR01A10 / Dirt Bridge Run / Segment begins at the confluence of two unnamed tributaries and continues downstream until the confluence with Passapatanzy Creek.	5A	Escherichia coli	2018	L	1.81

Dirt Bridge Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.81**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30E-01-BAC** **Williams Creek**

Cause Location: Begins at the head of tide of Williams Creek and continues downstream until the extent of the Section C area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, effective May 15, 2012.

City / County: King George Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

2014 Assessment: Enterococci bacteria criterion excursions (3 of 11 samples - 27.3%) at station 1aWLL001.30 at Route 206 and excursions (4 of 6 samples - 66.7%) at station 1aWLL002.21 at Route 301. A new TMDL is not required for this impaired segment of Williams Creek because the Upper Machodoc Creek Watershed bacteria TMDL (36032, 12/18/2008) included modeling, source identification, and reductions that covered the entire watershed (POL0443).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30E_WLL01B10 / Williams Creek / The downstream portion of the boundary of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section C, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Enterococcus	2010	L	0.113
VAN-A30E_WLL02A02 / Williams Creek / The upstream portion of the boundary of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section C, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Enterococcus	2010	L	0.022

Williams Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.135**		

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30E-01-PCB** **Coan River, Monroe Creek, Upper Machodoc Creek**

Cause Location: Includes the tidal portions of the following tributaries from the Potomac River Bridge at Route 301 to the mouth of the Potomac River near Smith Point: Upper Machodoc Creek, Monroe Creek, and Coan River.

City / County: King George Co. Northumberland Co. Westmoreland Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Fish Tissue / 4A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 12/13/04, limits consumption of channel catfish, gizzard shad, and white perch to no more than two meals per month.

Nine exceedances of the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in five species of fish (channel catfish, gizzard shad, white perch, mummichog, and croaker) in 11 total samples collected in 2004 at monitoring station 1aUMC001.36. Two exceedances of the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in three species of fish (channel catfish, gizzard shad, and bluefish) sampled in 2004 at monitoring station 1aUMC004.43.

The Tidal Potomac River PCB TMDL for the Upper Machodoc Creek watershed (POL0483) was approved by the EPA on 10/31/2007. The SWCB approved the TMDL on 04/11/2008. Federal ID 35064.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30E_UMC01A02 / Upper Machodoc Creek / The boundaries of the condemned (prohibited) area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section F, effective May 7, 2013. Portion of CBP segment POTMH.	4A	PCB in Fish Tissue	2006	L	0.022
VAN-A30E_UMC01B06 / Upper Machodoc Creek / The Upper Machodoc Creek portion of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section A, effective May 7, 2013. Portion of CBP segment POTMH.	4A	PCB in Fish Tissue	2006	L	0.064
VAN-A30E_UMC02A04 / Upper Machodoc Creek / The boundaries of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section B, effective May 7, 2013. Portion of CBP segment POTMH.	4A	PCB in Fish Tissue	2006	L	0.028
VAN-A30E_UMC03A04 / Upper Machodoc Creek / A portion of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section E, effective May 7, 2013. Portion of CBP segment POTMH.	4A	PCB in Fish Tissue	2006	L	0.043
VAN-A30E_UMC03B10 / Upper Machodoc Creek / Segment includes the area of UMC described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section M1, effective May 7, 2013. Portion of CBP segment POTMH.	4A	PCB in Fish Tissue	2006	L	0.049
VAN-A30E_UMC04A10 / Upper Machodoc Creek / Segment includes main body of tidal Upper Machodoc Creek not included in segment VAN-A30E_UMC04B06 or the Sections described in VDH Shellfish Area Condemnation Number 001A-36, dated May 7, 2013.	4A	PCB in Fish Tissue	2004	L	0.419

Portion of CBP segment POTMH.					
VAN-A30E_UMC04B06 / Upper Machodoc Creek / Segment includes main body of tidal Upper Machodoc Creek not included in segment VAN-A30E_UMC04A10 or the Sections described in VDH Shellfish Area Condemnation Number 001A-36, dated May 7, 2013. Portion of CBP segment POTMH.	4A	PCB in Fish Tissue	2004	L	0.418
VAN-A30E_UMC04C06 / Upper Machodoc Creek / Segment includes the downstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, dated 05/07/13, and continuing until the open embayment of Upper Machodoc Creek. Portion of CBP segment POTMH.	4A	PCB in Fish Tissue	2006	L	0.184
VAN-A30E_UMC05A02 / Upper Machodoc Creek / Segment includes the upstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, effective May 07, 2013. Portion of CBP segment POTMH.	4A	PCB in Fish Tissue	2004	L	0.705
VAP-A31E_MON01A00 / Monroe Creek/Monroe Bay / Prohibited area around STP outfall as described in VDH shellfish condemnation 002-001D, 6/7/2016	4A	PCB in Fish Tissue	2004	L	0.176
VAP-A31E_MON02A98 / Monroe Bay / Administratively condemned portion of VDH condemnation notice 002-001A, 6/17/2016	4A	PCB in Fish Tissue	2004	L	0.355
POTMH					
VAP-A31E_MON03A98 / Monroe Bay / Portion of VDH condemnation notice 002-001A, 6/17/2016	4A	PCB in Fish Tissue	2004	L	0.172
POTMH					
VAP-A31E_MON03B16 / Monroe Bay / Described in VDH condemnation notice 002-001M2, 6/17/2016	4A	PCB in Fish Tissue	2004	L	0.063
POTMH					
VAP-A31E_MON04A00 / Monroe Bay / Downstream of VDH-DSS condemnation area 002-001A, 6/17/2016	4A	PCB in Fish Tissue	2004	L	0.221
POTMH					
VAP-A31E_MON05A04 / Monroe Bay / Described in VDH Condemnation 002-001C, 6/7/2016	4A	PCB in Fish Tissue	2004	L	0.002
POTMH					
VAP-A34E_COA01A02 / Coan River / Portion of VDH-DSS Condemnation Notice 008-214B, 2/23/2012 not included on SFC 145, 2/23/1997.	4A	PCB in Fish Tissue	2006	L	0.009
POTMH					
VAP-A34E_COA01A98 / Coan River / Described in the VDH-DSS Condemnation Notice 008-214B, 2/19/2016, excluding Mill Creek.	4A	PCB in Fish Tissue	2006	L	0.330
POTMH					
VAP-A34E_COA01B16 / Coan River / Portion of VDH-DSS Condemnation Notice 145I, 2/25/1997 open in 008-214, 2/19/2016.	4A	PCB in Fish Tissue	2006	L	0.028
POTMH					

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VAP-A34E_COA02A02 / Coan River / From SFC 008-214B, 2/23/2012 to its mouth at the Potomac, excluding otherwise segmented waterbodies.	A	PCB in Fish Tissue	2006	L	2.756

POTMH

Coan River, Monroe Creek, Upper Machodoc Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:	**6.041**		

Sources:

Atmospheric Deposition - Toxics	Combined Sewer Overflows	Contaminated Sediments	Discharges from Municipal Separate Storm Sewer Systems (MS4)
Industrial Point Source Discharge	Municipal Point Source Discharges	Non-Point Source	Upstream Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30E-03-SF** **Upper Machodoc Creek**

Cause Location: Defined as Section D of the shellfish condemnation.

City / County: King George Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The shellfishing use is categorized as impaired due to a Virginia Department of Health, Division of Shellfish Sanitation, Notice and Description of Shellfish Area Condemnation Number 001A-036, Upper Machodoc Creek, dated 05/07/13.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30E_UMC04C06 / Upper Machodoc Creek / Segment includes the downstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, dated 05/07/13, and continuing until the open embayment of Upper Machodoc Creek. Portion of CBP segment POTMH.	4A	Fecal Coliform	2012	L	0.184
VAN-A30E_UMC05A02 / Upper Machodoc Creek / Segment includes the upstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, effective May 07, 2013. Portion of CBP segment POTMH.	4A	Fecal Coliform	1998	L	0.705

Upper Machodoc Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.888**		

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30E-06-SF** **Deep Creek**

Cause Location: Defined in Section D of the shellfish condemnation.

City / County: King George Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The shellfishing use is categorized as impaired due to a Virginia Department of Health, Division of Shellfish Sanitation, Notice and Description of Shellfish Area Condemnation Number 001A-036, Upper Machodoc Creek, dated 05/07/13. The Upper Machodoc Creek shellfish TMDL for the Deep Creek watershed (POL0602) was approved by the EPA on 12/18/2008. The SWCB approved the TMDL on 07/27/2009. Federal ID 36253.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30E_DEE01A00 / Deep Creek / Segment includes the downstream portion of Deep Creek to the confluence with Upper Machodoc Creek within the boundaries described in the VDH Shellfish Area Condemnation Number 001A-036, Section D, effective 05/07/13. Portion of CBP segment POTMH.	4A	Fecal Coliform	2002	L	0.019

Deep Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.019**		

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Waterfowl	Wildlife Other than Waterfowl		

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30E-07-SF** **Upper Machodoc Creek**

Cause Location: Defined as Section M1 of the shellfish condemnation.

City / County: King George Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The shellfishing use is categorized as seasonally (April-October) impaired due to a Virginia Department of Health, Division of Shellfish Sanitation, Notice and Description of Shellfish Area Condemnation Number 001A-036, Upper Machodoc Creek, dated 05/07/13. A new TMDL is not required for this impaired segment of Upper Machodoc Creek because the Upper Machodoc Creek shellfish TMDL (36028, 12/18/2008) included modeling, source identification, and reductions that covered the entire Williams Creek, Upper Machodoc Creek watershed (POL0443).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30E_UMC03B10 / Upper Machodoc Creek / Segment includes the area of UMC described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section M1, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Fecal Coliform	2014	L	0.049

Upper Machodoc Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.049**		

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30R-01-DO** **Pepper Mill Creek**

Cause Location: Begins at the headwaters of Pepper Mill Creek and continues downstream until its confluence with Upper Machodoc Creek.

City / County: King George Co.

Use(s): Aquatic Life

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

2014 Assessment: Excursions less than the minimum dissolved oxygen criterion (2 of 14 samples - 14.3%) at station 1aPEP001.58 at Route 206.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30R_PEP01A10 / Pepper Mill Creek / Segment begins at the headwaters of Pepper Mill Creek and continues downstream until the confluence with Upper Machodoc Creek.	5C	Oxygen, Dissolved	2010	L	8.66

Pepper Mill Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**8.66**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30R-01-PH** **Pepper Mill Creek**

Cause Location: Begins at the headwaters of Pepper Mill Creek and continues downstream until its confluence with Upper Machodoc Creek.

City / County: King George Co.

Use(s): Aquatic Life

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

2014 Assessment: Excursions less than the lower limit of the pH criterion range (3 of 14 samples - 21.4%) at station 1aPEP001.58 at Route 206.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30R_PEP01A10 / Pepper Mill Creek / Segment begins at the headwaters of Pepper Mill Creek and continues downstream until the confluence with Upper Machodoc Creek.	5C	pH	2010	L	8.66

Pepper Mill Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**8.66**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

Cause Group Code: **A30R-02-BAC** **Upper Machodoc Creek**

Cause Location: Includes the upstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, effective May 07, 2013.
Portion of CBP segment POTMH.

City / County: King George Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Enterococcus bacteria criterion excursions (5 of 17 samples - 29.4%) at station 1aUMC004.43 at Route 218. A new bacteria TMDL is not required for this impaired segment of Upper Machodoc Creek because the Upper Machodoc Creek Watershed shellfish TMDL (36028, 12/18/2008) included modeling, source identification, and reductions for bacteria that covered the entire watershed (POL0444).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30E_UMC05A02 / Upper Machodoc Creek / Segment includes the upstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, effective May 07, 2013. Portion of CBP segment POTMH.	4A	Enterococcus	2006	L	0.705

Upper Machodoc Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.705**		

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30R-02-DO** **Gambo Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Gambo Creek, approximately 0.35 rivermile upstream from Route 645, and continues downstream until the ponded waters on Gambo Creek.

City / County: King George Co.

Use(s): Aquatic Life

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

Excursions less than the minimum dissolved oxygen criterion (6 of 16 samples - 37.5%) at station 1aGAM003.50 at Route 301 and excursions less than the minimum dissolved oxygen criterion (5 of 8 samples - 62.5%) at station 1aGAM003.83 at Route 635.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30R_GAM01A04 / Gambo Creek / Segment begins at the confluence with an unnamed tributary to Gambo Creek, approximately 0.35 rivermile upstream from Route 645, and continues downstream until estuarine Gambo Creek.	5C	Oxygen, Dissolved	2016	L	0.95

Gambo Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**0.95**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A30R-02-PH** **Gambo Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Gambo Creek, approximately 0.35 rivermile upstream from Route 645, and continues downstream until estuarine Gambo Creek.

City / County: King George Co.

Use(s): Aquatic Life

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

Excursions less than the lower limit of the pH criterion range (5 of 15 samples - 33.3%) at station 1aGAM003.50 at Route 301 and excursions less than the lower limit of the pH criterion range (3 of 7 samples - 42.9%) at station 1aGAM003.83 at Route 635.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30R_GAM01A04 / Gambo Creek / Segment begins at the confluence with an unnamed tributary to Gambo Creek, approximately 0.35 rivermile upstream from Route 645, and continues downstream until estuarine Gambo Creek.	5C	pH	2016	L	0.95

Gambo Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**0.95**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-01-SF** **Rosier Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 088A, 7/1/1998

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS Shellfish Condemnation 001-088A, 8/20/2015

The Shellfish TMDL for the portion of the Rosier Creek that was impaired in the 1998 cycle (088A, 7/1/1998) was developed during the 2008 cycle. The TMDL was approved by the EPA on 6/8/2006 and by the SWCB on 4/28/2009.

The condemnation has expanded. The lower portion of the current cycle's condemnation was not included in the TMDL and is now included under A31E-01-SF2.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_ROS01A98 / Rosier Creek / Described in VDH condemnation notice 088A, 7/1/1998.	4A	Fecal Coliform	1998	L	0.206

Rosier Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.206**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A31E-01-SF2** **Rosier Creek**

Cause Location: The portion of VDH Shellfish Condemnation 001-088A, 8/20/2015 which was not included in the Rosier Creek Shellfish TMDL (excluding Goldman Creek).

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS Shellfish Condemnation 001-088A, 8/20/2015

The Shellfish TMDL for the portion of the Rosier Creek that was impaired in the 1998 cycle I (088A, 7/1/1998) was developed during the 2008 cycle. The TMDL was approved by the EPA on 6/8/2006 and by the SWCB on 4/28/2009.

The lower portion of the current cycle's condemnation was not included in the TMDL; however, the area is considered nested in the Rosier Creek TMDL.

The condemnation expanded in the 2016 cycle. It subsequently shrank again in the 2018 cycle and section M1 was split off and partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_ROS01A08 / Rosier Creek / Portion of VDH condemnation notice 001-088A, 8/20/2015 not included in the 2006 TMDL.	4A	Fecal Coliform	2006	L	0.149

Segment shrunk and split in 2018 cycle.

POTMH

Rosier Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.149**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-02-SF** **Goldman Creek**

Cause Location: Described in VDH Shellfish Condemnation 001-008B, 8/20/2015

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS condemnation 001-008B, 8/20/2015

Goldman Creek was initially impaired of the Shellfish Consumption Use during the 2014 cycle due to VDH-DSS Shellfish Condemnation 001-088B, 9/13/2012. In the 2016 cycle, the Rosier Creek impairment expanded and the impairments were merged. They split again in the 2018 cycle.

The impairment is nested in the Rosier Creek Shellfish TMDL. The TMDL was approved by the EPA on 6/8/2006 and by the SWCB on 4/28/2009. The condemnation was not included in the TMDL; however, the area is within the tidal range of the addressed impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_GLD01A00 / Goldman Creek / Described in VDH-DSS condemnation notice 001-088B, 8/20/2015	4A	Fecal Coliform	2014	L	0.043

Slight adjustment in the 2018 cycle

POTMH

Goldman Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.043**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-03-SF** **Monroe Creek**

Cause Location: The portion of VDH Shellfish Condemnation 002-001A, 6/17/2016 which is not included in the administrative condemnation.

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS Shellfish Condemnation 002-001A, 6/17/2016

The area was seasonally condemned in the 2010 cycle, however condemnation A expanded in the 2014 cycle. The Shellfish TMDL for Monroe Creek was approved by the EPA on 6/8/2006 and by the SWCB on 7/27/2009. The area was addressed by the TMDL; therefore, it was considered Category 4A.

Condemnation A shrank slightly in the 2016 cycle and section M2 was split off; it will be considered partially delisted (Cat. 2C.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_MON03A98 / Monroe Bay / Portion of VDH condemnation notice 002-001A, 6/17/2016	4A	Fecal Coliform	2014	L	0.172

POTMH

Monroe Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.172**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-04-PH** **Monroe Creek**

Cause Location: As described in VDH condemnation 002-001D, 6/17/2016

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2012 cycle, the upper portion of Monroe Creek was impaired of the Aquatic Life Use due to a pH violation rate of 10/16 at 1AMRC002.81, which is located at Rt. 658.

A Swampwaters Determination Report was completed during the 2014 cycle. The report attributed the pH exceedances to natural conditions and the impairment is considered Category 4C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_MON01A00 / Monroe Creek/Monroe Bay / Prohibited area around STP outfall as described in VDH shellfish condemnation 002-001D, 6/7/2016	4C	pH			0.176

Monroe Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	**0.176**		

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-06-BAC** **Mattox Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 002-001B, 6/17/2016

City / County: Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

The segment was initially listed in 1996 based on excessive fecal coliform standards at the Route 205 bridge (1AMAO004.08). The segment was adjusted during the 2006 cycle to be coincident with VDH-DSS Shellfish Condemnation 001B (11/15/2004) and the Recreation Use impairment switched to Enterococci due to exceedances at 1AMAO004.08.

During the 2008 and 2010 cycles, the segment remained impaired due to Enterococci exceedance at 1AMAO001.36 and at 1AMAO004.08. The exceedance rate was 5/12 during the 2014 cycle at 1AMAO004.08. However, the bacterial TMDL for the Mattox Creek Watershed was approved by the EPA on 12/4/2006; therefore, the segment is considered Category 4A for the Recreation Use.

The impairment length has been adjusted to remain coincident with Mattox Creek shellfish condemnations.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_MAO01A98 / Mattox Creek / Portion of the condemnation notice 002-001B, 6/17/2016 that is not administratively condemned	4A	Enterococcus	2006	L	0.429
Segment extended in the 2018 cycle.					
POTMH					
VAP-A31E_MAO01B10 / Mattox Creek / Upper portion of the condemnation notice 002-001B, 6/17/2016 which is administratively condemned.	4A	Enterococcus	2006	L	0.366
Segment merged in the 2018 cycle.					
POTMH					

Mattox Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.795**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-06-SF** **Mattox Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation Number 002-001B, 6/17/2016 which is not an administrative condemnation

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS condemnation 002-001B, 6/17/2016

The segment has been considered impaired of the Shellfish Consumption Use since 1996. The impairment is currently described in VDH-DSS Shellfish Condemnation 002-001B, 9/20/2013. The Shellfish TMDL for the Mattox Creek Watershed was developed during the 2008 cycle and was approved by the EPA on 12/4/2006 and the water was considered Category 4A for the Shellfish Use.

However, during the 2010 cycle it was determined that the upper portion of the section is administratively closed as a buffer for the Outdoor World Harborview STP. Therefore the use was considered removed for the upper portion and it was partially delisted.

The advisory was shortened during the 2012 cycle and split into 002-001B and 002-001C, 8/30/2010. It expanded and re-merged in the 2014 cycle. It has slightly shrunk and expanded in 2016 and 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_MAO01A98 / Mattox Creek / Portion of the condemnation notice 002-001B, 6/17/2016 that is not administratively condemned	4A	Fecal Coliform	1996	L	0.429

Segment extended in the 2018 cycle.

POTMH

Mattox Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.429**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A31E-07-BAC** **Popes Creek**

Cause Location: From the extent of tide to the mouth of Popes Creek

City / County: Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Popes Creek was initially assessed as impaired of the Recreation Use in 2002 based on fecal coliform standard exceedances at 1APOP000.38, which is located off of the George Washington National Monument picnic area. During the 2006 cycle, the fecal coliform rate remained impaired (2/7) and enterococci was added as an impairment (2/6).

During the 2010 cycle, the enterococci exceedance rate was 4/11; the impairment was considered nested because it is contained within the shellfish TMDL study area, which was approved on 6/8/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_POP01A98 / Popes Creek / Described in condemnation notice 003-146, 9/23/2008.	4A	Enterococcus	2006	L	0.576

Popes Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.576**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-07-SF** **Popes Creek**

Cause Location: From the extent of tide to the mouth of Popes Creek

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Popes Creek was previously assessed as not supporting the Shellfish Consumption Use based on VDH-DSS Shellfish Condemnation 146, 4/27/1989; this condemnation was later replaced by 003-146, 9/23/2008.

The Popes Creek Shellfish TMDL was approved by the EPA on 6/8/2006 and by the SWCB on 4/28/2009. The segment is considered Category 4A for the Shellfish Use.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_POP01A98 / Popes Creek / Described in condemnation notice 003-146, 9/23/2008.	4A	Fecal Coliform	1998	L	0.576

Popes Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.576**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-11-BAC** **Bridges Creek**

Cause Location: The tidal portion of Bridges Creek

City / County: Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 5A

Bridges Creek was assessed as not supporting of the Recreation Use support goal during the 2004 cycle based on a fecal coliform violation rate of 2/2 at 01660860, a USGS station located near the mouth of Bridges Creek.

The impairment converted to enterococci during the 2012 cycle based on violations at 1ABRG000.15.

The enterococci exceedance rate was 26/35 during the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31E_BRG01A04 / Bridges Creek / Tidal limit to mouth	5A	Enterococcus	2012	L	0.182

POTMH

Bridges Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.182**		

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31R-01-BAC** **Pine Hill Creek Watershed**

Cause Location: Pine Hill Creek watershed from its headwaters to tidal limit at Rosier Creek.

City / County: King George Co. Westmoreland Co.

Use(s): Recreation

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

During the 2014 cycle, the Pine Hill Creek watershed was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 1APIN007.24, which is located at Route 301.

Note: monitoring at station 1APIN000.57 is acceptable (1/12).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31R_PIN01A00 / Pine Hill Creek Watershed / Pine Hill Creek and its tributaries from the confluence with Rosier Creek to their headwaters.	5A	Escherichia coli	2014	L	34.91

Pine Hill Creek Watershed **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**34.91**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A31R-03-BAC** **Popes Creek Watershed**

Cause Location: The Popes Creek watershed above the tidal limit.

City / County: Westmoreland Co.

Use(s): Recreation

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

The nontidal Popes Creek watershed was impaired of the Recreation Use during the 2014 cycle due to an E. coli exceedance rate of 2/11 at 1APOP003.92, which is located at the Route 3 bridge.

The impairment is considered nested in the Popes Creek Watershed Shellfish TMDL, which was approved by the EPA on 6/8/2006 and by the SWCB on 4/28/2009. It will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A31R_POP01A00 / Popes Creek / Watershed above tidal limit.	4A	Escherichia coli	2014	L	29.88

Popes Creek Watershed **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**29.88**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-01-SF** **Cold Harbor Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 004-184A, 2/1/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Shellfish Condemnation 004-184A, 2/1/2016

Cold Harbor Creek was mistakenly assessed as impaired in the 1998 cycle due to VDH-DSS Shellfish Condemnation 184A, 6/21/1996. The area had been reopened on 2/10/1997; therefore it should have been assessed as fully supporting.

The segment was first listed appropriately in the 2004 cycle. The impairment was addressed in the "Chesapeake Bay: Potomac River: Nomini Creek Watershed Total Maximum Daily Load (TMDL) Report for Shellfish Condemnation Areas Listed Due to Bacteria Contamination" report, which was approved by the EPA on 8/22/2007 and by the SWCB on 7/31/2008. Allocations were given to nonpoint sources. The segment is considered Category 4A for the shellfish use.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_CHB01A98 / Cold Harbor Bay / Described in the condemnation notice 004-184A, 2/1/2016	4A	Fecal Coliform	2004	L	0.083

POTMH

Cold Harbor Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.083**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-02-SF** **Currioman Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 184, 2/10/1997

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Shellfish Condemnation 184, 2/10/1997 - Impaired in 1998

Portion of current condemnation 004-184B, 2/1/2016

The upstream portion was included in the "Chesapeake Bay: Potomac River: Nomini Creek Watershed Total Maximum Daily Load (TMDL) Report for Shellfish Condemnation Areas Listed Due to Bacteria Contamination" report, which was approved by the EPA on 8/22/2007 and by the SWCB on 7/31/2008. This portion is considered Category 4A.

The downstream portion of the current condemnation is addressed in A32E-13-SF.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_CUR01A98 / Currioman Creek / Described in the condemnation notice 004-184, 2/10/1997	4A	Fecal Coliform	1998	L	0.052

POTMH

Currioman Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.052**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-04-SF** **Nomini Creek, Peirce Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnations 082A and 082B, 7/3/1997

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portions of VDH Shellfish Condemnation 004-082D, 2/1/2016

Portions of Nomini Creek (0.5404 sq. mi.) and Pierce Creek (0.14 sq. mi.) were assessed as impaired in 1998. During the 2004 cycle, the condemnation was expanded and combined. The Nomini Creek watershed TMDL, which was developed in the 2008 cycle and approved by the EPA on 8/22/2007 and by the SWCB on 7/31/2008, addressed the 1998 portions of the impairment (004-082B and 004-082A, 7/3/1997). The residual of the impaired area is addressed in A32E-04-SF2.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_NOM01A98 / Nomini Creek / As described in VDH Shellfish Condemnation 082B, 7/3/1997. POTMH	4A	Fecal Coliform	1998	L	0.540
VAP-A32E_PEI01A98 / Peirce Creek / As described in VDH Shellfish Condemnation 082A, 7/3/1997. POTMH	4A	Fecal Coliform	1998	L	0.142

Nomini Creek, Peirce Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.682**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-04-SF2** **Nomini Creek, Peirce Creek**

Cause Location: The portions of VDH Notice and Description of Shellfish Condemnation 004-082D, 2/1/2016 that were not included in the 2007 Nomini Creek watershed TMDL.

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Condemnation 004-082D, 2/1/2016

Portions of Nomini Creek (0.5404 sq. mi.) and Pierce Creek (0.14 sq. mi.) were assessed as impaired in 1998. During the 2004 cycle, the condemnation was expanded and combined. However, the Nomini Creek watershed TMDL, which was developed in the 2008 cycle and approved by the EPA on 8/22/2007, only addressed the 1998 portion of the impairment. As the condemnation first expanded on the 2004 list, the TMDL for the downstream portion was due in 2016.

The impairment is considered nested within the Nomini Creek Shellfish TMDL, which was approved by the EPA on 8/22/2007 and by the SWCB on 7/31/2008.

Shrank slightly in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_NOM01A04 / Nomini Creek, Pierce Creek / Portion of VDH Shellfish Condemnation 004-082D, 2/1/2016 downstream of 082B, 7/3/1997 and portion upstream of 082A, 7/3/1997.	4A	Fecal Coliform	2004	L	0.247

Segment shortened in 2018 cycle

POTMH

Nomini Creek, Peirce Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.247**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-05-SF** **Buckner Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 082D, 2/10/1997

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Shellfish Condemnation 004-082B, 2/1/2016

The upper portion of Buckner Creek was assessed as impaired of the Shellfish Use during the 1998 cycle due to VDH shellfish advisory 082D, 2/10/1997. Although the closure was expanded during the 2008 cycle (004-082B 1/27/2006), the 2007 TMDL "Chesapeake Bay: Potomac River: Nomini Creek Watershed Total Maximum Daily Load (TMDL) Report for Shellfish Condemnation Areas Listed Due to Bacteria Contamination" only addressed the original upstream impaired area, which is classified as Category 4A.

In the 2016 cycle, the condemnation shrank (004-082B, 1/22/2014); the condemned area remained Category 4A and the lower portion was partially delisted (Category 2C.)

The condemnation expanded past the 1997 advisory boundary again in the 2018 cycle. See A32E-07-SF

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_BUB01B16 / Buckner Creek / Described in VDH Condemnation 004-082D, 2/10/1997	4A	Fecal Coliform	1998	L	0.183

Merged in the 2018 cycle.

POTMH

Buckner Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.183**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-06-SF** **North Prong Buckner Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 004-082D, 2/10/1997

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Shellfish Condemnation 004-082A, 2/1/2018

The upper portion of North Prong Buckner Creek was assessed as impaired of the Shellfish Use during the 1998 cycle due to a VDH shellfish advisory (082E, 2/10/1997). Although the closure was expanded during the 2008 cycle (004-082A, 1/27/2006), the 2007 TMDL "Chesapeake Bay: Potomac River: Nomini Creek Watershed Total Maximum Daily Load (TMDL) Report for Shellfish Condemnation Areas Listed Due to Bacteria Contamination" only addressed the original upstream impaired area. This upstream portion of the condemnation is classified as Category 4A; the lower portion is considered nested and is addressed in A32E-21-SF.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_NOP01A02 / North Prong Buckner Creek / Described in the condemnation notice 082E, 2/10/1997.	4A	Fecal Coliform	1998	L	0.023

POTMH

North Prong Buckner Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.023**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A32E-07-SF** **Buckner Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 004-082B, 2/1/2016 open in 082D, 2/10/1997

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Shellfish Condemnation 004-082B, 2/1/2016

The upper portion of Buckner Creek was assessed as impaired of the Shellfish Use during the 1998 cycle due to VDH shellfish advisory 082D, 2/10/1997. Although the closure was expanded during the 2008 cycle (004-082B 1/27/2006), the 2007 TMDL "Chesapeake Bay: Potomac River: Nomini Creek Watershed Total Maximum Daily Load (TMDL) Report for Shellfish Condemnation Areas Listed Due to Bacteria Contamination" only addressed the original upstream impaired area, which is classified as Category 4A.

The condemnation expanded past the 1997 advisory boundary again in the 2018 cycle. The impairment is considered nested in the upstream TMDL (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_BUB02B14 / Buckner Creek / Portion of condemnation 004-082B, 2/1/2016 not included in 082D, 2/10/1997	4A	Fecal Coliform	2018	L	0.065

POTMH

Buckner Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.065**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-08-SF** **Lower Machodoc Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 005-083B, 12/28/2007

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS condemnation 005-083A, 7/14/2016

0.36 sq. mile of Lower Machodoc Creek was assessed in 1998 as impaired of the Shellfish Use due to VDH shellfish condemnation 83B, 5/16/1997. The segment has expanded and contracted several times.

A TMDL was developed based on the 12/28/2007 extent and was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009.

During the 2014 cycle, the condemnation shrank considerably and was now smaller than the completed TMDL segment. The condemned area remains Category 4A; the opened area was partially delisted (Category 2C).

Condemnation grew in the 2018 cycle and now extends past the TMDL boundary (see A32E-18-SF).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_LOW01A04 / Lower Machodoc Creek / As described in VDH condemnation notice 005-083B, 12/28/2007	4A	Fecal Coliform	1998	L	0.536

Merged in the 2018 cycle.

POTMH

Lower Machodoc Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.536**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-09-EBEN** **Lower Machodoc Creek**

Cause Location: One-half mile upstream and downstream of monitoring station 1ALOW002.18

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2016 cycle, a portion of Lower Machodoc Creek was assessed as impaired of the Aquatic Life Use. Estuarine probabilistic monitoring at station 1ALOW002.18 in 2013 indicated a high potential for chronic benthic alteration due to PAHs in sediment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_LOW02B16 / Lower Machodoc Creek / One-half mile upstream and downstream of station 1ALOW002.18.	5A	Estuarine Bioassessments	2016	L	0.687

POTMH

Lower Machodoc Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**0.687**		

Sources:

Contaminated Sediments Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-10-SF** **Weatherall Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 005-083D, 7/14/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Shellfish Condemnation 005-083D, 7/14/2016

Weatherall Creek was first listed for the Shellfish Use during the 2004 cycle. The Shellfish Use impairment was addressed in the Lower Machodoc Shellfish TMDL which was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009. Weatherall Creek was considered Category 4A.

That condemnation shrank during the 2014 cycle and Weatherall Creek is now open for harvest (005-083, 9/12/2012) and was delisted (Category 2C.)

The area was re-condemned in the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_WEA02A04 / Weatherall Creek / As described in VDH condemnation 005-083D, 7/14/2016	4A	Fecal Coliform	2016	L	0.055

POTMH

Weatherall Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.055**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-11-SF** **Cabin Point Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 005-083B, 11/5/2014

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH Condemnation Notice 005-083B, 7/14/2016

The segment was previously considered nonproductive and the use was removed. It was first considered impaired during the 2008 cycle.

The Shellfish Use impairment was addressed in the Lower Machodoc Shellfish TMDL which was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009. Cabin Point Creek is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_CAP01A04 / Cabin Point Creek / As described in the condemnation notice 005-083B, 7/14/2016	4A	Fecal Coliform	2008	L	0.123

POTMH

Cabin Point Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.123**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-12-SF** **Glebe Creek and Aimes Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 005-083A, 12/28/2007

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH Shellfish Condemnation 005-083E and -083F, 7/14/2016

The Shellfish Use impairment was addressed in the Lower Machodoc Shellfish TMDL which was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009. The TMDL was based on the extent in condemnation 005-083A, 12/28/2007.

In the 2018 cycle, the condemnation shrank and the open portion was partially delisted (Category 2C.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_GLB02A08 / Aimes and Glebe Creeks / As described in VDH Shellfish Condemnation 005-083E and -083F, 7/14/2016.	4A	Fecal Coliform	2008	L	0.120

Split in the 2018 cycle.

POTMH

Mileage adjusted in 2006 and 2008 cycles.

Glebe Creek and Aimes Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.120**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-13-SF** **Currioman Creek**

Cause Location: The portion of VDH Notice and Description of Shellfish Condemnation 004-184B, 2/1/2016 that was not included in the 8/23/2004 condemnation

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Shellfish condemnation 004-184B, 2/1/2016

The upstream portion of Currioman Creek has been listed for shellfish condemnations since 1998. The condemnation expanded on 1/27/2006, however the 2007 TMDL did not address the expanded portion. The expansion is first listed in 2008; therefore, the TMDL is due in 2020.

The impairment is considered nested in the upstream Currioman Creek Shellfish TMDL, which was approved by the EPA on 8/22/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_CUR01B08 / Currioman Creek / From the limit of VDH condemnation 004-184, 2/10/1997 downstream to the limit of 004-184B, 2/1/2016.	4A	Fecal Coliform	2008	L	0.020

POTMH

Currioman Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.020**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-14-SF** **Poor Jack Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 004-184C, 2/1/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH Condemnation Notice 004-184C, 2/1/2016

The impairment is considered nested in the neighboring Currioman Creek Shellfish TMDL, which was approved by the EPA on 8/22/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_POO01A08 / Poor Jack Creek / Described in VDH Shellfish Condemnation 004-184C, 2/1/2016	4A	Fecal Coliform	2008	L	0.147

POTMH

Poor Jack Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.147**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-15-SF** **Davis Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 004-082G, 2/1/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH Condemnation Notice 004-082G, 2/1/2016

Davis Creek was initially listed in the 2008 cycle as impaired of the Shellfish Consumption Use due to VDH condemnation 004-082D, 1/27/2006. During the 2012 cycle, the condemnation expanded and merged with the Nomini Creek impairment; therefore the segment was a portion of VDH Shellfish Condemnation 004-082D, 1/23/2012. The Nomini Creek condemnation shrank and split in the 2016 cycle; Davis Creek remains condemned.

The impairment is considered nested within the Nomini Creek Shellfish TMDL, which was approved by the EPA on 8/22/2007 and by the SWCB on 7/31/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_DAV01A08 / Davis Creek / Described in VDH condemnation 004-082G, 2/1/2016	4A	Fecal Coliform	2008	L	0.026

POTMH

Davis Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.026**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-16-SF** **Jules Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 004-082C, 2/1/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH Condemnation Notice 004-082C, 2/1/2016

The impairment is considered nested within the Nomini Creek Shellfish TMDL, which was approved by the EPA on 8/22/2007 and by the SWCB on 7/31/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_JUL01A08 / Jules Creek / Described in VDH Shellfish Condemnation 004-082C, 2/1/2016	4A	Fecal Coliform	2008	L	0.045

POTMH

Jules Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.045**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-17-SF** **Matthews Cove**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 004-082E, 2/1/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH Condemnation Notice 004-082E, 2/1/2016

The impairment is considered nested within the Nomini Creek Shellfish TMDL, which was approved by the EPA on 8/22/2007 and by the SWCB on 7/31/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_MAT01A08 / Matthews Cove / Described in VDH Shellfish Condemnation 004-082E, 2/1/2016	4A	Fecal Coliform	2008	L	0.019

POTMH

Matthews Cove **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.019**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-18-SF** **Lower Machodoc Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 005-083A, 7/14/2006 open in 005-083B, 12/28/2007

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS condemnation 005-083A, 7/14/2016

An upstream portion of Lower Machodoc Creek was assessed in 1998 as impaired of the Shellfish Use due to VDH shellfish condemnation 83B, 5/16/1997. The segment has expanded and contracted several times.

A TMDL was developed based on the 12/28/2007 extent and was approved by the EPA on 12/29/2008 and by the SWCB on 4/28/2009.

Condemnation grew in the 2018 cycle and now extends past the TMDL boundary. The expansion is proposed for nesting in the upstream TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_LOW01B18 / Lower Machodoc Creek / Boundary of condemned area 005-083B, 12/28/2007 downstream to limit of 005-083A, 7/14/2016	4A	Fecal Coliform	2018	L	0.626

POTMH

Lower Machodoc Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.626**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-19-SF** **Barnes Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 082C, 2/10/1997

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH Shellfish Condemnation 004-08F, 2/1/2016

Barnes Creek is assessed as impaired of the Shellfish Use. This area was impaired in the 1998 cycle and was addressed in the TMDL "Chesapeake Bay: Potomac River: Nomini Creek Watershed Total Maximum Daily Load (TMDL) Report for Shellfish Condemnation Areas Listed Due to Bacteria Contamination". This condemnation is classified as Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_BAN02A08 / Barnes Creek / Described in VDH Shellfish Condemnation 082C, 2/10/1997	4A	Fecal Coliform	2008	L	0.057

POTMH

Barnes Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.057**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-21-SF** **North Prong Buckner Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation Number 004-082A, 2/1/2016 not included in 004-082E, 2/10/1997

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Shellfish Condemnation 004-082A, 2/1/2016

The upper portion of North Prong Buckner Creek was assessed as impaired of the Shellfish Use during the 1998 cycle due to a VDH shellfish advisory (082E, 2/10/1997). Although the closure was expanded during the 2008 cycle (004-082A, 1/27/2006), the 2007 TMDL "Chesapeake Bay: Potomac River: Nomini Creek Watershed Total Maximum Daily Load (TMDL) Report for Shellfish Condemnation Areas Listed Due to Bacteria Contamination" only addressed the original upstream impaired area. The upstream portion of the condemnation was classified as Category 4A, however this lower portion was considered Category 5B; the TMDL was due in 2020.

During the 2014 cycle, the impairment was nested in the North Prong Buckner Creek TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32E_NOP02A08 / North Prong Buckner Creek / Portion of VDH condemnation 004-082A, 2/1/2016 that was not included in 082E, 2/10/1997	4A	Fecal Coliform	2008	L	0.060

Expanded in the 2018 cycle.

POTMH

North Prong Buckner Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.060**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-01-DO** **Thompson Branch**

Cause Location: Thompson Branch from its headwaters to the tidal limit.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

Thompson Branch was initially assessed as not supporting the Aquatic Life Use during the 2006 cycle based on dissolved oxygen exceedances at Route 626 (1ATHP001.15), as well as DO exceedances at special study stations in the creek (1/1).

During the 2014 cycle, the segment remained impaired with a DO violation rate of 2/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_THP01A06 / Thompson Branch / Headwaters to tidal limit.	5C	Oxygen, Dissolved	2006	L	1.60

Thompson Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.60**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-01-PH** **Thompson Branch**

Cause Location: Thompson Branch from its headwaters to the tidal limit.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

Thompson Branch was initially assessed as not supporting the Aquatic Life Use during the 2006 cycle based on pH exceedances at Route 626 (1ATHP001.15), as well as pH exceedances at special study stations in the creek (1/1).

During the 2014 cycle, the segment remained impaired with a pH violation rate of 10/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_THP01A06 / Thompson Branch / Headwaters to tidal limit.	5C	pH	2006	L	1.60

Thompson Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.60**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-02-BAC** **Lee Creek**

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

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2012 cycle, Lee Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 4/13 at 1ALEC001.18, which is located at the Route 675 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_LEC01A10 / Lee Creek / Headwaters to tidal limit.	4A	Escherichia coli	2012	L	1.35

Lee Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.35**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-03-PH** **XLK - Nomini Creek, UT**

Cause Location: The unnamed tributary in its entirety.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2010 cycle, the stream was assessed as not supporting the Aquatic Life Use due to a pH exceedance rate of 2/2 at probabilistic monitoring station 1AXLK000.04.

The impairment was confirmed during the 2016 cycle with an exceedance rate of 2/11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_XLK01A10 / Nomini Creek, UT / Headwaters to mouth at Nomini Creek.	5C	pH	2010	L	1.45

XLK - Nomini Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.45**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-04-BAC** **XCJ - Jones Branch, UT**

Cause Location: Tributary XCJ from its headwaters to its mouth at Jones Branch

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2012 cycle, the tributary was impaired of the Recreation Use due to an E. coli violation rate of 4/13 at 1AXCJ000.54, which is located at the Route 618 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_XCJ01A10 / XCJ - Jones Branch, UT / Headwaters to mouth at Jones Branch.	4A	Escherichia coli	2012	L	1.02

XCJ - Jones Branch, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.02**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A32R-05-BAC** **Tavern Run**

Cause Location: Tavern Run from its headwaters to the confluence with Newtons Mill Run.

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2012 cycle, Tavern Run was impaired of the Recreation Use due to E. coli violations at 1ATAE002.50, which is located at the Route 615 bridge.

Additional monitoring occurred in the 2014 cycle; the impairment was confirmed with exceedance rates of 8/24 at 1ATAE002.50 and 2/12 at 1ATAE003.85.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_TAE01A12 / Tavern Run / Headwaters to Newtons Mill Run	4A	Escherichia coli	2012	L	3.27

Tavern Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.27**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-05-PH** **Tavern Run**

Cause Location: Tavern Run from its headwaters to the confluence with Newtons Mill Run.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2012 cycle, Tavern Run was impaired of the Aquatic Life Use due to pH violations at 1ATAE002.50, which is located at the Route 615 bridge.

Additional monitoring occurred in the 2014 cycle; the impairment was confirmed with exceedance rates of 3/24 at 1ATAE002.50 and 3/12 at 1ATAE003.85.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_TAE01A12 / Tavern Run / Headwaters to Newtons Mill Run	5C	pH	2012	L	3.27

Tavern Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.27**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-06-BAC** **Nontidal Nomini Creek Tributaries**

Cause Location: Marshall Creek, Buena Vista Branch and Templeman Run.

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2014 cycle, monitoring occurred throughout the upper Nomini Creek watershed. Multiple tributaries indicated E. coli exceedances.

3/12 at 1ABUV000.15
4/12 at 1AMAR000.62
3/12 at 1ATEM003.54

Note: Tavern Run is already listed for bacteria (see A32R-05-BAC).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_BUV01A14 / Buena Vista Branch / Headwaters to mouth	4A	Escherichia coli	2014	L	2.26
VAP-A32R_MAR01A14 / Marshall Creek / Headwaters to mouth at Templeman Run	4A	Escherichia coli	2014	L	2.88
VAP-A32R_TEM01A14 / Templeman Run / Headwaters to tidal limit	4A	Escherichia coli	2014	L	3.99

Nontidal Nomini Creek Tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.13**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-06-PH** **Nontidal Nomini Creek Tributaries**

Cause Location: Multiple tributaries throughout the upper Nomini Creek watershed - including Marshall Creek, Buena Vista Branch, Oldham Creek, Newtons Mill Run, Antioch Branch, Templeman Run.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, monitoring occurred throughout the upper Nomini Creek watershed. Multiple tributaries indicated low pH - including Nomini Creek, Marshall Creek, Buena Vista Branch, Oldham Creek, Newtons Mill Run, Antioch Branch, and Templeman Run.

4/5 at 1AANT001.31
3/12 at 1ABUV000.15
2/12 at 1AMAR000.62
2/12 at 1ANET001.77
2/12 at 1AOLD000.70
3/12 at 1ATEM003.54
2/12 at 1ANOM012.38

Note; Nomini Creek, UT (XLK) and Tavern Run were already listed for pH (see A32R-03-PH and A32R-05-PH).

Additional monitoring was conducted during the 2016 cycle at 1ANOM0012.38. The pH exceedance rate was acceptable 2/23 and Nomini Creek was partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_ANT01A14 / Antioch Branch / Headwaters to mouth at Nomini Creek.	5C	pH	2014	L	2.06
VAP-A32R_BUV01A14 / Buena Vista Branch / Headwaters to mouth	5C	pH	2014	L	2.26
VAP-A32R_MAR01A14 / Marshall Creek / Headwaters to mouth at Templeman Run	5C	pH	2014	L	2.88
VAP-A32R_NET01A14 / Newtons Mill Run / Headwaters to mouth at Tavern Run.	5C	pH	2014	L	3.18
VAP-A32R_OLD01A14 / Oldham Creek / Headwaters to mouth at Tavern Run.	5C	pH	2014	L	1.99
VAP-A32R_TEM01A14 / Templeman Run / Headwaters to tidal limit	5C	pH	2014	L	3.99

Nontidal Nomini Creek Tributaries **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**16.36**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-07-DO** **Marshall Creek**

Cause Location: Marshall Creek from its headwaters to its mouth at Templeman Run.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Marshall Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/12 at 1AMAR000.62, which is located at the Route 600 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_MAR01A14 / Marshall Creek / Headwaters to mouth at Templeman Run	5C	Oxygen, Dissolved	2014	L	2.88

Marshall Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.88**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-08-BAC** **Barnes Creek**

Cause Location: The nontidal portion of Barnes Creek.

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2014 cycle, Barnes Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 1ABAN001.34, which is located at Route 649.

It is considered nested within the Barnes Creek TMDL, which was addressed in the report "Chesapeake Bay: Potomac River: Nomini Creek Watershed Total Maximum Daily Load (TMDL) Report for Shellfish Condemnation Areas Listed Due to Bacteria Contamination." The TMDL was approved by the EPA on 8/22/2007 and by the SWCB on 7/31/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_BAN01A14 / Barnes Creek / Headwaters to tidal limit.	4A	Escherichia coli	2014	L	1.94

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

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-08-DO** **Barnes Creek**

Cause Location: The nontidal portion of Barnes Creek.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Barnes Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/12 at 1ABAN001.34, which is located at Route 649.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_BAN01A14 / Barnes Creek / Headwaters to tidal limit.	5C	Oxygen, Dissolved	2014	L	1.94

Barnes Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.94**

Sources:

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

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-08-PH** **Barnes Creek**

Cause Location: The nontidal portion of Barnes Creek.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Barnes Creek was impaired of the Aquatic Life Use due to a pH exceedance rate of 5/12 at 1ABAN001.34, which is located at Route 649.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_BAN01A14 / Barnes Creek / Headwaters to tidal limit.	5C	pH	2014	L	1.94

Barnes Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.94**

Sources:

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

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-09-DO** **Mount Pleasant Creek**

Cause Location: The nontidal portion of Mount Pleasant Creek.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Mount Pleasant Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 1AMBP001.00, which is located at Route 612.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_MPB01A14 / Mount Pleasant Branch / Headwaters to tidal limit.	5C	Oxygen, Dissolved	2014	L	2.26

Mount Pleasant Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.26**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-09-PH** **Mount Pleasant Creek**

Cause Location: The nontidal portion of Mount Pleasant Creek.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Mount Pleasant Creek was impaired of the Aquatic Life Use due to a pH exceedance rate of 3/11 at 1AMBP001.00, which is located at Route 612.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A32R_MPB01A14 / Mount Pleasant Branch / Headwaters to tidal limit.	5C	pH	2014	L	2.26

Mount Pleasant Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.26**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-01-SF** **Gardner Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 006-143A and -E, 8/4/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Number 006-143A and -E, 8/4/2016

Gardner Creek was included on the 1998 303(d) list due to VDH condemnation 143, 6/26/1996. The Shellfish Bacterial TMDL for Gardner Creek was developed during the 2010 cycle. The TMDL addressed the maximum extent of the condemnation, which occurred in condemnation 006-143A, 5/5/2005.

The condemnation has expanded and contracted several times. During the 2014 cycle, the condemnation shrank again. The open area was partially delisted (0.0522 mi2) and is considered Category 2C.

Condemnation shrank further in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_GAD01A98 / Gardner Creek / Described in condemnations 006-143A and -E, 8/4/2016.	4A	Fecal Coliform	1998	L	0.008

Size reduced in the 2018 cycle.

POTMH

Gardner Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.008**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-02-BAC** **Jackson Creek**

Cause Location: Tidal portion of Jackson Creek

City / County: Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, the segment was impaired of the Recreation Use due to an enterococci violation rate of 2/12 at 1AXDW000.08, which is located at the end of Rt. 661.

The area is within the study area for the Jackson Creek Shellfish TMDL, which was approved by the EPA on 7/15/2009 and by the SWCB on 11/14/2009; 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-A33E_JCK01A98 / Jackson Creek / Described in VDH condemnation notice 006-143B and -D, 8/4/2016	4A	Enterococcus	2012	L	0.096
Segment split in the 2018 cycle.					
POTMH					
VAP-A33E_JCK01B18 / Jackson Creek / Portion of VDH condemnation notice 006-143B, 5/5/2005 seasonally condemned in 006-143S2, 8/4/2016	4A	Enterococcus	2012	L	0.042
POTMH					

Jackson Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.137**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-02-SF** **Jackson Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 006-143B, 5/30/2012

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 006-143B and -D, 8/4/2016

The Shellfish Bacterial TMDL for Jackson Creek was approved by the EPA on 7/15/2009. The TMDL addressed the maximum extent of the condemnation, which occurred in condemnation 006-143B, 5/5/2005.

The condemnation has expanded and contracted several times.

The condemnation shrank in the 2018 cycle and the downstream portion was partially delisted (Category 2C).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_JCK01A98 / Jackson Creek / Described in VDH condemnation notice 006-143B and -D, 8/4/2016	4A	Fecal Coliform	1998	L	0.096

Segment split in the 2018 cycle.

POTMH

Jackson Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.096**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-03-BAC** **Bonum Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 006-143C, 8/4/2016

City / County: Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, Bonum Creek was impaired of the Recreation Use due to an enterococci violation rate of 4/12 at 1ABOM000.46, which is located at the end of Rt. 763.

The Bonum Creek Shellfish TMDL was approved by the EPA on 7/15/2009. As this bacterial impairment is located within the study area for the completed TMDL, the Recreation Use is considered nested (Category 4A.)

The impairment was adjusted slightly in the 2018 cycle to remain coincident with the shellfish condemnation.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_BOM01A98 / Bonum Creek / Described in the condemnation notice 006-143C, 8/4/2016.	4A	Enterococcus	2012	L	0.180

Shortened in the 2018 cycle.

POTMH

Bonum Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.180**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-03-SF** **Bonum Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 006-143C, 8/4/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS condemnation 006-143C, 8/6/2016

Bonum Creek was included on the 1998 303(d) list due to VDH Condemnation 159, 4/27/1989. The Shellfish Bacterial TMDL for Bonum Creek was approved by the EPA on 7/15/2009 and by the SWCB on 11/14/2009. The TMDL addressed the maximum extent of the condemnation, which occurred in condemnation 006-143C, 5/5/2005. The upstream portion of this area remained impaired in the 2010 condemnation (006-143C, 5/19/2008); however, the downstream portion was opened for harvest and was partially delisted and considered Category 2C.

The condemnation shrank further in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_BOM01A98 / Bonum Creek / Described in the condemnation notice 006-143C, 8/4/2016.	4A	Fecal Coliform	1998	L	0.180

Shortened in the 2018 cycle.

POTMH

Bonum Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.180**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A33E-04-BAC** **Lodge Creek**

Cause Location: Lodge Creek from its tidal limit to the downstream extent of VDH-DSS condemnation 007-028F, 5/12/1997

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 5A

Lodge Creek from its tidal limit downstream to the end of VDH-DSS condemnation 007-028F, 7/21/2004 has been assessed as not supporting the Recreation Use due to enterococci exceedances at 1ALOG001.20, which is located at the end of Route 712. The segment was expanded during the 2008 cycle to align the boundary with the 5/12/1997 impairment. During the 2018 cycle, the violation rate was 5/36.

The bacteria TMDL for shellfish impairments in the Yeocomico River watershed was approved by the EPA on 6/8/2006. Section 028F was addressed in the report. However, the Recreation Use impairment cannot be nested because the Callao WWTP was not addressed in the TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_LOG01A98 / Lodge Creek / Described in the condemnation notice 007-225C, 9/26/2016.	5A	Enterococcus	2006	L	0.030
POTMH					
VAP-A33E_LOG02A98 / Lodge Creek / Portion of condemnation notice 007-225A, 9/26/2016 that is not administratively condemned.	5A	Enterococcus	2006	L	0.138
Shrank in the 2018 cycle.					
POTMH					
VAP-A33E_LOG02B10 / Lodge Creek / Portion of condemnation notice 007-225A, 9/26/2016 that is administratively condemned.	5A	Enterococcus	2006	L	0.074
POTMH					
VAP-A33E_LOG02C12 / Lodge Creek / Portion of condemnation notice 007-028F, 5/12/1997 that is within 007-225M2, 9/26/2016.	5A	Enterococcus	2006	L	0.058
Expanded in the 2018 cycle.					
POTMH					

Lodge Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.301**		

Sources:

Non-Point Source Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-05-SF** **White Point Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 007-028C, 9/26/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS condemnation 007-028C, 9/26/2016

White Point Creek was listed as impaired of the Shellfish Consumption Use in the 1998 cycle due to condemnation 007-028B, 5/12/1997 (A33E-05-SF). The condemnation grew during the 2008 cycle (007-028B, 12/12/2006); however, only the original 1998 portion was included in the Yeocomico River Watershed TMDL Report, which was developed during the 2008 cycle and approved by the EPA on 6/8/2006.

However, during the 2012 cycle, the entire segment was open for harvest on the 11/1/2010 condemnation; therefore the segment was delisted.

A portion of the area closed again in the 2018 cycle. The open portion remains Category 2C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_WHP01A98 / White Point Creek / Described in the condemnation notice 007-028C, 9/28/2016	4A	Fecal Coliform	2018	L	0.044

POTMH

White Point Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.044**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-07-BAC** **Hampton Hall Branch**

Cause Location: Tidal Hampton Hall Branch

City / County: Northumberland Co. Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, Hampton Hall Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 3/11 at 1AHAM001.92, which is located at Route 202.

The area is within the study area for the Yeocomico River Watershed TMDL report, which was approved by the EPA on 6/8/2006; therefore, the segment is considered nested (Category 4A).

The exceedance rate was 2/11 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_HAM01A02 / Hampton Hall Branch / Tidal Hampton Hall Branch	4A	Enterococcus	2012	L	0.274

POTMH

Hampton Hall Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.274**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-07-SF** **Hampton Hall Branch, Kinsale Branch**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnations 007-028B, 8/7/2014

City / County: Northumberland Co. Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Shellfish Condemnation 007-028B, 9/26/2016

The West Yeocomico River (including Hampton Hall Branch and Kinsale Branch) was listed as impaired of the Shellfish Consumption Use in the 1998 cycle due to condemnation 007-028C, 5/12/1997. The original 1998 portion was included in the Yeocomico River Watershed TMDL Report, which was developed during the 2008 cycle and approved by the EPA on 6/8/2006. This portion was considered as Category 4A.

The segment shortened dramatically during the 2012 cycle and split into two separate condemnations - Kinsale Branch and Hampton Hall Creek. These areas remained Category 4A. The remainder of the 1998 extent was partially delisted (Category 2C).

The condemnation extended to the TMDL extent in the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_HAM01A02 / Hampton Hall Branch / Tidal Hampton Hall Branch	4A	Fecal Coliform	1998	L	0.274
POTMH					
VAP-A33E_KIN01A12 / Kinsale Branch / Tidal limit to mouth	4A	Fecal Coliform	1998	L	0.108
POTMH					
VAP-A33E_WES01B12 / West Yeocomico River / Portion of the West Yeocomico River mainstem within condemnation notice 007-028C, 5/12/1997	4A	Fecal Coliform	2016	L	0.052
POTMH					

Hampton Hall Branch, Kinsale Branch **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.434**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-08-EBEN** **West Yeocomico River**

Cause Location: Downstream portion of West Yeocomico River mainstem (below condemnations)

City / County: Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life

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

The lower West Yeocomico River was impaired of the Aquatic Life Use in the 2018 cycle due to an altered benthic community at Coastal 2000 station 1AWES000.78 in 2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_WES02A06 / West Yeocomico River / Downstream of condemnations	5A	Estuarine Bioassessments	2018	L	0.394

POTMH

West Yeocomico River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**0.394**		

Sources:

Contaminated Sediments Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-09-SF** **Mill Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 007-225B, 9/26/2016

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 007-225B, 9/26/2016

The upper part of Mill Creek was listed as impaired of the Shellfish Consumption Use in the 1998 cycle due to condemnation 007-028E, 5/12/1997. The impairment was included in the Yeocomico River Watershed TMDL Report, which was developed during the 2008 cycle and approved by the EPA on 6/8/2006. This original segment is considered Category 4A.

The Mill Creek condemnation is now smaller than the 1998 area. The upstream portion remains impaired (Category 4A); the lower portion was considered a partial delist (Category 2C.) The condemnation has vacillated in size slightly over numerous cycles.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_MIA01A98 / Mill Creek / Described in the condemnation notice 007-225B, 9/26/2016	4A	Fecal Coliform	1998	L	0.149

Expanded in the 2018 cycle.

POTMH

Mill Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.149**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-10-SF** **Lodge Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnations 028A and -G, 10/30/2012 which are not administratively or seasonally condemned

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS Shellfish Condemnation 007-225A, 9/26/2016

A portion of Lodge Creek was assessed as impaired of the Shellfish Use in 1998 due to VDH condemnation 028F, 5/12/1997. It was subsequently addressed in the bacteria TMDL for shellfish impairments in the Yeocomico River Watershed, which was approved by the EPA on 6/8/2006.

However, during the 2010 cycle, it was determined that the upper portion of the condemnation (007-028E, 11/10/2008) is an administrative closure. Therefore the use was considered removed and the upper portion was partially delisted. The downstream portion remains impaired and is considered Category 4A.

During the 2012 cycle, the condemnation shrank and the downstream-most portion was converted to seasonally condemned; therefore, it was partially delisted.

The condemnation shrank again during the 2018 cycle (Category 2C).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_LOG02A98 / Lodge Creek / Portion of condemnation notice 007-225A, 9/26/2016 that is not administratively condemned.	4A	Fecal Coliform	1998	L	0.138

Shrank in the 2018 cycle.

POTMH

Lodge Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.138**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-12-SF** **Shannon Branch**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 007-028A, 9/26/2016

City / County: Westmoreland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS condemnation 007-028A, 9/26/2016

The Shellfish Use impairment is considered nested within the neighboring White Point Creek Shellfish TMDL. The TMDL was included in the Yeocomico River Watershed Shellfish TMDL Report, which was approved by the EPA on 6/8/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33E_SHA01A98 / Shannon Branch / Described in the condemnation notice 007-028A, 9/26/2016.	4A	Fecal Coliform	2006	L	0.036

POTMH

Shannon Branch **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.036**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33L-01-DO** **Hampton Hall, Gardy Millpond**

Cause Location: Hampton Hall, Gardy Millpond

City / County: Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life

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

During the 2016 cycle an error was discovered from the 2014 cycle. The temperature impairment from 2014 cycle was actually a DO impairment. the violation rate for the DO impairment was 13/69 at station 1AHAM003.08. No new data has been collected since the 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33L_HAM01A12 / Hampton Hall, Gardy Millpond / From the confluence of Hampton Hall Branch to Rt. 617	5C	Oxygen, Dissolved	2016	L	45.86

Hampton Hall, Gardy Millpond **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:		**45.86**	

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-01-BAC** **Mill Creek**

Cause Location: From its headwaters to the tidal limit.

City / County: Northumberland Co.

Use(s): Recreation

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

During the 2002 cycle, Mill Creek was assessed not supporting of the Recreation Use goal based on fecal coliform exceedances at Route 202 (1AMIA004.12).

During the 2010 cycle, the E. coli violation rate at 1AMIA004.12 was 1/6 (insufficient information for assessment). However, there was additional monitoring downstream at 1AMIA002.34 which showed impairment (2/6). The segment remained listed and was extended downstream to the tidal limit; the impairment converted to E. coli.

In the 2018 cycle, the E. coli exceedance rates were 3/12 at 1AMIA002.34 and 6/24 at 1AMIA004.12.

The Bacteria TMDL for (non-tidal) Mill Creek was approved by the EPA on 7/30/2010 and by the SWCB on 12/13/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_MIA01A00 / Mill Creek / From its headwaters to the tidal limit	4A	Escherichia coli	2010	L	5.00

Mill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.00**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-02-BAC** **Lodge Creek**

Cause Location: The free flowing portion of Lodge Creek.

City / County: Northumberland Co.

Use(s): Recreation

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

During the 2014 cycle, Lodge Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/21 at 1ALOG003.30, which is located at the Route 360 bridge. Monitoring at station 1ALOG003.45 was acceptable (0/3).

Additional monitoring was conducted in the 2018 cycle at 1ALOG003.45; the exceedance rate was 5/21.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_LOG01A04 / Lodge Creek / Headwaters to tidal limit	5A	Escherichia coli	2014	L	3.44

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

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-02-DO** **Lodge Creek**

Cause Location: The free flowing portion of Lodge Creek.

City / County: Northumberland Co.

Use(s): Aquatic Life

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

During the 2010 cycle, Lodge Creek was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 1ALOG003.30, which is located at the Route 360 bridge. The exceedance rate was 6/21 during the 2018 cycle. Monitoring at station 1ALOG003.45 was acceptable (0/3).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_LOG01A04 / Lodge Creek / Headwaters to tidal limit	5C	Oxygen, Dissolved	2010	L	3.44

Lodge Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.44**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed	Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-03-BAC** **Gardner Creek**

Cause Location: The free flowing portion of Gardner Creek.

City / County: Northumberland Co. Westmoreland Co.

Use(s): Recreation

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

During the 2012 cycle, the segment was considered impaired of the Recreation Use due to an E. coli violation rate of 2/11 at 1AGAD001.73. Note: the violation rate was 0/8 at 1GAD002.54; therefore, additional sampling may be warranted.

The bacterial TMDL for the shellfish impairment on tidal Gardner Creek was approved by the EPA on 7/15/2009 and by the SWCB on 11/14/2009. Because the riverine bacterial impairment is located within the TMDL study watershed, 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-A33R_GAD01A10 / Gardner Creek / Headwaters to tidal limit	4A	Escherichia coli	2012	L	1.40

Gardner Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.40**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-03-DO** **Gardner Creek**

Cause Location: The free flowing portion of Gardner Creek.

City / County: Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life

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

During the 2010 cycle, Gardner Creek was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 1AGAD001.73, which is located at 3352 Coles Point Road. During the 2012 cycle, the violation rate was 4/11 at 1AGAD001.73.

Additional monitoring was conducted in the 2016 cycle at 1AGAD002.54; the dissolved oxygen exceedance rate was 3/11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_GAD01A10 / Gardner Creek / Headwaters to tidal limit	5C	Oxygen, Dissolved	2010	L	1.40

Gardner Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.40**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-03-PH** **Gardner Creek**

Cause Location: The free flowing portion of Gardner Creek.

City / County: Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life

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

During the 2010 cycle, Gardner Creek was assessed as not supporting of the Aquatic Life Use due to a pH violation rate of 5/5 at 1AGAD001.73, which is located at 3352 Coles Point Road as well as a pH violation rate of 1/1 at 1AGAD002.54, which is located at the Route 612 bridge.

During the 2012 cycle, the violation rates increased to 11/11 and 7/7, respectively.

Additional monitoring was conducted in the 2016 cycle at 1AGAD002.54; the pH exceedance rate was 11/11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_GAD01A10 / Gardner Creek / Headwaters to tidal limit	5C	pH	2010	L	1.40

Gardner Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.40**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-04-PH** **XMB - Hampton Hall Creek, UT**

Cause Location: Headwaters to the backwater of Gardys Millpond.

City / County: Northumberland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, UT XMB was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 1AXMB000.88, which is located at Route 618.

The exceedance rate decreased to 3/24 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_XMB01A14 / XMB - Hampton Hall Branch, UT / Headwaters to backwater of Gardys Millpond	5C	pH	2014	L	3.48

XMB - Hampton Hall Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.48**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-05-DO** **XLZ - Hampton Hall Creek, UT**

Cause Location: Headwaters to the backwater of Gardys Millpond.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2018 cycle, UT XLZ was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/24 at 1AXLZ002.04, which is located at Route 601.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_XLZ01A14 / XLZ - Hampton Hall Branch, UT / Headwaters to backwater of Gardys Millpond.	5C	Oxygen, Dissolved	2018	L	3.13

XLZ - Hampton Hall Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.13**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

Cause Group Code: **A33R-05-PH** **XLZ - Hampton Hall Creek, UT**

Cause Location: Headwaters to the backwater of Gardys Millpond.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, UT XLZ was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 1AXLZ002.04, which is located at Route 601.

The exceedance rate decreased to 3/24 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_XLZ01A14 / XLZ - Hampton Hall Branch, UT / Headwaters to backwater of Gardys Millpond.	5C	pH	2014	L	3.13

XLZ - Hampton Hall Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.13**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

Cause Group Code: **A33R-06-BAC** **XMA - Hampton Hall Creek, UT**

Cause Location: Headwaters to the mouth at XLZ.

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2014 cycle, UT XMA was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 1AXMA000.12, which is located at Route 601.

The impairment is considered nested within the Hampton Hall Branch Shellfish TMDL, which was developed as part of the Yeocomico River Watershed TMDL report. The report was approved by the EPA on 6/8/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A33R_XMA01A14 / XMA - Hampton Hall Branch, UT / Headwaters to mouth at XLZ.	4A	Escherichia coli	2014	L	2.07

XMA - Hampton Hall Creek, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.07**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-07-BAC** **XMC - Lodge Creek, UT**

Cause Location: Headwaters to mouth at Lodge Creek.

City / County: Northumberland Co.

Use(s): Recreation

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

During the 2014 cycle, UT XMC was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/12 at 1AXMC000.92, which is located at the Route 768 bridge.

The impairment is proposed for nesting in the downstream Yeocomico River Watershed Shellfish TMDL, which was approved by the EPA on 6/8/2006 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-A33R_XMC01A14 / XMC - Lodge Creek, UT / Headwaters to mouth at Lodge Creek.	4A	Escherichia coli	2014	L	1.69

XMC - Lodge Creek, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.69**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-01-SF** **The Glebe**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 145D, 2/25/1997

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Shellfish Condemnation 008-213B, 3/5/2015

A 0.13 portion of Glebe Creek was initially assessed as impaired of the Shellfish Use due to VDH-DSS Condemnation Notice 145D, 2/25/1997.

In the 2004 cycle, the segment was extended; however, the 12/18/2003 TMDL was only performed on the 1998 portion. The original impairment is classified as Cat. 4A (TMDL completed).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_GLE01A98 / The Glebe / Described in the condemnation notice 145D, 2/25/1997.	4A	Fecal Coliform	1998	L	0.132

POTMH

The Glebe **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.132**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-01-SF2** **The Glebe**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 008-213B, 3/5/2015 not included in the 1997 impairment

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS Condemnation 008-213B, 3/5/2015

A 0.13 portion of Glebe Creek was assessed as impaired of the Shellfish Use during the 1998 cycle due to VDH-DSS Condemnation Notice 145D, 2/25/1997. In the 2004 cycle, the segment was extended to match condemnation 145C, 11/27/2002. However, the TMDL was only performed on the 1998 portion.

The impairment is nested within the Glebe Creek Shellfish TMDL, which was approved by the EPA on 12/18/2003.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_GLE01A04 / The Glebe / Portion of VDH-DSS notice 008-213B, 3/5/2015 open on 145D, 2/25/1997	4A	Fecal Coliform	2004	L	0.045

POTMH

The Glebe **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.045**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-02-SF** **Killneck Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 008-214A, 2/19/2016

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS condemnation 008-214A, 2/19/2016

Killneck Creek was assessed as not supporting of the Shellfish Consumption Use during the 1998 cycle due to VDH-DSS condemnation 145E, 2/25/1997. The shellfish condemnation for this segment was addressed in "Coan River Watershed Total Maximum Daily Load (TMDL) Report for Six Shellfish Areas", which was completed during the 2006 cycle and approved by the EPA on 12/18/2003 and by the SWCB on 12/02/2004. During the 2012 cycle, the condemnation was rescinded and the entire segment was delisted.

The condemnation was re-closed during the 2014 cycle. The impairment is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_KNC01A98 / Killneck Creek / Described in the condemnation notice 008-214A, 2/19/2016.	4A	Fecal Coliform	2014	L	0.027

POTMH

Killneck Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.027**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-04-SF** **XFJ - Coan River, UT (Cellars Cove)**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 008-214C, 2/19/2016

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Shellfish Condemnation 008-214C, 2/19/2016

A portion of the tributary was listed in the 1998 cycle due to condemnation 145G, 2/25/1997. The shellfish condemnation for this segment was included in "Coan River Watershed Total Maximum Daily Load (TMDL) Report for Six Shellfish Areas", which was approved by the EPA on 12/18/2003 and by the SWCB on 12/02/2004. The condemnation size has been adjusted through several cycles; however, during the 2012 cycle the condemnation shrunk and currently matches the 1998 impairment. It is considered Category 4A.

Note: Although the 1998 portion of the tributary is shown on the TMDL map, the TMDL used station 8-33 which is near the mouth of the creek instead of station 8-34, which was located within the 1998 impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_XFJ01A98 / XFJ - Coan River, UT (Cellars Cove) / Described in the condemnation notice 008-214C, 2/19/2016.	4A	Fecal Coliform	1998	L	0.032

POTMH

XFJ - Coan River, UT (Cellars Cove) **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.032**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-05-BAC** **Coan River**

Cause Location: Coan River mainstem within VDH Shellfish Condemnation Number 145I, 2/25/1997

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, the uppermost portion of the Coan River was assessed as impaired of the Recreation Use due to an enterococci exceedance rate of 2/12 at 1ACOA004.12, which is located at a private dock at the end of Route 629. As the impairment is located within the study area for the Shellfish bacterial TMDL for the Coan River which was approved by the EPA on 12/18/2003 and by the SWCB on 12/02/2004, the impairment is considered nested (Category 4A).

A portion of nontidal Coan Mill Stream was impaired of the Recreation Use since the 2002 cycle based on E. coli exceedances at 1ACON000.96 (old fact sheet A34R-01-BAC). In the 2014 cycle, it was determined that this station is actually tidally influenced. The impairment is now a part of A34E-05-BAC. The enterococci exceedance rate was 12/24 during the 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_COA01A98 / Coan River / Described in the VDH-DSS Condemnation Notice 008-214B, 2/19/2016, excluding Mill Creek. POTMH	4A	Enterococcus	2012	L	0.330
VAP-A34E_COA01B16 / Coan River / Portion of VDH-DSS Condemnation Notice 145I, 2/25/1997 open in 008-214, 2/19/2016. POTMH	4A	Enterococcus	2012	L	0.028

Coan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.358**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-05-SF** **Headly Cove**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 145H, 2/25/1997

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 008-214E, 2/19/2016

Headly Cove was assessed as impaired of the Shellfish Use in 1998 because of VDH SFC 145I, 2/25/1997. The impairment was included in "Coan River Watershed Total Maximum Daily Load (TMDL) Report for Six Shellfish Areas", which was approved by the EPA on 12/18/2003 and by the SWCB on 12/02/2004. The segment is classified as Category 4A for shellfish consumption.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_HEA01A98 / Headly Cove / Described in the VDH-DSS Condemnation Notice 008-214D, 2/19/2016	4A	Fecal Coliform	1998	L	0.026

POTMH

Headly Cove **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.026**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-05-SF2** **Mill Creek and the Coan River**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 145I, 2/25/1997

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 008-214B, 2/19/2016

Mill Creek and the upstream most portion of the Coan River were assessed as impaired of the Shellfish Use in 1998 because of VDH SFC 145I, 2/25/1997. The impairment has expanded in several assessment cycles. However only the original segment was included in "Coan River Watershed Total Maximum Daily Load (TMDL) Report for Six Shellfish Areas", which was completed during the 2006 cycle and approved by the EPA on 12/18/2003 and by the SWCB on 12/02/2004.

During the 2016 cycle, the condemnation shrank significantly and is now smaller than the TMDL extent. The condemned segment is classified as Category 4A; the newly opened portion was partially delisted (Cat 2C).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_COA01A98 / Coan River / Described in the VDH-DSS Condemnation Notice 008-214B, 2/19/2016, excluding Mill Creek.	4A	Fecal Coliform	1998	L	0.330
POTMH					
VAP-A34E_MII01A06 / Mill Creek / Tidal limit to mouth at Coan River	4A	Fecal Coliform	1998	L	0.104
POTMH					

Mill Creek and the Coan River **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.434**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-07-SF** **Cod Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 009-141A, 3/26/2014

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 009-141A, 3/26/2014

Cod Creek was included on the 1998 303(d) list due to VDH Condemnation 141A, 1/31/1997. The Shellfish TMDL for Cod Creek was developed during the 2010 cycle based on the maximum extent of the impairment (1/31/1997). The TMDL was approved by the EPA on 11/16/2009; therefore, Cod Creek will be considered Category 4A.

The condemnation shrank slightly during the 2014 cycle and the lower portion was partially delisted (Category 2C).

The condemnation shrank again in the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_COC01A98 / Cod Creek / Described in the condemnation notice 009-141A, 3/26/2014.	4A	Fecal Coliform	1998	L	0.049

POTMH

Cod Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.049**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-08-SF** **Cod Creek, UT**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 009-141B, 3/26/2014

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 009-141B, 3/26/2014

Cod Creek was included on the 1998 303(d) list due to VDH condemnation 141B, 1/31/1997. The Shellfish TMDL for Cod Creek was developed during the 2010 cycle based on the maximum extent of the impairment (1/31/1997). The TMDL was approved by the EPA on 11/16/2009; therefore, Cod Creek is considered Category 4A.

The condemnation shrank slightly during the 2014 cycle and the lower portion was partially delisted (Category 2C).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_COC01B02 / Cod Creek, UT / Described in the condemnation notice 009-141B, 3/26/2014	4A	Fecal Coliform	1998	L	0.054

POTMH

Cod Creek, UT **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.054**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-09-BAC** **Presley Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 009-141C, 3/26/2014

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, Presley Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 2/12 at 1APRE001.58, which is located off Rt. 629. The area is within the study area for the Presley Creek Shellfish TMDL, which was approved by the EPA on 11/16/2009; 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-A34E_PRE01A98 / Presley Creek / Described in the condemnation notice 009-141C, 3/26/2014.	4A	Enterococcus	2012	L	0.332

POTMH

Presley Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.332**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-09-SF** **Presley Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 009-141C, 3/26/2014

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 009-141C, 3/26/2014

Presley Creek was included on the 1998 303(d) list due to VDH condemnation 140, 4/27/1989. The Shellfish TMDL for Presley Creek was developed during the 2010 cycle based on the maximum extent of the impairment (009-141C, 3/30/2009). The TMDL was approved by the EPA on 11/16/2009; therefore, Presley Creek is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_PRE01A98 / Presley Creek / Described in the condemnation notice 009-141C, 3/26/2014.	4A	Fecal Coliform	1998	L	0.332

POTMH

Presley Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.332**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-12-SF** **Hull Creek and Spring Cove**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 009-142A, -B, and -E, 4/12/2016

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnations 009-142A, -B, and -E, 4/12/2016

A portion of Hull Creek was listed as impaired of the Shellfish Use in the 1998 cycle because of VDH-DSS Shellfish Condemnation 142A, 1/31/1997.

The Shellfish TMDL for Hull Creek was developed during the 2010 cycle based on the maximum extent of the impairment (8/21/2000). The TMDL was approved by the EPA on 11/16/2009; therefore, Hull Creek is considered Category 4A.

The condemnation subsequently shrank and split segments. Closed segments remain Category 4A; the remainder (including Spring Cove) was partially delisted (Category 2C).

The condemnation grew slightly in the 2018 cycle and Spring Cove was relisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_HUL01A02 / Hull Creek and Floyd Cove / Described in VDH condemnations 009-142A and -E, 4/12/2016, excluding Spring Cove. Expanded slightly in the 2018 cycle.. POTMH	4A	Fecal Coliform	1998	L	0.252
VAP-A34E_HUL01C12 / Fleets Cove (Hull Creek, UT) / Described in VDH condemnation 009-142B, 4/12/2016 POTMH	4A	Fecal Coliform	1998	L	0.024
VAP-A34E_SPN01A04 / Spring Cove / Tidal limit to mouth at Hull Creek POTMH	4A	Fecal Coliform	2018	L	0.010

Hull Creek and Spring Cove **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.285**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-13-SF** **Rogers Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 142C, 4/12/2016

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 009-142C, 4/12/2016

Rogers Creek was included on the 1998 303(d) list due to VDH condemnation 142B, 1/31/1997. The Shellfish TMDL for Rogers Creek was developed during the 2010 cycle based on the maximum extent of the impairment (3/17/2008). The TMDL was approved by the EPA on 11/16/2009.

During the 2016 cycle, the Rogers Creek condemnation shrank. The upstream portion remains impaired (Category 4A); the downstream portion was partially delisted (Category 2C.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_ROG01A98 / Rogers Creek / Described in the condemnation notice 009-142C, 4/12/2016.	4A	Fecal Coliform	1998	L	0.035

POTMH

Rogers Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.035**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-14-SF** **Cubitt Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 009-161A, 3/26/2014

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Shellfish Condemnation 009-161A, 3/26/2014

Cubitt Creek was impaired during the 1998 cycle due to VDH-DSS Shellfish Condemnation 168, 4/27/1989. The Shellfish TMDL for Cubitt Creek was developed during the 2010 cycle based on the maximum extent of the impairment (5/30/1986). The TMDL was approved by the EPA on 11/16/2009; therefore, the creek is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_CUT01A98 / Cubitt Creek / Described in the condemnation notice 009-161A, 3/26/2014	4A	Fecal Coliform	1998	L	0.225

POTMH

Cubitt Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.225**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-15-SF** **Cod Creek, Tributary to Little Wicomico River**

Cause Location: Described in VDH condemnation 105A, 6/10/1997

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH Shellfish Condemnation 010-105G, 6/14/2016

Cod Creek was assessed as impaired during the 1998 cycle because of VDH-DSS Shellfish Condemnation 105B, 6/10/1997. The TMDL was adopted by the EPA on 12/18/2003 and the SWCB on 12/2/2004. The impairment shortened during the 2012 cycle and a portion of the impairment was partially delisted.

The impairment expanded in the 2014 and 2016 cycles (see fact sheet A34E-11-SF). It shrunk back to the TMDL extent in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_COO01A98 / Cod Creek, Trib to Little Wicomico / Described in VDH condemnation notice 105A, 06/10/1997	4A	Fecal Coliform	1998	L	0.078

CB5MH

Cod Creek, Tributary to Little Wicomico River **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.078**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-16-SF** **Little Wicomico River**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 105B, 6/10/1997

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Shellfish Condemnation 010-105A, 6/14/2016

This segment of the Little Wicomico River was assessed as impaired in 1998 based on VDH SFC 105B 6/10/1997.

During the 2004 cycle, the segment expanded. However, the 2003 TMDL only covered the original 1998 impaired section, which is classified as Cat. 4A. The TMDL for the expansion is due in 2016 (see fact sheet A34E-06-SF2).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_LIS01A98 / Little Wicomico River / Described in the VDH-DSS Condemnation Notice 105B, 6/10/1997	4A	Fecal Coliform	1998	L	0.203

CB5MH

Little Wicomico River **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.203**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-16-SF2** **Little Wicomico River**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 010-105A, 6/9/2014 not listed in 1998 as well as Sections 010-150C and 010-105E

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH Shellfish Condemnation 010-105A, 6/14/2016
VDH-DSS Condemnations 010-105C and -105E, 6/14/2016

A segment of the Little Wicomico River was assessed as impaired in 1998 based on VDH SFC 105B 6/10/1997. During the 2004 cycle, the segment expanded and has subsequently expanded and contracted during various assessment cycles. However, the 2003 TMDL only covered the original 1998 impaired section, which is classified as Cat. 4A. The TMDL for the expansion is due in 2016.

During the 2016 cycle, condemnation 010-105A, 6/9/2014 expanded considerably and several impairments were merged (A34E-16-SF2 and A34E-30-SF). The impairment is considered nested within the upstream Little Wicomico River Shellfish TMDL, which was approved by the EPA on 12/18/2003.

The condemnation shortened and split in the 2018 cycle; in addition, a seasonally condemned portion (010-105M4) was split off and partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_LIS01A02 / Little Wicomico River / Portion of VDH-DSS Condemnation 010-105A, 6/14/2016 open on 6/10/1997 as well as sections 010-105E and -105C.	4A	Fecal Coliform	2004	L	0.179

Segment shortened and split in the 2018 cycle.

CB5MH

Little Wicomico River **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.179**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-17-SF** **Bridge Creek**

Cause Location: VDH condemnation 010-105B and portion of 010-105D, 6/14/2016 open in the 1998 cycle

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS Condemnation Notice 010-105B and portion of 010-105D, 6/14/2016

A small portion of the segment was listed in the 2006 cycle due to condemnation 010-105C, 9/15/2004. The segment expanded and merged with another condemnation during the 2008 cycle. Although the other condemnation was listed in 1998 and was later addressed in the Shellfish TMDL approved by the EPA on 12/18/03, this AU represents the portion of the condemnation which was not included in the 2003 TMDL.

The impairment is considered nested within the Bridge Creek Shellfish TMDL, which was approved by the EPA on 12/18/2003.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_BRI01C98 / Bridge Creek / VDH condemnation 010-105B and portion of 010-105D, 6/14/2016 not otherwise segmented.	4A	Fecal Coliform	2006	L	0.129

CB5MH

Bridge Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.129**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-18-SF** **Bridge Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 180, 6/10/1997

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Portion of VDH-DSS Condemnation Notice 010-105D, 6/14/2016

Bridge Creek was impaired of the Shellfish Consumption Use during the 1998 cycle due to VDH-DSS condemnation 180, 6/10/1997. The segment was delisted in 2004 because the area was reopened for harvest, but was closed again in the 2006 cycle.

The segment received a fecal coliform allocation in the "Little Wicomico River Watershed TMDL for Three Shellfish Areas Listed Due to Bacteria Contamination" report which was approved by the EPA on 12/18/2003; therefore, it is considered Cat. 4A for shellfish consumption.

Although the segment expanded and merged during the 2008 cycle, this AU represents only the portion of the condemnation which was included in the 2003 TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_BRI02C98 / Bridge Creek / Described in the condemnation notice 010-105D, 9/15/2004	4A	Fecal Coliform	2006	L	0.089

CB5MH

Bridge Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.089**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-21-SF** **Kingscote Creek**

Cause Location: Described in VDH-DSS condemnation 008-213A, 3/5/2015

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS condemnation 008-213A, 3/5/2015

The Shellfish Use impairment is considered nested within the nearby Killneck Creek Shellfish TMDL, which was approved by the EPA on 12/18/2003.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_KIN04A06 / Kingscote Creek / Described in VDH-DSS condemnation 008-213A, 3/5/2015	4A	Fecal Coliform	2006	L	0.009

POTMH

Kingscote Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.009**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-24-BAC** **Spring Cove**

Cause Location: Tidal Spring Cove

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2010 cycle, Spring Cove was assessed as not supporting of the Recreation Use due to enterococci exceedances at 1ASPN000.08, which is located at the boat ramp off of Route 629.

Because the area is within the study area for the Hull Creek Shellfish TMDL which was approved by the EPA on 11/16/2009, the Recreation impairment is considered nested (Category 4A.) The exceedance rate was 6/26 during the 2012 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_SPN01A04 / Spring Cove / Tidal limit to mouth at Hull Creek	4A	Enterococcus	2010	L	0.010

POTMH

Spring Cove **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.010**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-31-BAC** **Little Wicomico River**

Cause Location: Tidal extent to boundary of VDH Notice and Description of Shellfish Condemnation 105A, -105C, and -105E, 6/14/2016

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

In the 2006 cycle, the upper tidal portion of the Little Wicomico River was considered impaired of the Recreation Use due to enterococci exceedances at 1ALIS004.20, which is located off the mouth of Spences Creek. The enterococci violation rate was 4/26 during the 2012 cycle.

The impairment is considered nested because it is located within the tidal excursion of the upstream Little Wicomico River Shellfish TMDL. The TMDL was approved on 12/18/2003.

It was shortened in the 2018 cycle to remain coincident with the shellfish closure since that limit is more stringent.

Additional monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_LIS01A02 / Little Wicomico River / Portion of VDH-DSS Condemnation 010-105A, 6/14/2016 open on 6/10/1997 as well as sections 010-105E and -105C.	4A	Enterococcus	2006	L	0.179
Segment shortened and split in the 2018 cycle.					
CB5MH					
VAP-A34E_LIS01A98 / Little Wicomico River / Described in the VDH-DSS Condemnation Notice 105B, 6/10/1997	4A	Enterococcus	2006	L	0.203
CB5MH					
VAP-A34E_LIS01C18 / Little Wicomico River / Described in VDH-DSS Condemnation 010-105M4.	4A	Enterococcus	2006	L	0.016
CB5MH					

Little Wicomico River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.397**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-34-SF** **Back Creek**

Cause Location: VDH Notice and Description of Shellfish Condemnation 010-105F, 6/14/2016

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH condemnation 010-105F, 6/14/2016

A segment of the Little Wicomico River was assessed as impaired in 1998 based on VDH SFC 105B 6/10/1997. During several cycles, the segment expanded. However, the 2003 TMDL only covered the original 1998 impaired section, which will be classified as Cat. 4A. This impairment addresses only the 2008 expansion. The TMDL for this downstream-most segment was due in 2020.

During the 2014 cycle, Back Creek was nested in the Cod Creek Shellfish TMDL, which was approved by the EPA on 12/18/2003.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_BAC01A12 / Back Creek / Described in VDH SFC 010-105F, 6/14/2016.	4A	Fecal Coliform	2008	L	0.038

CB5MH

Back Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.038**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-35-SF** **Little Wicomico River, UT**

Cause Location: VDH Notice and Description of Shellfish Condemnation 010-105H, 6/14/2016

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS condemnation 010-105H, 614/2016

The impairment is considered nested in the nearby Bridge Creek Shellfish TMDL, which was approved by the EPA on 12/18/2003.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_LIS04B12 / Little Wicomico River, UT / Described in VDH condemnation 010-105H, 6/14/2016.	4A	Fecal Coliform	2012	L	0.024

CB5MH

Little Wicomico River, UT **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.024**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34E-36-BAC** **Hack Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 009-161B, 3/26/2014

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, Hack Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 2/11 at 1AHAC000.96, which is located off of Route 644.

The Shellfish TMDL for Hack Creek was developed based on the maximum extent of the impairment (009-161B, 3/14/2007) and was approved by the EPA on 11/16/2009. Because the impairment is within the TMDL study area, the Recreation Use is considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_HAC01A00 / Hack Creek / Tidal limit to mouth at Potomac River.	4A	Enterococcus	2012	L	0.224

POTMH

Hack Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.224**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34E-36-SF** **Hack Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 009-161B, 3/26/2014

City / County: Northumberland Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

VDH-DSS condemnation 009-161B, 3/26/2014

Hack Creek was designated as a non-productive shellfish growing area by VDH-DSS in previous summaries, so the use had been considered removed. However, during the 2008 cycle, it was determined that VDH considers the water condemned; therefore, Hack Creek was assessed as impaired (161, 4/27/1989.)

The Shellfish TMDL for Hack Creek was developed based on the maximum extent of the impairment (009-161B, 3/14/2007). The TMDL was approved by the EPA on 11/16/2009; therefore, the creek is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_HAC01A00 / Hack Creek / Tidal limit to mouth at Potomac River.	4A	Fecal Coliform	2008	L	0.224

POTMH

Hack Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.224**		

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34R-02-BAC** **Little Wicomico River**

Cause Location: The nontidal portion of Little Wicomico River.

City / County: Northumberland Co.

Use(s): Recreation

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

The nontidal portion of the Little Wicomico River was impaired of the Recreation Use in the 2018 cycle due to an E. coli exceedance rate of 4/13 at 1ALIS007.20.

The segment is within the TMDL study area for the Little Wicomico River Watershed Shellfish TMDL, which was approved by the EPA on 12/18/2003 and by the SWCB on 12/2/2004. It will be considered nested (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34R_LIS01A06 / Little Wicomico River / Headwaters to tidal limit	4A	Escherichia coli	2018	L	2.33

Little Wicomico River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.33**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34R-02-PH** **Little Wicomico River**

Cause Location: The nontidal portion of Little Wicomico River.

City / County: Northumberland Co.

Use(s): Aquatic Life

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

The nontidal portion of Little Wicomico River was initially considered not supporting the Aquatic Life Use during the 2006 cycle due to a pH exceedance rate of 2/11 at 1ALIS007.20, located at the Route 646 bridge.

During the 2008 cycle, the exceedance rate increased to 3/13.

The exceedance rate was 3/10 in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34R_LIS01A06 / Little Wicomico River / Headwaters to tidal limit	5C	pH	2006	L	2.33

Little Wicomico River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.33**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* A34R-03-DO** **XLL - Coan Mill Stream, UT**

Cause Location: The unnamed tributary in its entirety.

City / County: Northumberland Co.

Use(s): Aquatic Life

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

During the 2010 cycle, the tributary was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 1AXLL000.92, which is located west of Route 301. The exceedance rate was 2/12 during the 2012 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34R_XLL01A10 / Coan Mill Stream, UT / Headwaters to mouth at Coan Mill Stream	5C	Oxygen, Dissolved	2010	L	2.10

XLL - Coan Mill Stream, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.10**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

Cause Group Code: **A34R-04-BAC** **Coan Mill Stream**

Cause Location: From the headwaters to the confluence with the unnamed tributary at river mile 1.53

City / County: Northumberland Co.

Use(s): Recreation

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

In the 2012 cycle, Coan Mill Stream was assessed not supporting of the Recreation use goal based on an E. coli exceedance rate of 2/12 at Route 638 (1ACON002.88).

The stream is considered nested within the Shellfish TMDL for the Coan River Watershed, which was approved by the EPA on 12/18/2003 and by the SWCB on 12/2/2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34R_CON01B10 / Coan Mill Stream / Headwaters to the confluence with the unnamed tributary at rivermile 1.53.	4A	Escherichia coli	2012	L	2.93

Coan Mill Stream **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.93**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B02R-01-BAC** **West Strait Creek**

Cause Location: West Strait Creek from the headwaters downstream to the Monterey STP discharge. (Start Mile: 4.84 End Mile: 3.97 Total Impaired Size: .87 miles)

City / County: Highland Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station 1AWSC003.79 (3 exceedences of 9 samples for e-coli ion 2014, no new data in 2016). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B02R_WSC03A00 / West Strait Creek / West Strait Creek from the headwaters downstream to the Monterey STP.	5A	Escherichia coli	2010	L	0.87

West Strait Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.87**

Sources:

Agriculture	Non-Point Source	Unspecified Domestic Waste	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B02R-01-BEN** **West Strait Creek**

Cause Location: West Strait Creek from the headwaters downstream to its confluence with Burner's Run. (Start Mile: 4.84 End Mile: 3.61 Total Impaired Size: 1.23 Miles)

City / County: Highland Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station 1AWSC003.54 and 1AWSC003.79 (Impaired for VSCI). Initial Listing Date: 1996. This impairment is included in the EPA approved West Strait Creek/Strait Creek Benthic TMDL. Federal TMDL ID # 36924.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B02R_WSC02A00 / West Strait Creek / West Strait Creek from the Monterey STP downstream to its confluence with Burner's Run.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	0.36
VAV-B02R_WSC03A00 / West Strait Creek / West Strait Creek from the headwaters downstream to the Monterey STP.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	0.87

West Strait Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.23**

Sources:

Municipal Point Source Discharges

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B02R-01-DO** **West Strait Creek**

Cause Location: West Strait Creek from the Monterey STP discharge downstream to its confluence with Burner's Run. (Start Mile: 3.97 End Mile: 3.61 Total Impaired Size: .36 Miles)

City / County: Highland Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

This segment is impaired due to exceedences of the daily average dissolved oxygen WQS at station: 1AWSC003.54 (0 of 2 samples for DO, no new data impairment carries over) Initial Listing Date: 2010. This impairment is included in the EPA approved West Strait Creek/Strait Creek Benthic TMDL. Federal TMDL ID # 36926

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B02R_WSC02A00 / West Strait Creek / West Strait Creek from the Monterey STP downstream to its confluence with Burner's Run.	4A	Oxygen, Dissolved	2010	L	0.36

West Strait Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**0.36**

Sources:

Municipal Point Source Discharges

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B02R-02-BEN** **Strait Creek**

Cause Location: Strait Creek from its confluence with West Strait Creek downstream to the confluence of the South Branch Potomac River. (Start Mile: 3.29 End Mile: 0.00 Total Impaired Size: 3.29 Miles)

City / County: Highland Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station 1ASTT000.72 (Impaired for benthics (VSCI) Initial Listing Date: 2002. This impairment is included in the EPA approved Strait Creek Benthic TMDL. Federal TMDL ID # 36923.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B02R_STC01A00 / Strait Creek / Strait Creek from its confluence with West Strait Creek downstream to the confluence with the South Branch Potomac River.	4A	Benthic-Macroinvertebrate Bioassessments	2002	L	3.29

Strait Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.29**

Sources:

Agriculture Channelization Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B02R-06-BAC** **Strait Creek**

Cause Location: Strait Creek from the headwaters downstream to its confluence with West Strait Creek. (Start Mile: 6.06 End Mile: 3.29 Total Impaired Size: 2.77 Miles) This segment was shortened in 2016 with delist of downstream segments)

City / County: Highland Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations 1ASTT000.02 (No new data in 2018).
Initial Listing Date: 2006

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B02R_STC02A00 / Strait Creek / Strait Creek from the headwaters downstream to its confluence with West Strait Creek.	5A	Escherichia coli	2006	L	2.77

Strait Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.77**

Sources:

Agriculture Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B03R-03-BAC** **South Fork South Branch Potomac River**

Cause Location: South Fork South Branch Potomac River from the headwaters downstream to the VA/WVA State Line. (Start Mile: 2.71 End Mile: 0.00 Total Impaired Size: 2.71 Miles

City / County: Highland Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1ASFP02.56 (2 exceedences of 12 samples for e-coli, no data in 2018). Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B03R_SFP01A00 / South Fork South Branch Potomac River / South Fork South Branch Potomac River from the headwaters downstream to the VA/WVA state line.	5A	Escherichia coli	2012	L	2.71

South Fork South Branch Potomac River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.71**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B04R-01-BAC** **Middle Fork Sleepy Creek**

Cause Location: Middle Fork Sleepy Creek from the headwaters downstream to the VA/WVA state line. (Start Mile: 2.93 End Mile: 0.00 Total Impaired Size: 2.93 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli WQS at station: 1AMIS000.33 (3 exceedences of 11 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2014

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B04R_MIS01A14 / Middle Fork Sleepy Creek / Middle Fork Sleepy Creek from the headwaters downstream to the VA/WVA state line.	5A	Escherichia coli	2014	L	2.93

Middle Fork Sleepy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.93**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B04R-02-BAC** **Sleepy Creek**

Cause Location: Sleepy Creek from the headwaters downstream to the VA/WVA state line. (Start Mile: 7.72 End Mile: 0.00 Total Impaired Size: 7.72 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli WQS at station: 1ASLP034.20 (2 exceedences of 12 samples for e-coli) Initial Listing Date: 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B04R_SLP01A00 / Sleepy Creek / Sleepy Creek from the headwaters downstream to the VA/WVA state line.	5A	Escherichia coli	2016	L	7.72

Sleepy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.72**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B04R-03-BAC** **Middle Fork Sleepy Creek X-trib**

Cause Location: Middle Fork Sleepy Creek X-trib from the headwaters downstream to its confluence with Middle Fork Sleepy Creek. (Start Mile: 2.55 End Mile: 0.00 Total Impaired Size: 2.55 Miles.

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli WQS at station: 1AXSM000.08 (3 exceedences of 12 samples for e-coli) Initial Listing Date: 2018

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B04R_XSM01A18 / Middle Fork Sleepy Creek X-trib / Middle Fork Sleepy Creek X-trib from the headwaters downstream to its confluence with Middle Fork Sleepy Creek.	5A	Escherichia coli	2018	L	2.55

Middle Fork Sleepy Creek X-trib **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.55**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B05R-01-BAC** **Back Creek**

Cause Location: Back Creek from the headwaters downstream to its confluence with Isaacs Creek. (Start Mile: 25.34 End Mile: 7.73 Total Impaired Size: 17.61 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1ABAR041.11 (3 exceedences of 12 samples for e-coli). Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B05R_BAR01B10 / Back Creek / Back Creek from the Route 600 bridge crossing downstream to its confluence with Isaacs Creek.	5A	Escherichia coli	2010	L	2.47
VAV-B05R_BAR02A04 / Back Creek / Back Creek from Rock Enon Spring downstream to the Route 600 bridge crossing.	5A	Escherichia coli	2010	L	10.94
VAV-B05R_BAR03A10 / Back Creek / Back Creek from the headwaters downstream to its confluence with Rock Enon Spring.	5A	Escherichia coli	2010	L	4.20

Back Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**17.61**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B05R-02-BAC** **Little Isaacs Creek**

Cause Location: Little Isaacs Creek from the Timber Ridge School STP downstream (including an unnamed tributary originating near Reynolds Store) to its confluence with Isaacs Creek. (Start Mile: 9.93 End Mile: 0.00 Total Impaired Size: 9.93 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station 1ALIG001.84 (No new data in 2018, last data available was 2012). Initial Listing Date: 2008

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B05R_LIG01A00 / Little Isaacs Creek / Little Isaacs Creek from the Timber Ridge School STP downstream (including unnamed tributary originating near Reynolds Store) to its confluence with Isaacs Creek.	5A	Escherichia coli	2008	L	9.93

Little Isaacs Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.93**

Sources:

Agriculture Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B05R-03-BAC** **Isaacs Creek**

Cause Location: Isaacs Creek from its confluence with Little Isaacs Creek downstream to its confluence with Back Creek. (Start Mile: 2.84 End Mile: 0.00 Total Impaired Size: 2.84 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station 1AISC001.77 (2 exceedences of 11 samples for e-coli) Initial Listing Date: 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B05R_ISC01A00 / Isaacs Creek / Isaacs Creek from its confluence with Little Isaacs Creek downstream to its confluence with Back Creek.	5A	Escherichia coli	2016	L	2.84

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

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B06R-02-BAC** **Hogue Creek**

Cause Location: Hogue Creek from the headwaters downstream to its confluence with Back Creek. (Start Mile: 17.27 End Mile: 0.00 Total Impaired Size: 17.27 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1AHOC003.67 (5 exceedences of 12 samples); 1AHOC006.23; no new data in 2018 and 1AHOC008.96; no new data in 2018. Initial Listing Date: 2002. This segment is included in the EPA approved Hogue Creek bacteria TMDL. Federal TMDL ID # 34147

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B06R_HOC01A00 / Hogue Creek / Hogue Creek from the Route 679 bridge crossing downstream to its confluence with Back Creek.	4A	Escherichia coli	2008	L	6.43
VAV-B06R_HOC02A10 / Hogue Creek / Hogue Creek from a point .175 miles downstream of the Route 600 bridge downstream to the Route 679 bridge crossing.	4A	Escherichia coli	2008	L	8.52
VAV-B06R_HOC03A10 / Hogue Creek / Hogue Creek from the headwaters downstream to a point .175 miles downstream of the Route 600 bridge.	4A	Escherichia coli	2008	L	2.29

Hogue Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**17.24**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B06R_HOC01A00 / Hogue Creek / Hogue Creek from the Route 679 bridge crossing downstream to its confluence with Back Creek.	4A	Fecal Coliform	2002	L	6.43
VAV-B06R_HOC02A10 / Hogue Creek / Hogue Creek from a point .175 miles downstream of the Route 600 bridge downstream to the Route 679 bridge crossing.	4A	Fecal Coliform	2002	L	8.52
VAV-B06R_HOC03A10 / Hogue Creek / Hogue Creek from the headwaters downstream to a point .175 miles downstream of the Route 600 bridge.	4A	Fecal Coliform	2002	L	2.29

Hogue Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**17.24**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B07R-01-BAC** **Back Creek**

Cause Location: Back Creek from its confluence with Hogue Creek downstream to its confluence with Babbs Creek.

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli WQS at station: 1ABAR037.84 (3 exceedences of 13 samples).
Initial Listing Date: 2018

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B07R_BAR02A10 / Back Creek / Back Creek from its confluence with Hogue Creek downstream to its confluence with Babbs Creek.	5A	Escherichia coli	2018	L	4.92

Back Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.92**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B08R-01-BAC** **Opequon Creek**

Cause Location: Opequon Creek from the headwaters downstream to its confluence with Abrams Creek. (Start Mile: 55.83 End Mile: 32.61 Total Impaired Size: 23.22 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1AOPE036.13 (11 exceedences of 36 samples for e-coli); 1AOPE044.17 (5 exceedences of 12 samples for e-coli); 1AOPE047.44 (4 exceedences of 6 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2004; This segment is included in the EPA approved Opequon Creek bacteria TMDL. Federal TMDL ID # 20941

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B08R_OPE01A00 / Opequon Creek / Opequon Creek from its confluence with Hoge Run downstream to its confluence with Abrams Creek.	4A	Escherichia coli	2004	L	12.83
VAV-B08R_OPE02A10 / Opequon Creek / Opequon Creek from the first Route 620 crossing downstream to its confluence with Hoge Run.	4A	Escherichia coli	2004	L	9.46
VAV-B08R_OPE03A10 / Opequon Creek / Opequon Creek from the headwaters downstream to the first Route 620 crossing.	4A	Escherichia coli	2004	L	0.92

Opequon Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**23.21**

Sources:

Municipal (Urbanized High Density Area)	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B08R-01-BEN** **Opequon Creek**

Cause Location: Opequon Creek from the headwaters downstream to its confluence with Abrams Creek. (Start Mile: 55.83 End Mile: 32.61 Total Impaired Size: 23.22 Miles)

City / County: Frederick Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station 1AOPE036.13 (Impaired for VSCI). Initial Listing Date: 2010. This segment is part of the EPA approved Abrams/Opequon watershed TMDL. Federal TMDL ID # 23357

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B08R_OPE01A00 / Opequon Creek / Opequon Creek from its confluence with Hoge Run downstream to its confluence with Abrams Creek.	4A	Benthic-Macroinvertebrate Bioassessments	2010	L	12.83
VAV-B08R_OPE02A10 / Opequon Creek / Opequon Creek from the first Route 620 crossing downstream to its confluence with Hoge Run.	4A	Benthic-Macroinvertebrate Bioassessments	2010	L	9.46
VAV-B08R_OPE03A10 / Opequon Creek / Opequon Creek from the headwaters downstream to the first Route 620 crossing.	4A	Benthic-Macroinvertebrate Bioassessments	2010	L	0.92

Opequon Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**23.21**

Sources:

Agriculture	Municipal Point Source Discharges	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B09R-01-BAC** **Abrams Creek**

Cause Location: Abrams Creek from the headwaters downstream to is confluence with Opequon Creek. (Start Mile: 11.18 End Mile: 0.00 Total Impaired Size: 11.18 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1AABR000.78 (3 exceedences of 12 samples for e-coli). Initial Listing Date: 1996; This segment is included in the EPA approved Abrams Creek bacteria TMDL. Federal TMDL ID # 17635

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_ABR01A00 / Abrams Creek / Abrams Creek from its headwaters downstream to its confluence with Opequon Creek.	4A	Escherichia coli	2008	L	11.18

Abrams Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.18**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_ABR01A00 / Abrams Creek / Abrams Creek from its headwaters downstream to its confluence with Opequon Creek.	4A	Fecal Coliform	1996	L	11.18

Abrams Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**11.18**

Sources:

Municipal (Urbanized High Density Area)

Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B09R-01-BEN** **Abrams Creek**

Cause Location: Abrams Creek from the headwaters downstream to is confluence with Opequon Creek. (Start Mile: 11.18 End Mile: 0.00 Total Impaired Size: 11.18 Miles)

City / County: Frederick Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1AABR000.78 (Impaired for VSCI); Initial Listing Date: 1996; This segment is included in the EPA approved Abrams Creek benthic TMDL. Federal TMDL ID # 17636

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_ABR01A00 / Abrams Creek / Abrams Creek from its headwaters downstream to its confluence with Opequon Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	11.18

Abrams Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.18**

Sources:

Municipal (Urbanized High Density Area)

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B09R-02-BAC** **Opequon Creek**

Cause Location: Opequon Creek from its confluence with Abrams Creek downstream to the VA/WV state line. (Start Mile: 32.61 End Mile: 23.55 Total Impaired Size: 9.06 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1AOPE025.10 (1 exceedance of 12 samples for e-coli, no new 2018 data, still impaired). Initial Listing Date: 1996; This segment is part of the EPA approved Abrams/Opequon watershed TMDL. Federal TMDL ID # 20941

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_OPE01A00 / Opequon Creek / Opequon Creek from its confluence with Hot Run downstream to the VA/WVA state line.	4A	Escherichia coli	2008	L	3.02
VAV-B09R_OPE02A10 / Opequon Creek / Opequon Creek from its confluence with Abrams Creek downstream to its confluence with Hot Run.	4A	Escherichia coli	2008	L	6.02

Opequon Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.04**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_OPE01A00 / Opequon Creek / Opequon Creek from its confluence with Hot Run downstream to the VA/WVA state line.	4A	Fecal Coliform	1996	L	3.02
VAV-B09R_OPE02A10 / Opequon Creek / Opequon Creek from its confluence with Abrams Creek downstream to its confluence with Hot Run.	4A	Fecal Coliform	1996	L	6.02

Opequon Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**9.04**

Sources:

Municipal (Urbanized High Density Area)

Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B09R-02-BEN** **Opequon Creek**

Cause Location: Opequon Creek from its confluence with Abrams Creek downstream to the VA/WV state line. (Start Mile: 32.61 End Mile: 23.55 Total Impaired Size: 9.06 Miles)

City / County: Frederick Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1AOPE028.72 (Impaired for VSCI). Initial Listing Date: 1996; This segment is part of the EPA approved Abrams/Opequon watershed TMDL. Federal TMDL ID # 23357

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_OPE01A00 / Opequon Creek / Opequon Creek from its confluence with Hot Run downstream to the VA/WVA state line.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	3.02
VAV-B09R_OPE02A10 / Opequon Creek / Opequon Creek from its confluence with Abrams Creek downstream to its confluence with Hot Run.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	6.02

Opequon Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.04**

Sources:

Municipal (Urbanized High Density Area)

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B09R-03-BAC** **Lick Run**

Cause Location: Lick Run (also known as Hiatt Run) from its headwaters downstream to its confluence with Opequon Creek. (Start Mile: 8.21 End Mile: 0.00 Total Impaired Size: 8.21 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1ALIR000.95 (no new data in 2018); Initial Listing Date: 2006; This segment is included in the EPA approved TMDL for the Abrams/Opequon watershed. Federal TMDL ID # 20941

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_LIR01A00 / Lick Run / Lick Run (also known as Hiatt Run) from its headwaters downstream to its confluence with Opequon Creek.	4A	Escherichia coli	2006	L	8.21

Lick Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.21**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B09R-04-BAC** **Redbud Run**

Cause Location: Redbud Run and tributary from the headwaters downstream to its confluence with Opequon Creek. (Start Mile: 8.05 End Mile: 0.00 Total Impaired Size: 8.05 Miles)

City / County: Frederick Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1ARED000.46 (no 2018 data for e-coli) Initial Listing Date: 2004; The segment is included in the EPA approved Abrams/Opequon TMDL . Federal TMDL ID # 20941

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_RED01A00 / Redbud Run / Redbud Run from a point 4.4 miles upstream of its confluence with Opequon Creek downstream to its confluence with Opequon Creek.	4A	Escherichia coli	2008	L	4.50
VAV-B09R_RED02A10 / Redbud Run / Redbud Run from its headwaters downstream to a point 4.4 miles upstream of its confluence with Opequon Creek.	4A	Escherichia coli	2008	L	2.00
VAV-B09R_XRD01A10 / Redbud Run x-trib / Redbud Run x-trib from the headwaters downstream to its confluence with Redbud Run.	4A	Escherichia coli	2008	L	1.55

Redbud Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.05**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_RED01A00 / Redbud Run / Redbud Run from a point 4.4 miles upstream of its confluence with Opequon Creek downstream to its confluence with Opequon Creek.	4A	Fecal Coliform	2004	L	4.50
VAV-B09R_RED02A10 / Redbud Run / Redbud Run from its headwaters downstream to a point 4.4 miles upstream of its confluence with Opequon Creek.	4A	Fecal Coliform	2004	L	2.00
VAV-B09R_XRD01A10 / Redbud Run x-trib / Redbud Run x-trib from the headwaters downstream to its confluence with Redbud Run.	4A	Fecal Coliform	2004	L	1.55

Redbud Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**8.05**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B09R-04-BEN** **Redbud Run**

Cause Location: Redbud Run and tributary from the headwaters downstream to its confluence with Opequon Creek. (Start Mile: 8.05 End Mile: 0.00 Total Impaired Size: 8.05 Miles)

City / County: Frederick Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1ARED000.46 (Impaired for VSCI). Initial Listing Date: 2004. This segment is included in the EPA Approved Abrams/Opequon TMDL. Federal TMDL ID # 20160.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B09R_RED01A00 / Redbud Run / Redbud Run from a point 4.4 miles upstream of its confluence with Opequon Creek downstream to its confluence with Opequon Creek.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	4.50
VAV-B09R_RED02A10 / Redbud Run / Redbud Run from its headwaters downstream to a point 4.4 miles upstream of its confluence with Opequon Creek.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	2.00
VAV-B09R_XRD01A10 / Redbud Run x-trib / Redbud Run x-trib from the headwaters downstream to its confluence with Redbud Run.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	1.55

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

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B10R-01-BEN** **Cockran Spring Branch**

Cause Location: Cockran Spring Branch from the spring downstream to its confluence with Middle River. (Start Mile: .58 End Mile: 0.00 Total Impaired Size: .58 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

The benthic community at this site was not assessed during the 2018 cycle and the impaired status carries from previous assessments. This assessment unit is included in an EPA approved TMDL for Streams Impacted by Fish Farms. Initial Listing Date: 1996. Federal TMDL ID # 9461

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B10R_XDN01A00 / Cockran Spring Branch / Cockran Spring Branch from the spring downstream to its confluence with Middle River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	0.58

Cockran Spring Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.58**

Sources:

Aquaculture (Permitted)

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B10R-02-BAC** **Middle River**

Cause Location: Middle River from the headwaters downstream to its confluence with Jennings Branch. (Start Mile: 69.61 End Mile: 45.69 Total Impaired Size: 23.92 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BMDL060.48 (43 exceedences of 73 samples for e-coli); 1BMDL047.90 (4 exceedences of 12 samples) and FOMR Level II data indicate impairment still present. Initial Listing Date: 2004; This segment is included in the Middle River bacteria TMDL and is considered category 4A Impaired - EPA Approved TMDL. Federal TMDL ID # 33831

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B10R_MDL01A00 / Middle River / Middle River from its confluence with Back Creek downstream to its confluence with Eidson Creek.	4A	Escherichia coli	2004	L	4.78
VAV-B10R_MDL02A00 / Middle River / Middle River from its confluence with Cockran Spring Branch downstream to its confluence with Back Creek.	4A	Escherichia coli	2004	L	9.30
VAV-B10R_MDL03A00 / Middle River / Middle River from the headwaters downstream to its confluence with Cockran Spring Branch.	4A	Escherichia coli	2004	L	2.97
VAV-B11R_MDL01A00 / Middle River / Middle River from its confluence with Buffalo Branch downstream to its confluence with Jennings Branch.	4A	Escherichia coli	2010	L	3.37
VAV-B11R_MDL02A00 / Middle River / Middle River from its confluence with Eidson Creek downstream to its confluence with Buffalo Branch.	4A	Escherichia coli	2008	L	3.49

Middle River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**23.91**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B11R_MDL01A00 / Middle River / Middle River from its confluence with Buffalo Branch downstream to its confluence with Jennings Branch.	4A	Fecal Coliform	2006	L	3.37
VAV-B11R_MDL02A00 / Middle River / Middle River from its confluence with Eidson Creek downstream to its confluence with Buffalo Branch.	4A	Fecal Coliform	2006	L	3.49

Middle River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**6.86**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B10R-02-BEN** **Middle River**

Cause Location: Middle River from the headwaters downstream to its confluence with Eidson Creek. (Start Mile: 69.61 End Mile: 52.55 Total Impaired Size: 17.06 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BMDL060.48 (Impaired for VSCI) 1BMDL066.05 (Impaired for VSCI); 1BMDL066.84 (Impaired for VSCI). Initial Listing Date: 1998; This segment is included in the Middle River benthic TMDL and is considered category 4A Impaired - EPA Approved TMDL. Federal TMDL ID # 24511

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B10R_MDL01A00 / Middle River / Middle River from its confluence with Back Creek downstream to its confluence with Eidson Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.78
VAV-B10R_MDL02A00 / Middle River / Middle River from its confluence with Cockran Spring Branch downstream to its confluence with Back Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	9.30
VAV-B10R_MDL03A00 / Middle River / Middle River from the headwaters downstream to its confluence with Cockran Spring Branch.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	2.97

Middle River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**17.05**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B10R-03-BAC** **Back Creek**

Cause Location: Back Creek from the headwaters downstream to its confluence with Middle River. (Start Mile: 10.72 End Mile: 0.00 Total Impaired Size: 10.72 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BBAK001.74 (6 exceedences of 12 samples for e-coli in 2014, no new data in 2018). This impairment was lengthened in the 2018 cycle to correct for GIS errors. Initial Listing Date: 2004; The segment is considered category 4A Impaired - EPA Approved TMDL since it is within the geographical region covered by the EPA approved Middle River Bacteria TMDL. Federal TMDL ID # 7683

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B10R_BAK01A00 / Back Creek / Back Creek from the headwaters downstream to its confluence with Middle River.	4A	Escherichia coli	2008	L	10.72

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B10R_BAK01A00 / Back Creek / Back Creek from the headwaters downstream to its confluence with Middle River.	4A	Fecal Coliform	2004	L	10.72

Back Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**10.72**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B10R-04-BAC** **Eidson Creek**

Cause Location: Eidson Creek from the headwaters downstream to its confluence with Middle River. (Start Mile: 8.84 End Mile: 0.00 Total Impaired Size: 8.84 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BEDN003.67 (9 exceedences of 12 samples for e-coli) no new data in 2018. FOMR Level II monitoring indicate impairment remains. Initial Listing Date: 2004; The segment is considered category 4A Impaired - EPA Approved TMDL since it is within the geographical region covered by the EPA approved Middle River Bacteria TMDL. Federal TMDL ID # 7683

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B10R_EDN01A00 / Eidson Creek / Eidson Creek from the headwaters downstream to its confluence with Middle River.	4A	Escherichia coli	2008	L	8.84

Eidson Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.84**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B10R_EDN01A00 / Eidson Creek / Eidson Creek from the headwaters downstream to its confluence with Middle River.	4A	Fecal Coliform	2004	L	8.84

Eidson Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**8.84**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B12R-01-BAC** **Lewis Creek**

Cause Location: Lewis Creek south of the Staunton City boundary near the power line crossing downstream to its confluence with Middle River. (Start Mile: 10.06 End Mile: 0.00 Total Impaired Size: 10.06 Miles)

City / County: Augusta Co. Staunton City

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BLEW000.61 (7 exceedences of 12 samples for e-coli in 2014, no data in 2018); 1BLEW006.95 (10 exceedences of 12 samples for e-coli). Initial Listing Date: 2004; This segment has an EPA Approved TMDL for bacteria (e-coli). Federal TMDL ID # 7677

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B12R_LEW01A00 / Lewis Creek / Lewis Creek south of the Staunton City boundary near the power line crossing downstream to its confluence with Middle River.	4A	Escherichia coli	2004	L	10.06

Lewis Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.06**

Sources:

Municipal (Urbanized High Density Area)	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B12R-01-BEN** **Lewis Creek**

Cause Location: Lewis Creek south of the Staunton City boundary near the power line crossing downstream to its confluence with Middle River. (Start Mile: 10.06 End Mile: 0.00 Total Impaired Size: 10.06 Miles)

City / County: Augusta Co. Staunton City

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BLEW000.61 (Impaired for VSCI); 1BLEW006.95 (Impaired for VSCI) and IBLEW009.19 (Impaired for VSCI). Initial Listing Date: 1996; This segment has an EPA Approved TMDL for benthics. Federal TMDL ID # 7676

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B12R_LEW01A00 / Lewis Creek / Lewis Creek south of the Staunton City boundary near the power line crossing downstream to its confluence with Middle River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	10.06

Lewis Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.06**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B12R-01-PCB** **Lewis Creek**

Cause Location: Lewis Creek south of the Staunton City boundary near the power line crossing downstream to its confluence with Middle River. (Start Mile: 10.06 End Mile: 0.00 Total Impaired Size: 10.06 Miles)

City / County: Augusta Co. Staunton City

Use(s): Fish Consumption

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

This segment is impaired due to exceedences of Fish Tissue and Sediment screening values at stations: 1BLEW005.24 (01 Hg, HMW PAH, PHH, FTH, Pry, ATH Ben, Chrys, Chl 01 Fish PCB 2 sp 2005 Fish PCB) and 1BLEW006.64 (1 samples exceeded the PEC of 128 for Lead (172)) Data outside of data window, however, status carried forward. Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B12R_LEW01A00 / Lewis Creek / Lewis Creek south of the Staunton City boundary near the power line crossing downstream to its confluence with Middle River.	5A	PCB in Fish Tissue	2004	H	10.06

Lewis Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**10.06**

Sources:

Inappropriate Waste Disposal

Municipal (Urbanized High Density Area)

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B12R-02-BAC** **Middle River**

Cause Location: Middle River from the quarry discharge west of Franks Mill downstream to its confluence with Moffett Creek. (Start Mile: 43.92 End Mile: 41.00 Total Impaired Size: 2.92 Miles.

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli WQS at station: 1BMDL043.35 (4 exceedences of 12 samples for e-coli. Original Initial Listing Date: 2008 as Cause ID B15R-01-BAC (added to downstream impairment), segment de-listed in 2016, re-listed in 2018 as Cause ID B12R-02-BAC as downstream segments remain fully supporting and re-list is not contiguous to B15R-01-BAC. This segment is included in the EPA approved Middle River bacteria TMDL. Federal TMDL ID # 33831.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B12R_MDL01B10 / Middle River / Middle River from the quarry discharge west of Franks Mill downstream to its confluence with Moffett Creek.	4A	Escherichia coli	2008	L	2.92

Middle River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.92**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B13R-01-BAC** **Moffett Creek**

Cause Location: Moffett Creek from the headwaters downstream to its confluence with Middle River. (Start Mile: 9.91 End Mile: 0.00 Total Impaired Size: 9.91 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BMFT001.43 (15 exceedences of 25 samples for e-coli) and 1BMFT006.20 (18 exceedences of 63 samples). Initial Listing Date: 2004; This segment is included in the EPA approved Moffetts Creek bacteria TMDL and is considered a category 4A - Impaired - EPA Approved TMDL. Federal TMDL ID # 7679.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B13R_MFT01A00 / Moffett Creek / Moffett Creek from the headwaters downstream to its confluence with Middle River.	4A	Escherichia coli	2008	L	9.91

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B13R_MFT01A00 / Moffett Creek / Moffett Creek from the headwaters downstream to its confluence with Middle River.	4A	Fecal Coliform	1996	L	9.91

Moffett Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**9.91**

Sources:

Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B13R-01-BEN** **Moffett Creek**

Cause Location: Moffett Creek from the headwaters downstream to its confluence with Middle River. (Start Mile: 9.91 End Mile: 0.00 Total Impaired Size: 9.91 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BMFT005.11 (Impaired for VSCI in 2010); 1BMFT002.46 (Fully supporting VSCI in 2018) Need agreement for delist. Initial Listing Date: 1996; This segment is included in the EPA approved Moffetts Creek benthic TMDL and is considered a category 4A - Impaired - EPA Approved TMDL. Federal TMDL ID # 7678.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B13R_MFT01A00 / Moffett Creek / Moffett Creek from the headwaters downstream to its confluence with Middle River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	9.91

Moffett Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.91**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B13R-02-BAC** **Elk Run**

Cause Location: Elk Run from the headwaters downstream to its confluence with Moffett Creek. (Start Mile: 4.13 End Mile: 0.00 Total Impaired Size: 4.13 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BEKR000.25 (5 exceedences of 12 samples for e-coli in 2014, no new data in 2016/18). Initial Listing Date: 2004; This segment lies within the geographic area of the EPA approved Moffatts Creek Bacteria TMDL and thus is considered Category 4A - Impaired - EPA Approved TMDL. Federal TMDL ID # 7679

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B13R_ELK01A00 / Elk Run / Elk Run from the headwaters downstream to its confluence with Moffett Creek.	4A	Escherichia coli	2008	L	4.13

Elk Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.13**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B13R_ELK01A00 / Elk Run / Elk Run from the headwaters downstream to its confluence with Moffett Creek.	4A	Fecal Coliform	2004	L	4.13

Elk Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**4.13**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B13R-03-BEN** **Tunnel Hollow X-trib**

Cause Location: Tunnel Hollow X-trib from the headwaters downstream to its confluence with Tunnel Hollow. (Start Mile: .58 End Mile: 0.00 Total Impaired Size: .58 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: USFS 2021. This assessment unit is located within the George Washington National Forest was deemed to be impaired due to natural conditions (intermittent flow at sampling site) by the U.S. Forest Service biologist utilizing the U.S. Forest Service benthic survey at site 2021. Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B13R_XEI02A02 / Tunnel Hollow x-trib / Tunnel Hollow x-trib from the headwaters downstream to its confluence with Tunnel Hollow	4C	Benthic-Macroinvertebrate Bioassessments			0.58

Tunnel Hollow X-trib **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.58**

Sources:

Drought-related Impacts

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B14R-01-BAC** **Christians Creek**

Cause Location: Christians Creek from the headwaters downstream to its confluence with Middle River. (Start Mile: 32.96 End Mile: 0.00 Total Impaired Size: 32.96 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BCST000.13 (1 exceedance of 12 samples for e-coli in 2014, no new data in 2016/18); 1BCST007.42 (5 exceedences of 12 samples for e-coli); 1BCST012.32 (34 exceedences of 57 samples for e-coli); 1BCST016.48 (9 exceedences of 12 samples for e-coli); 1BCST021.76 (39 exceedences of 59 samples for e-coli) and 1BCST028.71 (3 exceedences of 6 samples in 2016, no data in 2018). Initial Listing Date: 1996; This segment is part of the EPA approved Christians Creek bacteria TMDL for bacteria. Federal TMDL ID

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B14R_CST01A00 / Christians Creek / Christians Creek from its confluence with Folly Mills Creek downstream to its confluence with Middle River.	4A	Escherichia coli	2004	L	18.61
VAV-B14R_CST02A00 / Christians Creek / Christians Creek from the headwaters downstream to its confluence with Folly Mills Creek.	4A	Escherichia coli	2004	L	14.34

Christians Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**32.95**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B14R_CST01A00 / Christians Creek / Christians Creek from its confluence with Folly Mills Creek downstream to its confluence with Middle River.	4A	Fecal Coliform	1996	L	18.61
VAV-B14R_CST02A00 / Christians Creek / Christians Creek from the headwaters downstream to its confluence with Folly Mills Creek.	4A	Fecal Coliform	1996	L	14.34

Christians Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**32.95**

Sources:

Municipal (Urbanized High Density Area)	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B14R-01-BEN** **Christians Creek**

Cause Location: Christians Creek from the headwaters downstream to its confluence with Middle River. (Start Mile: 32.96 End Mile: 0.00 Total Impaired Size: 32.96 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station 1BCST007.42. Initial Listing Date 1996. This segment is included in the EPA approved Christians Creek benthic TMDL. Federal TMDL ID # 24514

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B14R_CST01A00 / Christians Creek / Christians Creek from its confluence with Folly Mills Creek downstream to its confluence with Middle River.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	18.61
VAV-B14R_CST02A00 / Christians Creek / Christians Creek from the headwaters downstream to its confluence with Folly Mills Creek.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	14.34

Christians Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**32.95**

Sources:

Municipal (Urbanized High Density Area)

Non-Point Source

Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B14R-02-BAC** **Folly Mills Creek**

Cause Location: Folly Mills Creek and tributary from the headwaters downstream to its confluence with Christians Creek. (Start Mile: 14.14 End Mile: 0.00 Total Impaired Size: 14.14 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BFMC003.57 (10 exceedences of 12 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2004; This segment is within the geographic boundary of the EPA approved Christians Creek bacteria TMDL and is considered a Category 4A - Impaired - EPA Approved TMDL. Federal TMDL ID # 17969

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B14R_FMC01A00 / Folly Mills Creek / Folly Mills Creek from a point 2.4 miles upstream of Christians Creek downstream to its confluence with Christians Creek.	4A	Escherichia coli	2012	L	2.48
VAV-B14R_FMC02A10 / Folly Mills Creek / Folly Mills Creek from the headwaters downstream to a point 2.4 miles upstream of Christians Creek.	4A	Escherichia coli	2012	L	7.34
VAV-B14R_XFM01A10 / Folly Mills Creek X-trib / Folly Mills Creek X-trib from the headwaters downstream to its confluence with Folly Mills Creek.	4A	Escherichia coli	2012	L	4.32

Folly Mills Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.14**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B14R_FMC01A00 / Folly Mills Creek / Folly Mills Creek from a point 2.4 miles upstream of Christians Creek downstream to its confluence with Christians Creek.	4A	Fecal Coliform	2004	L	2.48
VAV-B14R_FMC02A10 / Folly Mills Creek / Folly Mills Creek from the headwaters downstream to a point 2.4 miles upstream of Christians Creek.	4A	Fecal Coliform	2004	L	7.34
VAV-B14R_XFM01A10 / Folly Mills Creek X-trib / Folly Mills Creek X-trib from the headwaters downstream to its confluence with Folly Mills Creek.	4A	Fecal Coliform	2004	L	4.32

Folly Mills Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**14.14**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B14R-03-BAC** **Long Meadow Run**

Cause Location: Long Meadow Run and tributary from the headwaters downstream to its confluence with Christians Creek. (Start Mile: 11.06 End Mile: 0.00 Total Impaired Size: 11.06 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BMDW000.18 (5 exceedences of 12 samples for e-coli). Initial Listing Date: 2006; This segment is located within the geographical boundary of the EPA approved Christians Creek bacteria TMDL and is considered to be Category 4A - Impaired - EPA Approved TMDL. Federal TMDL ID # 17969

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B14R_LMR01A00 / Long Meadow Run / Long Meadow Run and tributary (Coleytown Run) from the headwaters downstream to its confluence with Christians Creek.	4A	Escherichia coli	2006	L	11.06

Long Meadow Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.06**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B14R-03-TEMP** **Long Meadow Run**

Cause Location: Long Meadow Run and tributary from the headwaters downstream to its confluence with Christians Creek. (Start Mile: 11.06 End Mile: 0.00 Total Impaired Size: 11.06 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5C

This segment is impaired due to exceedences of the natural trout temperature WQS (20 C) at station: 1BMDW000.18 (3 exceedences of 12 samples for temperature). Initial Listing Date: 2006. The aquatic life use is impaired due to exceedences of the temperature standard and is Category 5C due to suspected natural conditions.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B14R_LMR01A00 / Long Meadow Run / Long Meadow Run and tributary (Coleytown Run) from the headwaters downstream to its confluence with Christians Creek.	5C	Temperature, water	2006	L	11.06

Long Meadow Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**11.06**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B15R-01-BAC** **Middle River**

Cause Location: Middle River from the confluence with Christians Creek downstream to its confluence with North River. (Start Mile: 17.85 End Mile: 0.00 Total Impaired Size: 17.85 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BMDL001.83 (8 exceedences of 53 samples for e-coli) and 1BMDL013.94 (3 exceedences of 12 samples for e-coli). Initial Listing Date: 1996; This segment is included in the EPA approved Middle River bacteria TMDL. Federal TMDL ID # 24515.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B15R_MDL01A00 / Middle River / Middle River from its confluence with Christians Creek downstream to its confluence with North River.	4A	Escherichia coli	2008	L	17.85

Middle River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**17.85**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B15R_MDL01A00 / Middle River / Middle River from its confluence with Christians Creek downstream to its confluence with North River.	4A	Fecal Coliform	1996	L	17.85

Middle River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**17.85**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B15R-02-BAC** **Polecat Draft**

Cause Location: Polecat Draft and tributary from the headwaters downstream to its confluence with Middle River. (Start Mile: 7.90 End Mile: 0.00 Total Impaired Size: 7.90 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BPCD000.20 (32 exceedences of 45 samples for e-coli). Initial Listing Date: 1996; This segment is included in the EPA approval Polecat Draft TMDL for bacteria. Federal TMDL ID # 24515

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B15R_PCD01A00 / Polecat Draft / Polecat Draft and tributary from the headwaters downstream to its confluence with Middle River.	4A	Escherichia coli	2004	L	7.90

Polecat Draft **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.90**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B15R_PCD01A00 / Polecat Draft / Polecat Draft and tributary from the headwaters downstream to its confluence with Middle River.	4A	Fecal Coliform	1996	L	7.90

Polecat Draft **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**7.90**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B16L-01-TEMP** **Elkhorn Lake**

Cause Location: Elkhorn Lake (Total Impaired Size: 52.66 Acres)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This lake is impaired due to exceedences of the temperature WQS at station: 1BNTH045.36 (37 exceedences of 139 samples for temperature). Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B16L_NTH01A04 / Elkhorn Lake / Elkhorn Lake	5A	Temperature, water	2010	L	52.66

Elkhorn Lake **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:		**52.66**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B16R-01-PH** **North River**

Cause Location: North River from its confluence with Little River downstream to its confluence with Freemason Run. This impairment length was shortened in 2010 due to upstream stations returning to fully supporting status. Original length was 21.80 Miles. (Start Mile: 36.42 End Mile: 31.96 Total Impaired Size: 4.46 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment remains impaired due to excursions of the pH WQS at station: 1BNTH036.96 (1 excursion of 3 samples for pH 3 of 9 in 2010, no new data in 2016/18). Initial Listing Date: 2002

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B17R_NTH04A00 / North River / North River from its confluence with Little River downstream to its confluence with Freemason Run.	5A	pH	2002	L	4.46

North River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.46**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B17R-01-BAC** **North River**

Cause Location: North River from its confluence with Freemason Run downstream to its confluence with South River. (Start Mile: 31.96 End Mile: 0.00 Total Impaired Size: 31.96 Miles) Segment lengthened in 2012

City / County: Augusta Co. Rockingham Co.

Use(s): Recreation

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

This segment remains impaired due to exceedences of the e-coli bacteria WQS at station: 1BNTH029.30 (3 exceedences of 6 samples); 1BNTH022.25 (5 exceedences of 12 samples for e-coli in 2014, no data in 2016/18) 1BNTH014.08 (5 exceedences of 36 samples) and 1BNTH007.69 (3 exceedences of 12 samples for e-coli) Initial Listing Date: 2002; This segment is included in the EPA approved North River TMDL for bacteria. Federal TMDL ID # 23366.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B17R_NTH01A00 / North River / North River from its confluence with Briery Branch downstream to its confluence with Dry River.	4A	Escherichia coli	2014	L	3.48
VAV-B17R_NTH02A00 / North River / North River 5 miles above the Bridgewater Public Water Intake downstream to its confluence with Briery Branch.	4A	Escherichia coli	2012	L	1.31
VAV-B17R_NTH03A00 / North River / North River from its confluence with Freemason Run downstream to the 5 mile PWS limit for the Bridgewater Public Water Intake.	4A	Escherichia coli	2012	L	5.77
VAV-B23R_NTH01A04 / North River / North River from its confluence with Middle River downstream to its confluence with South River.	4A	Escherichia coli	2004	L	4.70
VAV-B23R_NTH01B10 / North River / North River from its confluence with Naked Creek downstream to its confluence with Middle River.	4A	Escherichia coli	2004	L	4.25
VAV-B23R_NTH02A04 / North River / North River from its confluence with Cooks Creek downstream to its confluence with Naked Creek.	4A	Escherichia coli	2004	L	6.87
VAV-B23R_NTH03A04 / North River / North River from the Harrisonburg Public Water Intake downstream to its confluence with Cooks Creek.	4A	Escherichia coli	2012	L	3.33
VAV-B23R_NTH04A04 / North River / North River from its confluence with Dry River downstream to the Harrisonburg Public Water Intake.	4A	Escherichia coli	2012	L	2.22

North River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**31.93**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B17R_NTH01A00 / North River / North River from its confluence with Briery Branch downstream to its confluence with Dry River.	4A	Fecal Coliform	2002	L	3.48
VAV-B23R_NTH01A04 / North River / North River from its	4A	Fecal Coliform	1996	L	4.70

confluence with Middle River downstream to its confluence with South River.					
VAV-B23R_NTH01B10 / North River / North River from its confluence with Naked Creek downstream to its confluence with Middle River.	4A	Fecal Coliform	1996	L	4.25
VAV-B23R_NTH02A04 / North River / North River from its confluence with Cooks Creek downstream to its confluence with Naked Creek.	4A	Fecal Coliform	1996	L	6.87
VAV-B23R_NTH03A04 / North River / North River from the Harrisonburg Public Water Intake downstream to its confluence with Cooks Creek.	4A	Fecal Coliform	1996	L	3.33
VAV-B23R_NTH04A04 / North River / North River from its confluence with Dry River downstream to the Harrisonburg Public Water Intake.	4A	Fecal Coliform	1996	L	2.22

North River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**24.85**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B17R-02-BAC** **Thorny Branch**

Cause Location: Thorny Branch and tributaries from the headwaters downstream to its confluence with North River. (Start Mile: 7.76 End Mile: 0.00 Total Impaired Size: 7.76 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Fecal Coliform / 4A

This segment remains impaired due to exceedences of the fecal coliform bacteria WQS at station: 1BTRN000.38 No fecal coliform or e-coli data are available in 2018. Initial Listing Date: 2004; This segment is included in the EPA approved North River TMDL for bacteria. Federal TMDL ID # 23366.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B17R_TRN01A00 / Thorny Branch / Thorny Branch and tributaries from the headwaters downstream to its confluence with North River.	4A	Fecal Coliform	2004	L	7.76

Thorny Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**7.76**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-01-BEN** **Wolf Run**

Cause Location: Wolf Run from the headwaters downstream to its confluence with Briery Branch. (Start Mile: 3.31 End Mile: 0.00 Total Impaired Size: 3.31 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: USFS 2019. No new data available for the 2018 assessment window, this impairment carries over to this cycle. Initial Listing Date: 2002.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_WFR01A02 / Wolf Run / Wolf Run from the Forest Service Road crossing downstream to its confluence with Briery Branch.	5A	Benthic-Macroinvertebrate Bioassessments	2002	L	1.18
VAV-B18R_WFR02A02 / Wolf Run / Wolf Run from the headwaters downstream to the Forest Service Road crossing.	5A	Benthic-Macroinvertebrate Bioassessments	2004	L	2.11

Wolf Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.29**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-01-PH** **Wolf Run**

Cause Location: Wolf Run from the headwaters downstream to its confluence with Briery Branch. (Start Mile: 3.31 End Mile: 0.00 Total Impaired Size: 3.31 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA VT56 (12 excursions of 12 samples for pH in 2010, no new Level III data available for 2018. Level II data show 24 exceedences of 24 samples for pH. Impairment carries forward.). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_WFR01A02 / Wolf Run / Wolf Run from the Forest Service Road crossing downstream to its confluence with Briery Branch.	5A	pH	2006	L	1.18
VAV-B18R_WFR02A02 / Wolf Run / Wolf Run from the headwaters downstream to the Forest Service Road crossing.	5A	pH	2006	L	2.11

Wolf Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.29**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-04-BAC** **Beaver Creek**

Cause Location: Beaver Creek from the headwaters downstream to its confluence with Briery Branch. (Start Mile: 6.30 End Mile: 0.00 Total Impaired Size: 6.30 Miles)

City / County: Rockingham Co.

Use(s): Recreation

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

This segment unit will remain impaired recreational use in the 2018 cycle based on best professional judgement. The data indicate improved conditions, no new data are available in the 2018 assessment window Initial Listing Date: 2002. This segment is included in the EPA approved Beaver Creek bacteria TMDL. Federal TMDL ID# 24517.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_BVR01A00 / Beaver Creek / Beaver Creek from its confluence with Waggys Creek downstream to its confluence with Briery Branch.	4A	Escherichia coli	2008	L	2.65
VAV-B18R_BVR02A00 / Beaver Creek / Beaver Creek from the headwaters (including Redbanks Run) downstream to its confluence with Waggys Creek.	4A	Escherichia coli	2008	L	3.63

Beaver Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.28**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_BVR01A00 / Beaver Creek / Beaver Creek from its confluence with Waggys Creek downstream to its confluence with Briery Branch.	4A	Fecal Coliform	2002	L	2.65
VAV-B18R_BVR02A00 / Beaver Creek / Beaver Creek from the headwaters (including Redbanks Run) downstream to its confluence with Waggys Creek.	4A	Fecal Coliform	2002	L	3.63

Beaver Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**6.28**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-04-TEMP** **Beaver Creek**

Cause Location: Beaver Creek from the headwaters downstream to its confluence with Briery Branch. (Start Mile: 6.30 End Mile: 0.00 Total Impaired Size: 6.30 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 4C

This segment is impaired due to exceedences of the temperature WQS at station: 1BBVR003.60. Initial Listing Date: 2002; Temperature readings used to determine this assessment unit as impaired were based on readings at station 1BBVR003.60 and has been determined to be natural. By letter from the Virginia Department of Game & Inland Fisheries, this stream is considered a warm water stream and should not be considered Class V - Stockable Trout. This segment became Category 4C - Impaired, but not needing a TMDL due to natural conditions in the 2006 cycle. The trout designations were reviewed during the Virginia Triennial Review. Data indicate supporting status, however, the data are old. New data needed for de-listing. Initial Listing Date: 2002

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_BVR01A00 / Beaver Creek / Beaver Creek from its confluence with Waggys Creek downstream to its confluence with Briery Branch.	4C	Temperature, water			2.65
VAV-B18R_BVR02A00 / Beaver Creek / Beaver Creek from the headwaters (including Redbanks Run) downstream to its confluence with Waggys Creek.	4C	Temperature, water			3.63

Beaver Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**6.28**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-05-BAC** **Briery Branch**

Cause Location: Briery Branch from its confluence with Beaver Creek downstream to its confluence with North River. (Start Mile: 1.47 End Mile: 0.00 Total Impaired Size: 1.47 Miles)

City / County: Rockingham Co.

Use(s): Recreation

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

This segment remains impaired due to exceedences of the e-coli bacteria WQS at station: 1BBRY001.22 (5 exceedences of 12 samples for e-coli). Initial Listing Date: 2004. This segment is included in the EPA approved North River bacteria TMDL. Federal TMDL ID # 23366.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_BRY01A02 / Briery Branch / Briery Branch from the 5 mile upper limit of the Bridgewater raw water intake (confluence with Beaver Creek) downstream to its confluence with North River.	4A	Escherichia coli	2014	L	1.47

Briery Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.47**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_BRY01A02 / Briery Branch / Briery Branch from the 5 mile upper limit of the Bridgewater raw water intake (confluence with Beaver Creek) downstream to its confluence with North River.	4A	Fecal Coliform	2004	L	1.47

Briery Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**1.47**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-06-PH** **Rocky Run**

Cause Location: Rocky Run from the headwaters downstream to its confluence with Briery Branch. (Start Mile: 1.93 End Mile: 0.00 Total Impaired Size: 1.93 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA RH33 (12 excursions of 12 samples for pH in 2010, no new data for 2018, impairment carries forward). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_ROB01A02 / Rocky Run / Rocky Run from the headwaters downstream to its confluence with Briery Branch.	5A	pH	2006	L	1.93

Rocky Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.93**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-07-PH** **Union Springs Run**

Cause Location: Union Springs Run from the headwaters downstream to its confluence with Red Banks Run. (Start Mile: 3.74 End Mile: 0.00 Total Impaired Size: 3.74 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA RH34 (12 excursions of 12 samples for pH in 2010, no new data for 2018, impairment carries forward). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B18R_USB01A00 / Union Springs Run / Union Springs Run from a point 3 miles upstream of Beaver Creek downstream to its confluence with Beaver Creek at Redbanks Run.	5A	pH	2006	L	3.07
VAV-B18R_USB02A10 / Union Springs Run / Union Springs Run from the headwaters downstream to a point 3 miles upstream of Beaver Creek at Redbanks Run.	5A	pH	2006	L	0.66

Union Springs Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.73**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B19R-01-BAC** **Mossy Creek**

Cause Location: Mossy Creek from the headwaters downstream to its confluence with North River. (Start Mile: 10.46 End Mile: 0.00 Total Impaired Size: 10.46 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BMSS001.35 (21 exceedences of 71 samples for e-coli). Initial Listing Date: 1996; The segment is included in the EPA approved Mossy Creek TMDL for bacteria. Federal TMDL ID # 1585

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B19R_MSS01A00 / Mossy Creek / Mossy Creek from the 5 mile upper limit for the Bridgewater Public Water Intake downstream to its confluence with North River.	4A	Escherichia coli	2004	L	2.29
VAV-B19R_MSS02A00 / Mossy Creek / Mossy Creek from a point 7.1 miles upstream of the confluence with North River downstream to the 5 mile upper limit for the PWS designation for the Bridgewater Public Water Intake.	4A	Escherichia coli	2004	L	5.10
VAV-B19R_MSS03A10 / Mossy Creek / Mossy Creek from the headwaters downstream to a point 7.1 miles upstream of the confluence with North River.	4A	Escherichia coli	2004	L	3.07

Mossy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.46**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B19R_MSS01A00 / Mossy Creek / Mossy Creek from the 5 mile upper limit for the Bridgewater Public Water Intake downstream to its confluence with North River.	4A	Fecal Coliform	1996	L	2.29
VAV-B19R_MSS02A00 / Mossy Creek / Mossy Creek from a point 7.1 miles upstream of the confluence with North River downstream to the 5 mile upper limit for the PWS designation for the Bridgewater Public Water Intake.	4A	Fecal Coliform	1996	L	5.10
VAV-B19R_MSS03A10 / Mossy Creek / Mossy Creek from the headwaters downstream to a point 7.1 miles upstream of the confluence with North River.	4A	Fecal Coliform	1996	L	3.07

Mossy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**10.46**

Sources:

Agriculture Non-Point Source Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B19R-01-BEN** **Mossy Creek**

Cause Location: Mossy Creek from the headwaters downstream to its confluence with North River. (Start Mile: 10.46 End Mile: 0.00 Total Impaired Size: 10.46 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BMSS003.01 (Impaired for VSCI). Initial Listing Date 1998; This segment is included in the EPA approved Mossy Creek TMDL for benthics. Federal TMDL ID # 10673

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B19R_MSS01A00 / Mossy Creek / Mossy Creek from the 5 mile upper limit for the Bridgewater Public Water Intake downstream to its confluence with North River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	2.29
VAV-B19R_MSS02A00 / Mossy Creek / Mossy Creek from a point 7.1 miles upstream of the confluence with North River downstream to the 5 mile upper limit for the PWS designation for the Bridgewater Public Water Intake.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	5.10
VAV-B19R_MSS03A10 / Mossy Creek / Mossy Creek from the headwaters downstream to a point 7.1 miles upstream of the confluence with North River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	3.07

Mossy Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.46**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B20L-01-TEMP** **Switzer Lake**

Cause Location: Switzer Lake (Total Impaired Size: 99.49 Acres)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This lake is impaired due to exceedences of the temperature WQS at station: 1BSKD003.18 (49 exceedences of 387 samples for temperature). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B20L_01 / Switzer Lake / Switzer Lake	5A	Temperature, water	2006	L	100.81

Switzer Lake **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:		**100.81**	

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B20R-01-PH** **Dry River**

Cause Location: Dry River from its confluence with Little Laurel Run downstream to its confluence with Blacks Run. (Start Mile: 20.83 End Mile: 10.65 Total Impaired Size: 10.18 Miles) This segment was shortened in 2014 due to a downstream assessment unit returning for fully supporting status.

City / County: Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: 1BDUR017.26 (2 excursions of 12 samples for pH). Initial Listing Date: 2002.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B20R_DUR01A00 / Dry River / Dry River from the City of Harrisonburg water intake downstream to its confluence with Black Run.	5A	pH	2002	L	1.52
VAV-B20R_DUR02A00 / Dry River / Dry River from its confluence with Skidmore Fork downstream to the City of Harrisonburg Water Intake.	5A	pH	2002	L	4.32
VAV-B20R_DUR02B10 / Dry River / Dry River from the 5 miles PWS designation downstream to its confluence with Skidmore Fork.	5A	pH	2008	L	0.64
VAV-B20R_DUR03A00 / Dry River / Dry River from its confluence with Little Laurel Run downstream to the 5 mile PWS designation for the City of Harrisonburg Water Intake.	5A	pH	2002	L	3.70

Dry River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**10.18**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B20R-02-BEN** **Skidmore Fork**

Cause Location: Skidmore Fork from the headwaters downstream to the upper end of Switzer Lake. (Start Mile: 8.50 End Mile: 3.06 Total Impaired Size: 5.44 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: USFS 2001 (MAIS-Impaired) Initial Listing Date: 2006; USFS believes this is a drought related impairment from the 1998-2002 regional drought and a natural conditions. Data in 2016 indicated that this impairment is no longer present, however both samples were taken in the spring and a sample needs to be fully supporting in both spring and fall successive samplings for delisting.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B20R_SKD03A00 / Skidmore Fork / Skidmore Fork from the headwaters downstream to the upper end of Switzer Lake.	4C	Benthic-Macroinvertebrate Bioassessments			5.44

Skidmore Fork **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.44**

Sources:

Drought-related Impacts

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B21R-01-BAC** **Dry River**

Cause Location: Dry River from the Route 613 bridge at Lilly downstream to its confluence with North River. (Start Mile: 6.57 End Mile: 0.00 Total Impaired Size: 6.57 Miles)

City / County: Rockingham Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BDUR000.02 (14 exceedences of 42 samples for e-coli). Initial Listing Date: 1998; This segment is included in the EPA approved Dry River bacteria TMDL. Federal TMDL ID # 1492

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B21R_DUR01A00 / Dry River / Dry River from its confluence with Muddy Creek downstream to its confluence with North River.	4A	Escherichia coli	2004	L	2.69
VAV-B21R_DUR02A00 / Dry River / Dry River from the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake downstream to its confluence with Muddy Creek.	4A	Escherichia coli	2004	L	2.20
VAV-B21R_DUR03A00 / Dry River / Dry River from the Route 613 bridge downstream to the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake.	4A	Escherichia coli	2004	L	1.66

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B21R_DUR01A00 / Dry River / Dry River from its confluence with Muddy Creek downstream to its confluence with North River.	4A	Fecal Coliform	1998	L	2.69
VAV-B21R_DUR02A00 / Dry River / Dry River from the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake downstream to its confluence with Muddy Creek.	4A	Fecal Coliform	1998	L	2.20
VAV-B21R_DUR03A00 / Dry River / Dry River from the Route 613 bridge downstream to the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake.	4A	Fecal Coliform	1998	L	1.66

Dry River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**6.55**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B21R-02-BAC** **Honey Run**

Cause Location: Honey Run from the headwaters downstream to its confluence with Dry River. (Start Mile: 4.26 End Mile: 0.00 Total Impaired Size: 4.26 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Fecal Coliform / 4A

This segment remains impaired based on data in the 2004 cycle for exceedences of the fecal coliform bacteria WQS. As no data are in the 2018 cycle, this status will carry to 2018. Initial Listing Date: 2004. This segment is included in the geographical boundary of the EPA approved Dry River TMDL for bacteria and is listed as Category 4A - Impaired - EPA Approved TMDL. Federal TMDL ID # 7686

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B21R_HNY01A02 / Honey Run / Honey Run from the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Supply Intake downstream to its confluence with Dry River.	4A	Fecal Coliform	2004	L	1.14
VAV-B21R_HNY02A02 / Honey Run / Honey Run from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake.	4A	Fecal Coliform	2004	L	3.11

Honey Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**4.25**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B22R-01-BAC** **Muddy Creek**

Cause Location: Muddy Creek from the headwaters downstream to its confluence with Dry River. (Start Mile: 11.15 End Mile: 0.00 Total Impaired Size: 11.15 Miles)

City / County: Rockingham Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BMDD000.40 (20 exceedences of 36 samples for e-coli) and 1BMDD005.81 (42 exceedences of 62 samples for e-coli). Initial Listing Date: 1996; This segment is included in the EPA approved Muddy Creek bacteria TMDL. Federal TMDL ID # 1589

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B22R_MDD01A00 / Muddy Creek / Muddy Creek from the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake downstream to its confluence with Dry River.	4A	Escherichia coli	2004	L	2.33
VAV-B22R_MDD02A00 / Muddy Creek / Muddy Creek from its confluence with War Branch downstream to the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake.	4A	Escherichia coli	2004	L	1.33
VAV-B22R_MDD03A00 / Muddy Creek / Muddy Creek from the headwaters downstream to its confluence with War Branch.	4A	Escherichia coli	2004	L	7.47

Muddy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.13**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B22R_MDD01A00 / Muddy Creek / Muddy Creek from the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake downstream to its confluence with Dry River.	4A	Fecal Coliform	1996	L	2.33
VAV-B22R_MDD02A00 / Muddy Creek / Muddy Creek from its confluence with War Branch downstream to the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake.	4A	Fecal Coliform	1996	L	1.33
VAV-B22R_MDD03A00 / Muddy Creek / Muddy Creek from the headwaters downstream to its confluence with War Branch.	4A	Fecal Coliform	1996	L	7.47

Muddy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**11.13**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B22R-01-BEN** **Muddy Creek**

Cause Location: Muddy Creek from the headwaters downstream to its confluence with Dry River. (Start Mile: 11.15 End Mile: 0.00 Total Impaired Size: 11.15 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BMDD002.10 (Impaired for VSCI) and 1BMDD005.17 (Impaired for VSCI). Initial Listing Date: 1996; This unit is included in the EPA approved Muddy Creek benthic TMDL. Federal TMDL ID # 7689

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B22R_MDD01A00 / Muddy Creek / Muddy Creek from the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake downstream to its confluence with Dry River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	M	2.33
VAV-B22R_MDD02A00 / Muddy Creek / Muddy Creek from its confluence with War Branch downstream to the 5 mile upper limit of the PWS designation for the Bridgewater Public Water Intake.	4A	Benthic-Macroinvertebrate Bioassessments	1996	M	1.33
VAV-B22R_MDD03A00 / Muddy Creek / Muddy Creek from the headwaters downstream to its confluence with War Branch.	4A	Benthic-Macroinvertebrate Bioassessments	1996	M	7.47

Muddy Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.13**

Sources:

Agriculture Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B23R-01-BEN** **North River**

Cause Location: North River from its confluence with Cooks Creek downstream to its confluence with South River. (Start Mile: 15.83 End Mile: 0.00 Total Impaired Size: 15.83 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BNTH014.48 (Impaired for VSCI). Initial Listing Date: 1996; The aquatic life impairment based on the impaired benthic status is now part of an EPA approved stressor report to move from 5A to 4A - Impaired - EPA approved TMDL (Letter from EPA dated 2/3/06). Federal TMDL ID numbers applicable are 9509 and 9510.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B23R_NTH01A04 / North River / North River from its confluence with Middle River downstream to its confluence with South River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.70
VAV-B23R_NTH01B10 / North River / North River from its confluence with Naked Creek downstream to its confluence with Middle River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.25
VAV-B23R_NTH02A04 / North River / North River from its confluence with Cooks Creek downstream to its confluence with Naked Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	6.87

North River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**15.82**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B24R-01-BAC** **Long Glade Creek**

Cause Location: Long Glade Creek from the headwaters downstream to its confluence with North River. (Start Mile: 11.22 End Mile: 0.00 Total Impaired Size: 11.22 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BLGC000.96 (21 exceedences of 59 samples for e-coli). Initial Listing Date: 2004. This segment is included in the EPA approved Mossy Creek/Long Glade Creek bacteria TMDL. Federal TMDL ID # 19708

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B24R_LGC01A00 / Long Glade Creek / Long Glade Creek from the headwaters downstream to its confluence with North River.	4A	Escherichia coli	2008	L	11.22

Long Glade Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.22**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B24R_LGC01A00 / Long Glade Creek / Long Glade Creek from the headwaters downstream to its confluence with North River.	4A	Fecal Coliform	1998	L	11.22

Long Glade Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**11.22**

Sources:

Agriculture Non-Point Source Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B25L-01-BAC** **Silver Lake**

Cause Location: Silver Lake (Total Impaired Size: 10.51 Acres)

City / County: Rockingham Co.

Use(s): Recreation

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

This lake is impaired due to exceedences of the e-coli WQS at station: 1BXEF000.23 (3 exceedences of 13 samples for e-coli). Initial Listing Date: 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B25L_00 / Silver Lake / Silver Lake at Dayton	5A	Escherichia coli	2018	L	10.51

Silver Lake **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:		**10.51**	

Sources:

Agriculture Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B25R-01-BAC** **Cooks Creek**

Cause Location: Cooks Creek from the headwaters downstream to its confluence with North River. (Start Mile: 14.39 End Mile: 0.00 Total Impaired Size: 14.39 Miles)

City / County: Rockingham Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BCKS003.10 (21 exceedences of 36 samples for e-coli); 1BCKS007.71 (5 exceedences of 12 samples for e-coli) Initial Listing Date: 1996; This segment is included in the EPA approved Cooks Creek bacteria TMDL. Federal TMDL ID # 9473

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B25R_CKS01A00 / Cooks Creek / Cooks Creek from its confluence with Silver Creek (at Route 701 Slab Crossing) downstream to its confluence with North River.	4A	Escherichia coli	2004	L	7.74
VAV-B25R_CKS02A04 / Cooks Creek / Cooks Creek from the headwaters downstream to its confluence with Silver Creek (at the Route 701 Slab Crossing).	4A	Escherichia coli	2004	L	6.63

Cooks Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.37**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B25R_CKS01A00 / Cooks Creek / Cooks Creek from its confluence with Silver Creek (at Route 701 Slab Crossing) downstream to its confluence with North River.	4A	Fecal Coliform	1996	L	7.74
VAV-B25R_CKS02A04 / Cooks Creek / Cooks Creek from the headwaters downstream to its confluence with Silver Creek (at the Route 701 Slab Crossing).	4A	Fecal Coliform	1996	L	6.63

Cooks Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**14.37**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B25R-01-BEN** **Cooks Creek**

Cause Location: Cooks Creek from the headwaters downstream to its confluence with North River. (Start Mile: 14.39 End Mile: 0.00 Total Impaired Size: 14.39 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BCKS001.03 (Impaired for VSCI) and 1BCKS003.04 (Impaired for VSCI). Initial Listing Date: 1996; This segment is included in the EPA approved Cooks Creek/Blacks Run benthic TMDL. Federal TMDL ID # 9509 & 9510

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B25R_CKS01A00 / Cooks Creek / Cooks Creek from its confluence with Silver Creek (at Route 701 Slab Crossing) downstream to its confluence with North River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	M, 2yr	7.74
VAV-B25R_CKS02A04 / Cooks Creek / Cooks Creek from the headwaters downstream to its confluence with Silver Creek (at the Route 701 Slab Crossing).	4A	Benthic-Macroinvertebrate Bioassessments	1996	M, 2yr	6.63

Cooks Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**14.37**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B25R-02-BAC** **Silver Creek**

Cause Location: Silver Creek from the Silver Lake dam outfall downstream to its confluence with Cooks Creek. (Start Mile: .21 End Mile: 0.00 Total Impaired Size: .21 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Fecal Coliform / 4A

This segment remains impaired due to exceedences of the fecal coliform WQS during the 2004 cycle. No new data are in the 2018 cycle, thus the impaired status carries forward. Initial Listing Date: 2002; This segment is included in the EPA approved Cooks Creek bacteria TMDL. Federal TMDL ID # 9470

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B25R_SLV01A04 / Silver Creek / Silver Creek from the Silver Lake dam outfall downstream to its confluence with Cooks Creek.	4A	Fecal Coliform	2002	L	0.20

Silver Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**0.20**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B25R-03-BAC** **Sunset Heights Branch**

Cause Location: Sunset Heights Branch from the headwaters downstream to its confluence with Cooks Creek. (Start Mile: 4.75 End Mile: 0.00 Total Impaired Size: 4.75 Miles)

City / County: Harrisonburg City Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Fecal Coliform / 4A

This segment remains impaired due to exceedences of the fecal coliform WQS during the 2004 cycle. No new data is in the 2018 cycle, thus the impaired status carries forward. Initial Listing Date: 2004; This segment is included in the EPA approved Cooks Creek bacteria TMDL. Federal TMDL ID # 9470

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B25R_XBU01A02 / Sunset Heights Branch / Sunset Heights Branch from the headwaters downstream to its confluence with Cooks Creek.	4A	Fecal Coliform	2004	L	4.74

Sunset Heights Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**4.74**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B26R-01-BAC** **Blacks Run**

Cause Location: Blacks Run from the headwaters downstream to its confluence with Cooks Creek. (Start Mile: 11.64 End Mile: 0.00 Total Impaired Size: 11.64 Miles)

City / County: Harrisonburg City Rockingham Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BBLK000.38 (12 exceedences of 36 samples for e-coli). Initial Listing Date: 1996; This segment is included in the EPA approved Blacks Run bacteria TMDL. Federal TMDL ID # 9470

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B26R_BLK01A00 / Blacks Run / Blacks Run from the headwaters downstream to its confluence with Cooks Creek.	4A	Escherichia coli	2004	L	11.64

Blacks Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.64**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B26R_BLK01A00 / Blacks Run / Blacks Run from the headwaters downstream to its confluence with Cooks Creek.	4A	Fecal Coliform	1996	L	11.64

Blacks Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**11.64**

Sources:

Municipal (Urbanized High Density Area) Non-Point Source Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B26R-01-BEN** **Blacks Run**

Cause Location: Blacks Run from the headwaters downstream to its confluence with Cooks Creek. (Start Mile: 11.64 End Mile: 0.00 Total Impaired Size: 11.64 Miles)

City / County: Harrisonburg City Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BBLK000.08 (Impaired for VSCI) and 1BBLK005.62 (Impaired for VSCI). Initial Listing Date: 1996; This segment is included in the EPA approved Blacks Run benthic TMDL. Federal TMDL ID # 9510

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B26R_BLK01A00 / Blacks Run / Blacks Run from the headwaters downstream to its confluence with Cooks Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1996	M, 2yr	11.64

Blacks Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.64**

Sources:

Municipal (Urbanized High Density Area) Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B27R-01-BAC** **Pleasant Run**

Cause Location: Pleasant Run from the headwaters downstream to its confluence with North River. (Start Mile: 6.74 End Mile: 0.00 Total Impaired Size: 6.74 Miles)

City / County: Rockingham Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BPLR000.16 (12 exceedences of 12 samples for e-coli). Initial Listing Date: 1996; This segment is included in the EPA approved Pleasants Run bacteria TMDL. Federal TMDL ID # 9469

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B27R_PLR01A00 / Pleasant Run / Pleasant Run from the headwaters downstream to its confluence with North River.	4A	Escherichia coli	2004	L	6.73

Pleasant Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.73**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B27R_PLR01A00 / Pleasant Run / Pleasant Run from the headwaters downstream to its confluence with North River.	4A	Fecal Coliform	1996	L	6.73

Pleasant Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**6.73**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B27R-01-BEN** **Pleasant Run**

Cause Location: Pleasant Run from the headwaters downstream to its confluence with North River. (Start Mile: 6.74 End Mile: 0.00 Total Impaired Size: 6.74 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BPLR000.08 (Impaired for VSCI). Initial Listing Date: 1996; This segment is included in the EPA approved Pleasants Run benthic TMDL. Federal TMDL ID # 9508

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B27R_PLR01A00 / Pleasant Run / Pleasant Run from the headwaters downstream to its confluence with North River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	M	6.73

Pleasant Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.73**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B28R-01-BAC** **Naked Creek**

Cause Location: Naked Creek from the headwaters downstream to its confluence with North River. (Start Mile: 7.12 End Mile: 0.00 Total Impaired Size: 7.12 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BNKD000.80 (35 exceedences of 59 samples for e-coli), 1BNKD-NC5-FOSR (17 exceedences of 18 samples for e-coli in 2016, no data in 2018) and 1BNKD-NC6-FOSR (17 exceedences of 18 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 1996; This segment is located within the EPA approved Naked Creek bacteria TMDL. Federal TMDL ID # 7710

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B28R_NKD01A00 / Naked Creek / Naked Creek from the Route 696 bridge crossing downstream to its confluence with North River.	4A	Escherichia coli	2004	L	3.79
VAV-B28R_NKD02A10 / Naked Creek / Naked Creek from the headwaters downstream to the Route 696 bridge crossing.	4A	Escherichia coli	2004	L	3.33

Naked Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.12**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B28R_NKD01A00 / Naked Creek / Naked Creek from the Route 696 bridge crossing downstream to its confluence with North River.	4A	Fecal Coliform	1996	L	3.79
VAV-B28R_NKD02A10 / Naked Creek / Naked Creek from the headwaters downstream to the Route 696 bridge crossing.	4A	Fecal Coliform	1996	L	3.33

Naked Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**7.12**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B28R-02-BAC** **North Fork Naked Creek**

Cause Location: North Fork Naked Creek from the headwaters downstream to its confluence with Naked Creek. (Start Mile: 5.25 End Mile: 0.00 Total Impaired Size 5.25 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BNKN-NC2-FOSR (10 exceedences of 18 samples for e-coli in 2016, no data in 2018); 1BNKN-NC3-FOSR (9 exceedences of 18 samples for e-coli in 2016, no data in 2018) and 1BNKN-NC4-FOSR (5 exceedences of 6 samples for e-coli in 2016, no data in 2018). Initial Listing 2012. This segment included in the EPA approved Naked Creek Bacteria TMDL. Federal TMDL ID: 7710

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B28R_NKN01A00 / North Fork Naked Creek / North Fork Naked Creek from the headwaters downstream to its confluence with Naked Creek.	4A	Escherichia coli	2012	L	5.24

North Fork Naked Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.24**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B29R-01-BAC** **Congers Creek/Duck Run/Mill Creek**

Cause Location: Congers Creek from the headwaters downstream to its confluence with Duck Run; Duck Run from the headwaters downstream to its confluence with Mill Creek, Mill Creek from the headwaters downstream to its confluence with North River. (Start Mile: 5.99, 2.88, 6.26 End Mile: 0.00, 0.00, 0.00 Total Impaired Size: 5.99 Miles, 2.88 Miles, 6.26 Miles)

City / County: Rockingham Co.

Use(s): Recreation

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

These segments remain impaired for recreational use based on exceedences of the fecal coliform and e-coli bacteria standards at station 1BCNG000.03, 1BDRK000.18 and 1BMIC001.00 (10 exceedences of 12 samples for e-coli). Initial Listing Date: 1996; These segments are included in the EPA approved Mill Creek TMDL for bacteria. Federal TMDL ID # 9468

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B29R_MIC01A00 / Mill Creek / Mill Creek from its confluence with Duck Run downstream to its confluence with the South Fork Shenandoah River.	4A	Escherichia coli	2004	L	2.78
VAV-B29R_MIC02A00 / Mill Creek / Mill Creek from the headwaters downstream to its confluence with Duck Run.	4A	Escherichia coli	2004	L	3.46

Congers Creek/Duck Run/Mill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.24**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B29R_CNG01A00 / Congers Creek / Congers Creek from the Lake Shenandoah Dam outfall downstream to its confluence with Mill Creek.	4A	Fecal Coliform	2004	L	3.20
VAV-B29R_CNG02A10 / Congers Creek / Congers Creek from the headwaters downstream to the upper end of Lake Shenandoah.	4A	Fecal Coliform	2004	L	2.79
VAV-B29R_DKR01A00 / Duck Run / Duck Run from its headwaters downstream to its confluence with Mill Creek.	4A	Fecal Coliform	1996	L	2.87
VAV-B29R_MIC01A00 / Mill Creek / Mill Creek from its confluence with Duck Run downstream to its confluence with the South Fork Shenandoah River.	4A	Fecal Coliform	1996	L	2.78
VAV-B29R_MIC02A00 / Mill Creek / Mill Creek from the headwaters downstream to its confluence with Duck Run.	4A	Fecal Coliform	1996	L	3.46

Congers Creek/Duck Run/Mill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**15.10**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B29R-01-BEN** **Mill Creek**

Cause Location: Mill Creek from the headwaters downstream to its confluence with North River. (Start Mile: 6.26 End Mile: 0.00 Total Impaired Size: 6.26 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BMIC001.00 (Impaired for VSCI). Initial Listing Date: 1996; This segment is included in the EPA approved Mill Creek benthic TMDL. Federal TMDL ID # 9676

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B29R_MIC01A00 / Mill Creek / Mill Creek from its confluence with Duck Run downstream to its confluence with the South Fork Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	M	2.78
VAV-B29R_MIC02A00 / Mill Creek / Mill Creek from the headwaters downstream to its confluence with Duck Run.	4A	Benthic-Macroinvertebrate Bioassessments	1996	M	3.46

Mill Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.24**

Sources:

Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B30R-01-BAC** **South River**

Cause Location: South River from the headwaters downstream to its confluence with Stony Run. (Start Mile: 52.54 End Mile: 40.11 Total Impaired Size: 12.43 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BSTH041.68 (39 exceedences of 71 samples for e-coli) and 1BSTH044.90 (4 exceedences of 6 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 1996; This segment was included in the EPA approved Middle River/South River bacteria TMDL. Federal TMDL ID # 7700

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B30R_STH01A00 / South River / South River from the headwaters downstream to its confluence with Stony Run.	4A	Escherichia coli	2008	L	12.42

South River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**12.42**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B30R_STH01A00 / South River / South River from the headwaters downstream to its confluence with Stony Run.	4A	Fecal Coliform	1996	L	12.42

South River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**12.42**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B30R-02-PH** **Loves Run**

Cause Location: Loves Run from the headwaters downstream to its confluence with the South River. (Start Mile: 5.64 End Mile: 0.00 Total Impaired Size: 5.64 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA AU14 (12 excursions of 12 samples for pH) This data is now outside the assessment data window, however the impairment must carry forward. Level II data at this site indicates continued impairment (1 excursion of 1 sample for pH in 2016, no data in 2018). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B30R_LOV01A00 / Loves Run / Loves Run from a point 2.7 miles upstream of South River downstream to its confluence with South River.	5A	pH	2006	M	2.70
VAV-B30R_LOV02A10 / Loves Run / Loves Run from the headwaters downstream to a point 2.7 miles upstream of its confluence with South River.	5A	pH	2006	M	2.93

Loves Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.63**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B30R-03-BAC** **Pine Run**

Cause Location: Pine Run from the headwaters downstream to its confluence with the South River. (Start Mile: 20.38 End Mile: 0.00 Total Impaired Size: 20.38 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BPNE000.04 (3 exceedences of 6 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2006. This segment is included in the EPA approved South River bacteria TMDL. Federal TMDL ID # 7700

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B30R_PNE01A00 / Pine Run / Pine Run and tributaries from the headwaters downstream to its confluence with South River.	4A	Escherichia coli	2006	L	20.38

Pine Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**20.38**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B30R-03-BEN** **Pine Run**

Cause Location: Pine Run from the headwaters downstream to its confluence with the South River. (Start Mile: 20.38 End Mile: 0.00 Total Impaired Size: 20.38 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for benthics at station: 1BPNE001.60 (Impaired for VSCI). Initial Listing Date: 2014

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B30R_PNE01A00 / Pine Run / Pine Run and tributaries from the headwaters downstream to its confluence with South River.	5A	Benthic-Macroinvertebrate Bioassessments	2014	L	20.38

Pine Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**20.38**

Sources:

Agriculture Non-Point Source

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31L-01-PH** **Coles Run Reservoir**

Cause Location: Coles Run Reservoir (Total Impaired Size: 10.84 Acres)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This lake is impaired due to excursions of the pH WQS at station: 1BCLS003.60 (35 excursions of 35 samples for pH). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31L_00 / Coles Run Reservoir / Coles Run Reservoir	5A	pH	2008	L	10.84

Coles Run Reservoir **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		**10.84**	

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-01-BAC** **Back Creek**

Cause Location: Back Creek from its confluence with Toms Branch downstream to the confluence with South River. (Start Mile: 6.01 End Mile 0.00 Total Impaired Size 6.01 Miles)

City / County: Augusta Co.

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at station 1BBCK000.78. (2 exceedences of 9 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2012. This impairment was shortened in 2018 due to additional data upstream indicating fully supporting status, 2 upstream units delisted 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_BCK01A00 / Back Creek / Back Creek from its confluence with Toms Branch downstream to its confluence with South River.	5A	Escherichia coli	2012	L	6.01

Back Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.01**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-01-BEN** **Back Creek**

Cause Location: Back Creek from its confluence with Toms Branch downstream to the confluence with South River. (Start Mile: 6.01 End Mile 0.00 Total Impaired Size 6.01 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at station 1BBCK000.78 (Impaired for VSCI). Initial Listing Date 2002. This impairment was shortened in 2018 due to additional data upstream indicating fully supporting status, 2 upstream units delisted 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_BCK01A00 / Back Creek / Back Creek from its confluence with Toms Branch downstream to its confluence with South River.	5A	Benthic-Macroinvertebrate Bioassessments	2002	L	6.01

Back Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.01**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-02-BEN** **Mills Creek**

Cause Location: Mills Creek from the headwaters downstream to its confluence with Back Creek. (Start Mile: 9.14 End Mile: 0.00 Total Impaired Size: 9.14 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at USFS Station: 5116 (Impaired for VSCI) and 1BMLS002.37 (Impaired for VSCI). Initial Listing Date: 2002.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_MLS01A02 / Mills Creek / Mills Creek from a point 1.8 miles upstream of Back Creek downstream to its confluence with Back Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2002	L	1.66
VAV-B31R_MLS02A10 / Mills Creek / Mills Creek from the South River Sanitary District's raw water intake downstream to a point 1.8 miles upstream of Back Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2002	L	2.44
VAV-B31R_MLS03A10 / Mills Creek / Mills Creek from the headwaters downstream to the South River Sanitary District's raw water intake.	5A	Benthic-Macroinvertebrate Bioassessments	2002	L	5.02

Mills Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.12**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-02-PH** **Mills Creek**

Cause Location: Mills Creek from the headwaters downstream to its confluence with Back Creek. (Start Mile: 9.14 End Mile: 0.00 Total Impaired Size: 9.14 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station 1BMLS002.37 (2 excursions of 6 samples for pH) and VT40-UVA (12 excursions of 24 samples for pH, Level II data). Initial Listing Date: 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_MLS01A02 / Mills Creek / Mills Creek from a point 1.8 miles upstream of Back Creek downstream to its confluence with Back Creek.	5A	pH	2018	L	1.66
VAV-B31R_MLS02A10 / Mills Creek / Mills Creek from the South River Sanitary District's raw water intake downstream to a point 1.8 miles upstream of Back Creek.	5A	pH	2018	L	2.44
VAV-B31R_MLS03A10 / Mills Creek / Mills Creek from the headwaters downstream to the South River Sanitary District's raw water intake.	5A	pH	2018	L	5.02

Mills Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**9.12**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-03-BEN** **Toms Branch**

Cause Location: Toms Branch from the headwaters downstream to its confluence with Back Creek. (Start Mile: 3.49 End Mile: 0.00 Total Impaired Size: 3.49 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is considered impaired for aquatic life use based on moderately impaired benthic assessment by the U.S. Forest Service at site 5104 in the 2004 assessment. Newer data indicate improvement at this site, however, additional surveys are needed for de-listing. This impairment was determined to be natural in the 2004 assessment and that categorization will carry to the 2016 cycle. Initial Listing Date: 2002.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_TMS01A02 / Toms Branch / Toms Branch from a point 1.1 miles upstream of Back Creek downstream to its confluence with Back Creek.	4C	Benthic-Macroinvertebrate Bioassessments			1.15
VAV-B31R_TMS02A10 / Toms Branch / Toms Branch from the headwaters downstream to a point 1.1 miles upstream of Back Creek.	4C	Benthic-Macroinvertebrate Bioassessments			2.34

Toms Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.49**

Sources:

Drought-related Impacts

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-04-PH** **Coles Run**

Cause Location: Coles Run from the headwaters downstream to its confluence with South River. (Start Mile: 6.89 End Mile: 0.00 Total Impaired Size: 6.89 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA AU16 (12 excursions of 12 samples for pH in 2010, 1 excursion of 1 samples in 2016 with Level II data indicate continued impairment, the impairment carries forward, no data in 2018). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_CLS01A00 / Coles Run / Coles Run from the South River Sanitary District's raw water intake (Coles Run Dam) downstream to its confluence with South River.	5A	pH	2006	M	4.25
VAV-B31R_CLS02A10 / Coles Run / Coles Run from the headwaters downstream to the upper end of the Coles Run Reservoir.	5A	pH	2006	M	2.63

Coles Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**6.88**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-05-PH** **Johns Run**

Cause Location: Johns Run from the headwaters downstream its confluence with South River. (Start Mile: 5.45 End Mile: 0.00 Total Impaired Size: 5.45 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA AU15 (12 excursions of 12 samples for pH in 2010, 1 excursion of 1 samples in 2016 with Level II data indicate continued impairment, the impairment carries forward, no data in 2018). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_JHN01A00 / Johns Run / Johns Run from the headwaters downstream to its confluence with South River.	5A	pH	2006	M	5.45

Johns Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.45**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-06-PH** **Kennedy Creek**

Cause Location: Kennedy Creek and tributaries from the headwaters downstream to its confluence with South River. (Start Mile: 15.47 End Mile: 0.00 Total Impaired Size: 15.47 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA VT39 (12 excursions of 12 samples for pH in 2010, 24 excursions of 24 samples in 2018 with Level II data indicate continued impairment, the impairment carries forward). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_KND01A00 / Kennedy Creek / Kennedy Creek and tributaries from the headwaters downstream to its confluence with South River.	5A	pH	2006	M	15.47

Kennedy Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**15.47**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-07-PH** **Orebank Creek**

Cause Location: Orebank Creek from the headwaters downstream to its confluence with Back Creek. (Start Mile: 3.55 End Mile: 0.00 Total Impaired Size: 3.55 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA OB01 (12 excursions of 12 samples for pH in 2010, no new data are available in 2018; AU35-UVA (1 excursion of 1 sample Level II data indicate continued impairment, the impairment carries forward). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_ORE01A02 / Orebank Creek / Orebank Creek from the headwaters downstream to its confluence with Back Creek.	5A	pH	2006	M	3.55

Orebank Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.55**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-01-BEN** **South River**

Cause Location: South River from its confluence with Back Creek downstream to its confluence with the North River. (Start Mile: 29.32 End Mile: 0.00 Total Impaired Size 29.32) (Impaired was lengthened in 2012.

City / County: Augusta Co. Rockingham Co. Waynesboro City

Use(s): Aquatic Life

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

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BSTH02.14 (Impaired for VSCI); 1BSTH0019.52 (Impaired for VSCI); 1BSTH021.59 (Impaired for VSCI) and 1BSTH027.08 (Impaired for VSCI). Initial Listing Date: 1996. This impairment is included in the EPA approved South River benthic TMDL. Federal TMDL ID # 38138 & 38139.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B32R_STH01A04 / South River / South River from its confluence with Stull Run downstream to its confluence with North River.	4A	Benthic-Macroinvertebrate Bioassessments	2012	L	5.37
VAV-B32R_STH02A04 / South River / South River from its confluence with Porterfield Run downstream to its confluence with Stull Run.	4A	Benthic-Macroinvertebrate Bioassessments	2008	L	11.55
VAV-B32R_STH03A04 / South River / South River from the INVISTA discharge downstream to its confluence with Porterfield Run.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	7.44
VAV-B32R_STH04A04 / South River / South River from its confluence with Coiner Spring intermittent run downstream to the INVISTA discharge.	4A	Benthic-Macroinvertebrate Bioassessments	2012	L	2.11
VAV-B32R_STH05A04 / South River / South River from its confluence with Back Creek downstream to its confluence with Coiner Spring intermittent run.	4A	Benthic-Macroinvertebrate Bioassessments	2012	L	2.82

South River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**29.29**

Sources:

Municipal (Urbanized High Density Area)

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-02-BAC** **South River**

Cause Location: South River from its confluence with Stony Creek downstream to its confluence with the North River. (Start Mile: 40.11 End Mile: 0.00 Total Impaired Size: 40.11 Miles) Impairment lengthened in 2012 with additional upstream assessment unit.

City / County: Augusta Co. Rockingham Co. Waynesboro City

Use(s): Recreation

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

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BSTH002.14 (2 exceedences of 12 samples for e-coli); 1BSTH007.80 (5 exceedences of 47 samples for e-coli); 1BSTH020.85 (7 exceedences of 59 samples for e-coli); 1BSTH027.85 (11 exceedences of 71 samples for e-coli) and 1BSTH031.45 (4 exceedences of 12 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 1996. This impairment is included in the EPA approved South River bacteria TMDL. Federal TMDL ID # 38140.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B31R_STH01A00 / South River / South River from its confluence with Stony Creek downstream to its confluence with Back Creek.	4A	Escherichia coli	2012	L	10.78
VAV-B32R_STH01A04 / South River / South River from its confluence with Stull Run downstream to its confluence with North River.	4A	Escherichia coli	2014	L	5.37
VAV-B32R_STH02A04 / South River / South River from its confluence with Porterfield Run downstream to its confluence with Stull Run.	4A	Escherichia coli	2006	L	11.55
VAV-B32R_STH03A04 / South River / South River from the INVISTA discharge downstream to its confluence with Porterfield Run.	4A	Escherichia coli	2012	L	7.44
VAV-B32R_STH04A04 / South River / South River from its confluence with Coiner Spring intermittent run downstream to the INVISTA discharge.	4A	Escherichia coli	2010	L	2.11
VAV-B32R_STH05A04 / South River / South River from its confluence with Back Creek downstream to its confluence with Coiner Spring intermittent run.	4A	Escherichia coli	2006	L	2.82

South River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**40.07**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B32R_STH01A04 / South River / South River from its confluence with Stull Run downstream to its confluence with North River.	4A	Fecal Coliform	1996	L	5.37
VAV-B32R_STH02A04 / South River / South River from its confluence with Porterfield Run downstream to its confluence with Stull Run.	4A	Fecal Coliform	1996	L	11.55
VAV-B32R_STH03A04 / South River / South River from the INVISTA discharge downstream to its confluence with Porterfield Run.	4A	Fecal Coliform	1996	L	7.44

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

Potomac and Shenandoah River Basins

South River

Recreation

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**24.36**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-02-HG** **South River/South Fork Shenandoah River/North Fork Shenandoah River/Shenandoah River**

Cause Location: South River from the INVISTA discharge downstream to its confluence with the South Fork Shenandoah River: Start Mile 24.37 End Mile 0.00 Total Miles 24.37; the entire South Fork Shenandoah River Start Mile 101.19 End Mile 0.00 Total Miles 101.19; North Fork Shenandoah River from old Riverton Dam (removed) downstream to its confluence with the South Fork Shenandoah River Start Mile .71 End Mile 0.00 Total Miles: .71 and the Shenandoah River to its confluence with Craig Run. Start Mile 56.23 End Mile 28.2 Total Miles 28.03 Miles (Total Miles of Impairment 154.3)

City / County: Augusta Co. Clarke Co. Page Co. Rockingham Co. Warren Co.
Waynesboro City

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 4A

This segment is impaired due to the presence of Hg in fish tissue at stations: 1BSTH004.21 (4 samples of Hg (Redbreast Sunfish, Lmouth Bass (2) & Wh. Sucker) 2005); 1BSTH020.44 (2 samples of Hg (Lmouth Bass & Wh. Sucker) 2005); 1BSTH022.75 (3 samples of Hg (Lmouth Bass (2) and White Sucker) 2005); 1BSTH023.73 (5 samples of Hg in Redbreast Sunfish, 3 samples in Largemouth Bass and 1 sample in Smallmouth Bass 2005); 1BSTH025.10 (2 samples of Hg (Redbreast Sunfish & Largemouth Bass) 2005); 1BSSF063.17 (2 samples of Hg in Redbreast Sunfish and Lmouth Bass); 1BSSF000.19 (01 Hg Sed, 05 Hg in 2 species); 1BSHN053.63 (3 samples of Hg in Bluegill, Smouth & Lmouth Bass); 1BSHN028.15 (2 samples below VDH threshold for Hg); 1BSHN038.27 (3 samples of Hg in Lmouth Bass (2) & Channel Catfish). Initial Listing Date: 1998. This segment was lengthened in 2008 as the presence of Hg was found further downstream than in the 2006 cycle. (128.82 miles to 155.11 miles) VDH Fish Consumption Advisory Federal TMDL ID #'s 38683, 38684, 38685, 38698, 38699 38700, 38701, 38702, 38703, 38704, 38705, 38706, 38707, 38708 and 38709

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B32R_STH01A04 / South River / South River from its confluence with Stull Run downstream to its confluence with North River.	4A	Mercury in Fish Tissue	1998	L	5.37
VAV-B32R_STH02A04 / South River / South River from its confluence with Porterfield Run downstream to its confluence with Stull Run.	4A	Mercury in Fish Tissue	1998	L	11.55
VAV-B32R_STH03A04 / South River / South River from the INVISTA discharge downstream to its confluence with Porterfield Run.	4A	Mercury in Fish Tissue	1998	L	7.44
VAV-B33R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with the North & South Rivers downstream to its confluence with Big Run.	4A	Mercury in Fish Tissue	1998	L	7.88
VAV-B35R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Dry Run downstream to its confluence with Naked Creek.	4A	Mercury in Fish Tissue	1998	L	3.55
VAV-B35R_SSF01B14 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Hawksbill Creek downstream to its confluence with Dry Run.	4A	Mercury in Fish Tissue	1998	L	4.04
VAV-B35R_SSF02A10 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Big Run downstream to its confluence with Hawksbill Creek.	4A	Mercury in Fish Tissue	1998	L	7.08
VAV-B37R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Cub Run downstream to its confluence with Stony Run just below the Route 340 bridge at	4A	Mercury in Fish Tissue	1998	L	4.98
VAV-B37R_SSF02A10 / South Fork Shenandoah River / South Fork Shenandoah River from the Shenandoah STP outfall	4A	Mercury in Fish Tissue	1998	L	12.16

downstream to its confluence with Cub Run.					
VAV-B37R_SSF02B14 / South Fork Shenandoah River / South Fork Shenandoah River from Naked Creek downstream to the Shenandoah STP outfall.	A	Mercury in Fish Tissue	1998	L	1.98
VAV-B38R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from the Whitehouse Landing downstream to its confluence with Hawksbill Creek.	A	Mercury in Fish Tissue	1998	L	10.46
VAV-B38R_SSF02A10 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Stony Run downstream to the Whitehouse Landing.	4A	Mercury in Fish Tissue	1998	L	5.98
VAV-B40R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from the Andy Guest State Park STP outfall downstream to its confluence with Gooney Run.	4A	Mercury in Fish Tissue	2006	L	6.60
VAV-B40R_SSF01B14 / South Fork Shenandoah River / South Fork Shenandoah River from the Bentonville Landing Bridge downstream to the Andy Guest State Park STP outfall.	4A	Mercury in Fish Tissue	1998	L	2.17
VAV-B40R_SSF01C14 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Dry Mine Run downstream to the Bentonville Landing Bridge.	4A	Mercury in Fish Tissue	1998	L	10.35
VAV-B40R_SSF02A00 / South Fork Shenandoah River / South Fork Shenandoah River from Seekford's Ford downstream to its confluence with Dry Mine Run.	4A	Mercury in Fish Tissue	1998	L	1.22
VAV-B40R_SSF03A14 / South Fork Shenandoah River / South Fork Shenandoah River from the Foster's Landing Rapids downstream to Seekford's Ford.	4A	Mercury in Fish Tissue	1998	L	5.39
VAV-B40R_SSF04A14 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Hawksbill Creek downstream to the Foster's Landing Rapids	4A	Mercury in Fish Tissue	1998	L	6.96
VAV-B41R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Cabin Run downstream to its confluence with the North Fork Shenandoah River.	4A	Mercury in Fish Tissue	2002	L	1.85
VAV-B41R_SSF02A00 / South Fork Shenandoah River / South Fork Shenandoah River from the Rivermont Drive Bridge downstream to its confluence with Cabin Run.	4A	Mercury in Fish Tissue	2002	L	2.45
VAV-B41R_SSF03A00 / South Fork Shenandoah River / South Fork Shenandoah River from the 5 mile upper limit of the PWS designation for the Front Royal Public Water Intake downstream to the Rivermont Drive Bridge.	4A	Mercury in Fish Tissue	1998	L	1.54
VAV-B41R_SSF04A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Gooney Run downstream to the 5 mile upper limit of the PWS designation for the Front Royal Public Water Intake.	4A	Mercury in Fish Tissue	1998	L	4.47
VAV-B51R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from the old dam site at the boat ramp downstream to its confluence with the South Fork Shenandoah River.	4A	Mercury in Fish Tissue	2002	L	0.71
VAV-B55R_SHN01A00 / Shenandoah River / Shenandoah River from its confluence with Oregon Hollow downstream to its confluence with Long Branch.	4A	Mercury in Fish Tissue	2008	L	8.51
VAV-B55R_SHN01B10 / Shenandoah River / Shenandoah River from the power plant dam near Front Royal downstream to its confluence with Oregon Hollow.	4A	Mercury in Fish Tissue	2008	L	4.42

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VAV-B55R_SHN02A00 / Shenandoah River / Shenandoah River from the confluence of the North and South Fork's downstream to the power plant dam near Front Royal.	4A	Mercury in Fish Tissue	1998	L	3.66
VAV-B57R_SHN01A00 / Shenandoah River / Shenandoah River from the 5 mile upper limit of the PWS designation for the Berryville Public Water Intake downstream to its confluence with Craig Run.	4A	Mercury in Fish Tissue	2008	L	2.72
VAV-B57R_SHN02A00 / Shenandoah River / Shenandoah River from its confluence with Spout Run downstream to the 5 mile upper limit of the PWS designation for the Berryville Public Water Intake.	4A	Mercury in Fish Tissue	2008	L	3.31
VAV-B57R_SHN03A00 / Shenandoah River / Shenandoah River from its confluence with Long Branch downstream to its confluence with Spout Run.	4A	Mercury in Fish Tissue	2008	L	5.40

South River/South Fork Shenandoah River/North Fork Shenandoah River/Shenandoah River **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**154.20**

Sources:

Contaminated Sediments

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-02-PCB** **South River**

Cause Location: South River from its confluence with Stull Run downstream to its confluence with North River. (Start Mile: 5.37 End Mile: 0.00 Total Impaired Size: 5.37 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Fish Consumption

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

This segment is impaired due to the presence of PCB's in fish tissue at station: 1BSTH000.19 (2 samples of PCB's (Carp and Redhorse Sucker (2005). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B32R_STH01A04 / South River / South River from its confluence with Stull Run downstream to its confluence with North River.	5A	PCB in Fish Tissue	2008	L	5.37

South River **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**5.37**

Sources:

Source Unknown

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-03-PH** **Paine Run**

Cause Location: Paine Run from the headwaters downstream to its confluence with South River. (Start Mile: 6.75 End Mile: 0.00 Total Impaired Size: 6.75 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at stations: UVA PAIN (12 excursions of 12 samples for pH, old data, however 681 excursions of 681 samples for pH in 2018 Level II data) and 1BPAN000.20 (3 excursions of 12 samples for pH) and 1BPAN-2.77-SNP (6 excursions of 6 samples for pH). Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B32R_PAN01A00 / Paine Run / Paine Run from a point 1.7 miles upstream of South River downstream to its confluence with South River.	5A	pH	2004	M	1.90
VAV-B32R_PAN02A10 / Paine Run / Paine Run from the headwaters downstream to a point 1.7 miles upstream of South River.	5A	pH	2004	M	4.83

Paine Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**6.73**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-04-PH** **Meadow Run**

Cause Location: Meadow Run from the headwaters downstream its confluence with South River. (Start Mile: 8.82 End Mile: 0.00 Total Impaired Size: 8.82 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

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

This segment is impaired due to excursions of the pH WQS at station: UVA VT36 (12 excursions of 12 samples for pH in 2010 cycle, 24 excursions of 24 samples in 2018 with Level II data) and 1BMDW-3.32-SNP (6 excursions of 6 samples for pH). Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B32R_MDW01A00 / Meadow Run / Meadow Run and tributary from the headwaters downstream to its confluence with South River.	5A	pH	2004	M	8.82

Meadow Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**8.82**

Sources:

Atmospheric Deposition - Acidity

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

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-05-BAC** **Steele Run**

Cause Location: Steele Run from the headwaters downstream to its confluence with South River. (Start Mile: 3.78 End Mile: 0.00 Total Impaired Size: 3.78 Miles)

City / County: Augusta Co. Waynesboro City

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BSTL002.14 (8 exceedences of 12 samples for e-coli). Initial Listing Date: 2016. This segment is included in the South River Bacteria TMDL. Federal TMDL ID# 38140.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B32R_STL01A16 / Steele Run / Steele Run from the headwaters downstream to its confluence with South River.	4A	Escherichia coli	2016	L	3.78

Steele Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.78**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B33R-01-BAC** **South Fork Shenandoah River**

Cause Location: South Fork Shenandoah River from its confluence with the North & South Rivers downstream to its confluence with Big Run. (Start Mile: 101.19 End Mile: 93.31 Total Impaired Size: 7.88 Miles) This impairment is a re-listing of an upstream segment that was delisted in 2014. The remaining downstream impaired segment that remained following 2014 was de-listed in 2018.

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BSSF0100.10 (9 exceedences of 72 samples for e-coli). Initial Listing Date: 2002. This impairment is included in the EPA approved South Fork Shenandoah River bacteria TMDL. Federal TMDL ID # 38140.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B33R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with the North & South Rivers downstream to its confluence with Big Run.	4A	Escherichia coli	2008	L	7.88

South Fork Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.88**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B33R-01-BEN** **South Fork Shenandoah River**

Cause Location: South Fork Shenandoah River from its confluence with North and South Rivers downstream to its confluence with Hawksbill Creek. (Start Mile: 101.19 End Mile: 43.02 Total Impaired Size: 58.17 Miles)

City / County: Page Co. Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BSSF100.10 (Reserve Judgement for VSCI),1BSSF078.18 (Impaired for VSCI) and 1BSSF053.05 (Impaired for VSCI). Initial Listing Date: 1998. Federal TMDL ID # 9509, 9510, 24511

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B33R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with the North & South Rivers downstream to its confluence with Big Run.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	7.88
VAV-B35R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Dry Run downstream to its confluence with Naked Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	3.55
VAV-B35R_SSF01B14 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Hawksbill Creek downstream to its confluence with Dry Run.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.04
VAV-B35R_SSF02A10 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Big Run downstream to its confluence with Hawksbill Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	7.08
VAV-B37R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Cub Run downstream to its confluence with Stony Run just below the Route 340 bridge at	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.98
VAV-B37R_SSF02A10 / South Fork Shenandoah River / South Fork Shenandoah River from the Shenandoah STP outfall downstream to its confluence with Cub Run.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	12.16
VAV-B37R_SSF02B14 / South Fork Shenandoah River / South Fork Shenandoah River from Naked Creek downstream to the Shenandoah STP outfall.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	1.98
VAV-B38R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from the Whitehouse Landing downstream to its confluence with Hawksbill Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	10.46
VAV-B38R_SSF02A10 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Stony Run downstream to the Whitehouse Landing.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	5.98

South Fork Shenandoah River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**58.11**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B33R-02-PH** **Deep Run**

Cause Location: Deep Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 4.49 End Mile: 0.00 Total Impaired Size: 4.49 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to excursions of the pH WQS at station: UVA DR01 (12 excursions of 12 samples for pH) (This data is now outside the assessment data window, Level II data in 2016 are 41 excursions of 41 samples); 1BDPR002.09 (12 excursions of 12 samples for pH). Initial Listing Date: 2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B33R_DPR01A00 / Deep Run / Deep Run from a point 1.8 miles upstream of the South Fork Shenandoah River downstream to its confluence with the South Fork Shenandoah River.	5A	pH	2004	M	1.87
VAV-B33R_DPR02A10 / Deep Run / Deep Run from the headwaters downstream to point 1.8 miles upstream of the South Fork Shenandoah River.	5A	pH	2004	M	2.62

Deep Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.49**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B33R-03-PH** **Lower Lewis Run**

Cause Location: Lower Lewis Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 3.94 End Mile: 0.00 Total Impaired Size: 3.94 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to excursions of the pH WQS at station: UVA RH47 (12 excursions of 12 samples for pH) (This data is now outside the assessment data window); 1BLLW000.62 (1 excursion of 1 samples for pH); 1BLLW-2-SNP (2 excursions of 2 samples for pH). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B33R_LLW01A00 / Lower Lewis Run / Lower Lewis Run from the Shenandoah National Park boundary downstream to its confluence with the South Fork Shenandoah River.	5A	pH	2006	M	1.90
VAV-B33R_LLW02A10 / Lower Lewis Run / Lower Lewis Run from the headwaters downstream to the Shenandoah National Park boundary.	5A	pH	2006	M	2.03

Lower Lewis Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.93**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B34R-01-BAC** **Cub Run**

Cause Location: Cub Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 14.89 End Mile: 0.00 Total Impaired Size: 14.89 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BCBR000.80 (3 exceedences of 10 samples for e-coli) and 1BCBR007.42 (4 exceedences of 12 samples for e-coli). Initial Listing Date: 1998; This segment is included in the EPA approved Cub Run bacteria TMDL. Federal TMDL ID # 18237

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B34R_CBR01A00 / Cub Run / Cub Run from the headwaters downstream to its confluence with the South Fork Shenandoah River.	4A	Escherichia coli	2004	L	14.89

Cub Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.89**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B34R_CBR01A00 / Cub Run / Cub Run from the headwaters downstream to its confluence with the South Fork Shenandoah River.	4A	Fecal Coliform	1998	L	14.89

Cub Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**14.89**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-01-BAC** **Boone Run**

Cause Location: Boone Run and tributaries from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 13.82 End Mile: 0.00 Total Impaired Size: 13.82 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment remains impaired for recreational use due to exceedences of the e-coli bacteria WQS at station: 1BBON000.60 (24 exceedences of 47 samples for e-coli) and 1BBON001.46 (5 exceedences of 6 samples for e-coli). Initial Listing Date: 2002.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B35R_BON01A00 / Boone Run / Boone Run from the vicinity of Route 637 at East Point and tributary from the headwaters downstream to its confluence with the South Fork Shenandoah River.	5A	Escherichia coli	2010	L	6.52
VAV-B35R_BON02A10 / Boone Run / Boone Run and tributaries from the headwaters downstream to its confluence with an unnamed tributary in the vicinity of Route 637 at East Point.	5A	Escherichia coli	2010	L	7.29

Boone Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**13.81**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B35R_BON01A00 / Boone Run / Boone Run from the vicinity of Route 637 at East Point and tributary from the headwaters downstream to its confluence with the South Fork Shenandoah River.	5A	Fecal Coliform	2002	L	6.52
VAV-B35R_BON02A10 / Boone Run / Boone Run and tributaries from the headwaters downstream to its confluence with an unnamed tributary in the vicinity of Route 637 at East Point.	5A	Fecal Coliform	2002	L	7.29

Boone Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**13.81**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-02-BAC** **Quail Run**

Cause Location: Quail Run from the headwaters downstream to the Massanutten STP discharge. (Start Mile: 6.60 End Mile: 5.14 Total Impaired Size: 1.46 Miles). This impairment was shortened in 2018 with the delisting of two downstream segments that were fully supporting.

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BQAL005.29 (11 exceedences of 48 samples for e-coli). Initial Listing Date: 2004 (shortened 2018).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B35R_QAL03A00 / Quail Run / Quail Run from the headwaters downstream to the Massanutten STP discharge.	5A	Escherichia coli	2010	L	1.46

Quail Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.46**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-02-BEN** **Quail Run**

Cause Location: Quail Run from the Massanutten STP discharge downstream to its confluence with Boone Run. (Start Mile: 5.14 End Mile: 0.00 Total Impaired Size: 5.14 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BQAL004.30 (Impaired for VSCI). Initial Listing Date: 1998; This segment is included in the EPA approved Quail Run benthic TMDL. Federal TMDL ID # 20863 & 20864

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B35R_QAL01A00 / Quail Run / Quail Run from the Bloomer Springs Road bridge downstream to its confluence with Boone Run.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.39
VAV-B35R_QAL02A00 / Quail Run / Quail Run from the Massanutten STP discharge downstream to the Bloomer Springs Road bridge.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	0.73

Quail Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.12**

Sources:

Municipal Point Source Discharges

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-03-BEN** **Quail Run**

Cause Location: Quail Run from the headwaters downstream to the Massanutten STP discharge. (Start Mile: 6.60 End Mile: 5.14 Total Impaired Size: 1.46 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5C

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BQAL005.04 (Impaired for VSCI) and 1BQAL005.09 (Impaired for VSCI). Initial Listing Date: 2002.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B35R_QAL03A00 / Quail Run / Quail Run from the headwaters downstream to the Massanutten STP discharge.	5C	Benthic-Macroinvertebrate Bioassessments	2002	L	1.46

Quail Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.46**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-04-PH** **Two Mile Run**

Cause Location: Two Mile Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 5.06 End Mile: 0.00 Total Impaired Size: 5.06 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to excursions of the pH WQS at station: 1BTWO000.95 *8 excursions of 8 samples for pH); 1BTWO001.79 (8 excursions of 8 samples for pH); UVA VT53 (55 excursion of 55 samples for pH, Level II data). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B35R_TWO01A00 / Two Mile Run / Two Mile Run from a point approximately 1.4 miles upstream of the South Fork Shenandoah River downstream to its confluence with the South Fork Shenandoah River.	5A	pH	2006	M	1.53
VAV-B35R_TWO02A10 / Two Mile Run / Two Mile Run from the headwaters downstream to a point approximately 1.4 miles upstream of the South Fork Shenandoah River.	5A	pH	2006	M	3.52

Two Mile Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.05**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-05-PH** **One Mile Run**

Cause Location: One Mile Run from the headwaters downstream to its confluence with the South Fork Shenandoah River (Start Mile: 9.17 End Mile: 0.00, Total Impaired Size: 9.17 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to excursions of the pH WQS at station: 1BONE000.71 (5 excursions of 5 samples for pH); UVA RH52 (6 excursions of 6 samples for pH) This data is now outside the assessment window for 2018. Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B35R_ONE01A00 / One Mile Run / One Mile Run from a point approximately 1.5 miles upstream of the South Fork Shenandoah River downstream to its confluence with the South Fork Shenandoah River.	5A	pH	2010	M	1.62
VAV-B35R_ONE02A10 / One Mile Run / One Mile Run and tributaries from the headwaters downstream to a point approximately 1.5 miles upstream of the South Fork Shenandoah River.	5A	pH	2010	M	7.54

One Mile Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**9.16**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B36R-01-BEN** **Naked Creek**

Cause Location: Naked Creek including the East Branch from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 12.82 End Mile: 0.00 Total Impaired Size: 12.82 Miles)

City / County: Page Co. Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4C

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BNAK001.24 (Impaired for VSCI). Initial Listing Date: 1998. This impairment has been determined to be natural and is considered 4C by letter received from EPA TMDL Program Manager Helene Drago dated July 13, 2009.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B36R_NAK01A00 / Naked Creek / Naked Creek from its confluence with the East Branch Naked Creek downstream to its confluence with the South Fork Shenandoah River.	4C	Benthic-Macroinvertebrate Bioassessments			6.66
VAV-B36R_NKE01A10 / East Branch Naked Creek / East Branch Naked Creek from its headwaters downstream to its confluence with Naked Creek.	4C	Benthic-Macroinvertebrate Bioassessments			6.15

Naked Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**12.81**

Sources:

Natural Sources

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B37R-01-PCB** **South Fork Shenandoah River**

Cause Location: South Fork Shenandoah River from its confluence with Naked Creek downstream to its confluence with Stony Creek just above the Route 340 bridge at Alma. (Start Mile: 78.23 End Mile: 59.46 Total Impaired Size: 18.77)

City / County: Page Co. Rockingham Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Fish Tissue / 5A

This segment is impaired due to exceedences of the fish tissues screening value for PCB at stations: 1BSSF063.17 (2 samples of PCB in Lmouth Bass & Redbreast Sunfish) and 1BSSF078.24 (3 samples of PCB in White Sucker, Redbreast Sunfish & Smouth Bass). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B37R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Cub Run downstream to its confluence with Stony Run just below the Route 340 bridge at	5A	PCB in Fish Tissue	2010	L	4.98
VAV-B37R_SSF02A10 / South Fork Shenandoah River / South Fork Shenandoah River from the Shenandoah STP outfall downstream to its confluence with Cub Run.	5A	PCB in Fish Tissue	2010	L	12.16
VAV-B37R_SSF02B14 / South Fork Shenandoah River / South Fork Shenandoah River from Naked Creek downstream to the Shenandoah STP outfall.	5A	PCB in Fish Tissue	2010	L	1.98

South Fork Shenandoah River **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**19.12**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B37R-02-BAC** **Line Run**

Cause Location: Line Run from the headwaters downstream to its confluence with Honey Run. (Start Mile: 4.94 End Mile: 0.00 Total Impaired Size: 4.94 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BLIN001.60 (4 exceedences of 36 samples for e-coli in 2010, 2 of 33 in 2012, 1 of 24 in 2014, no data in 2016/18) Segment remains impaired in 2018. Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B37R_LIN01A06 / Line Run / Line Run from the headwaters downstream to its confluence with Honey Run.	5A	Escherichia coli	2006	L	4.93

Line Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.93**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B37R-03-BAC** **Honey Run**

Cause Location: Honey Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 5.11 End Mile: 0.00 Total Impaired Size: 5.11 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BHDY000.91 (2 exceedences of 12 samples for e-coli). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B37R_HDY01A00 / Honey Run / Honey Run from the headwaters downstream to its confluence with the South Fork Shenandoah River.	5A	Escherichia coli	2008	L	5.10

Honey Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.10**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B37R-04-TEMP** **Cub Run**

Cause Location: Cub Run in Page County from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 9.81 End Mile: 0.00 Total Impaired Size: 9.81 Miles)

City / County: Page Co. Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This segment is impaired due to exceedences of the temperature WQS at station: 1BCUB-FP12-FOSR (6 exceedences of 65 samples for temperature). Initial Listing Date: 2012

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B37R_CUB01A00 / Cub Run / Cub Run from its confluence with Pitt Spring Run downstream to its confluence with the South Fork Shenandoah River.	5A	Temperature, water	2012	L	2.87
VAV-B37R_CUB02A10 / Cub Run / Cub Run from the headwaters downstream to its confluence with Pitt Spring Run.	5A	Temperature, water	2012	L	6.92

Cub Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**9.79**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B38R-01-BAC** **Mill Creek**

Cause Location: Mill Creek from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 7.07 End Mile: 0.00 Total Impaired Size: 7.07 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BMLC000.40 (21 exceedences of 60 samples for e-coli). Initial Listing Date: 1998; This segment is included in the EPA approved Mill Creek bacteria TMDL. Federal TMDL ID # 19994

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B38R_MLC01A00 / Mill Creek / Mill Creek from the headwaters downstream to its confluence with South Fork Shenandoah River.	4A	Escherichia coli	2008	L	7.06

Mill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.06**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B38R_MLC01A00 / Mill Creek / Mill Creek from the headwaters downstream to its confluence with South Fork Shenandoah River.	4A	Fecal Coliform	1998	L	7.06

Mill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**7.06**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B38R-02-BAC** **Big Run**

Cause Location: Big Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 6.41 End Mile: 0.00 Total Impaired Size: 6.41 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BBIG000.48 (21 exceedences of 23 samples for e-coli in 2014, no data in 2016/18). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B38R_BIG01A00 / Big Run / Big Run from the headwaters downstream to its confluence with South Fork Shenandoah River.	5A	Escherichia coli	2006	L	6.40

Big Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.40**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-01-BAC** **Pass Run**

Cause Location: Pass Run from the headwaters downstream to its confluence with Hawksbill Creek. (Start Mile: 9.48 End Mile: 0.00 Total Impaired Size: 9.48 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BPSS000.64 (2 exceedences of 12 samples for e-coli in 2014, no data in 2016/18). Initial Listing Date: 2002; The segment is included in the EPA approved Hawksbill Creek bacteria TMDL. Federal TMDL ID # 19344

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_PSS01A00 / Pass Run / Pass Run from the headwaters downstream to its confluence with Hawksbill Creek.	4A	Escherichia coli	2004	L	9.47

Pass Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.47**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_PSS01A00 / Pass Run / Pass Run from the headwaters downstream to its confluence with Hawksbill Creek.	4A	Fecal Coliform	2002	L	9.47

Pass Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**9.47**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-02-BAC** **Hawksbill Creek**

Cause Location: Hawksbill Creek from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 19.89 End Mile: 0.00 Total Impaired Size: 19.89 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BHKS000.96 (25 exceedences of 60 samples for e-coli); 1BHKS007.77 (10 exceedences of 12 samples for e-coli); 1BHKS009.58 (3 exceedences of 12 samples for e-coli in 2016, no new data in 2018). Initial Listing Date: 2002. This segment is included in the EPA approved Hawksbill Creek bacteria TMDL. Federal TMDL ID # 19344

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_HKS01A00 / Hawksbill Creek / Hawksbill Creek from the Route 211 bypass downstream to its confluence with the South Fork Shenandoah River.	4A	Escherichia coli	2006	L	6.04
VAV-B39R_HKS01B10 / Hawksbill Creek / Hawksbill Creek from its confluence with East Hawksbill Creek downstream to the Route 211 bypass.	4A	Escherichia coli	2006	L	1.31
VAV-B39R_HKS02A00 / Hawksbill Creek / Hawksbill Creek from a point near the Route 340 and Route 624 intersection downstream to its confluence with East Hawksbill Creek.	4A	Escherichia coli	2004	L	5.91
VAV-B39R_HKS03A10 / Hawksbill Creek / Hawksbill Creek from a point near the St. Georges Church at Pine Grove downstream to a point near the intersection of Route 340 and Route 624.	4A	Escherichia coli	2004	L	3.84
VAV-B39R_HKS04A10 / Hawksbill Creek / Hawksbill Creek from the headwaters downstream to a point near the St. Georges Church at Pine Grove.	4A	Escherichia coli	2004	L	2.78

Hawksbill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**19.88**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_HKS02A00 / Hawksbill Creek / Hawksbill Creek from a point near the Route 340 and Route 624 intersection downstream to its confluence with East Hawksbill Creek.	4A	Fecal Coliform	2002	L	5.91
VAV-B39R_HKS03A10 / Hawksbill Creek / Hawksbill Creek from a point near the St. Georges Church at Pine Grove downstream to a point near the intersection of Route 340 and Route 624.	4A	Fecal Coliform	2002	L	3.84
VAV-B39R_HKS04A10 / Hawksbill Creek / Hawksbill Creek from the headwaters downstream to a point near the St. Georges Church at Pine Grove.	4A	Fecal Coliform	2002	L	2.78

Hawksbill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**12.53**

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-03-BAC** **East Hawksbill Creek**

Cause Location: East Hawksbill Creek from the headwaters downstream to its confluence with Hawksbill Creek. (Start Mile: 9.38 End Mile: 0.00 Total Impaired Size: 9.38 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BEHC001.18 (18 exceedences of 60 samples for e-coli). Initial Listing Date: 2006; This segment is included in the EPA approved Hawksbill Creek bacteria TMDL. Federal TMDL ID # 19344

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_EHC01A00 / East Hawksbill Creek / East Hawksbill Creek from the headwaters downstream to its confluence with Hawksbill Creek.	4A	Escherichia coli	2006	L	9.38

East Hawksbill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.38**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-03-BEN** **East Hawksbill Creek**

Cause Location: East Hawksbill Creek from the headwaters downstream to its confluence with Hawksbill Creek. (Start Mile: 9.38 End Mile: 0.00 Total Impaired Size: 9.38 Miles)

City / County: Page Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BEHC001.18 (Impaired for VSCI). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_EHC01A00 / East Hawksbill Creek / East Hawksbill Creek from the headwaters downstream to its confluence with Hawksbill Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	9.38

East Hawksbill Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.38**

Sources:

Agriculture Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-03-PH** **Rocky Branch**

Cause Location: Rocky Branch from the headwaters downstream to its confluence with Pass Run . (Start Mile: 4.25 End Mile: 0.00 Total Impaired Size: 4.25 Miles)

City / County: Page Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to excursions of the pH WQS at station: USGS 163054325. Initial Listing Date: 2004; This segment is impaired for aquatic life use based on excursions of the pH WQS at USGS site 163054325. This use support carries forward from the 2016 assessment as no new data are available for assessment in 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_RKB01A00 / Rocky Branch / Rocky Branch from the headwaters downstream to its confluence with Pass Run.	5A	pH	2004	L	4.25

Rocky Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.25**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-03-TEMP** **Pass Run**

Cause Location: Pass Run from the headwaters downstream to its confluence with Hawksbill Creek. (Start Mile: 9.48 End Mile: 0.00 Total Impaired Size: 9.48 Miles)

City / County: Page Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This segment is impaired due to exceedences of the temperature WQS at station: 1BPSS-FP17-FOSR (14 exceedences of 39 samples for temperature). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_PSS01A00 / Pass Run / Pass Run from the headwaters downstream to its confluence with Hawksbill Creek.	5A	Temperature, water	2010	L	9.47

Pass Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**9.47**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-04-BEN** **Dry Run**

Cause Location: Dry Run from the outfall of Lake Arrowhead downstream to its confluence with Hawksbill Creek. (Start Mile: 5.52 End Mile: 0.00 Total Impaired Size: 5.52 Miles)

City / County: Page Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BDRI000.21 (Impaired for VSCI). Initial Listing Date: 2012

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B39R_DRI01A00 / Dry Run / Dry Run from the Lake Arrowhead outfall downstream to its confluence with Hawksbill Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	5.52

Dry Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.52**

Sources:

Agriculture Dam or Impoundment Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-01-BAC** **Jeremys Run**

Cause Location: Jeremys Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 11.70 End Mile: 0.00 Total Impaired Size: 11.70 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BJER000.62 (14 exceedences of 36 samples for e-coli). Initial Listing Date: 2012

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B40R_JER01A00 / Jeremy's Run / Jeremy's Run from the Shenandoah National Park boundary downstream to its confluence with the South Fork Shenandoah River.	5A	Escherichia coli	2012	H	4.54
VAV-B40R_JER02A10 / Jeremy's Run / Jeremy's Run from the headwaters downstream to the Shenandoah National Park boundary.	5A	Escherichia coli	2012	H	7.15

Jeremys Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.69**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-02-BAC** **Flint Run**

Cause Location: Flint Run and tributary from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 12.59 End Mile: 0.00 Total Impaired Size: 12.59 Miles)

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment remains impaired due to exceedences of the e-coli WQS at station: 1BFNT002.16. (23 exceedences of 36 samples for e-coli). Initial Listing Date: 2004

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B40R_FNT01A00 / Flint Run / Flint Run from a point 4 miles upstream of the South Fork Shenandoah River downstream to its confluence with the South Fork Shenandoah River.	5A	Escherichia coli	2016	H	4.10
VAV-B40R_FNT02A10 / Flint Run / Flint Run from the headwaters downstream to a point 4 miles upstream of the South Fork Shenandoah River.	5A	Escherichia coli	2016	H	3.35
VAV-B40R_XFT01A10 / Flint Run X-trib / Flint Run X-trib from the headwaters downstream to its confluence with Flint Run.	5A	Escherichia coli	2016	H	5.13

Flint Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**12.58**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B40R_FNT01A00 / Flint Run / Flint Run from a point 4 miles upstream of the South Fork Shenandoah River downstream to its confluence with the South Fork Shenandoah River.	5A	Fecal Coliform	2004	H	4.10
VAV-B40R_FNT02A10 / Flint Run / Flint Run from the headwaters downstream to a point 4 miles upstream of the South Fork Shenandoah River.	5A	Fecal Coliform	2004	H	3.35
VAV-B40R_XFT01A10 / Flint Run X-trib / Flint Run X-trib from the headwaters downstream to its confluence with Flint Run.	5A	Fecal Coliform	2004	H	5.13

Flint Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**12.58**

Sources:

Agriculture Non-Point Source Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-03-BAC** **Gooney Run**

Cause Location: Gooney Run and tributaries (Greasy Run, Lands Run, Smith Creek) from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 20.18 End Mile: 0.00 Total Impaired Size: 20.18 Miles)

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BGNY000.04 (4 exceedences of 36 samples for e-coli). Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B40R_GNY01A00 / Gooney Run / Gooney Run from its confluence with Broad Run downstream to its confluence with the South Fork Shenandoah River.	5A	Escherichia coli	2010	H	6.73
VAV-B40R_GNY02A10 / Gooney Run / Gooney Run from its headwaters downstream to its confluence with Broad Run.	5A	Escherichia coli	2010	H	3.39
VAV-B40R_GRS01A10 / Greasy Run / Greasy Run from the headwaters downstream to its confluence with Gooney Run.	5A	Escherichia coli	2010	H	3.64
VAV-B40R_LND01A10 / Lands Run / Lands Run from its headwaters downstream to its confluence with Gooney Run.	5A	Escherichia coli	2010	H	3.97
VAV-B40R_SMC02A10 / Smith Creek / Smith Creek from the headwaters downstream to its confluence with Gooney Run.	5A	Escherichia coli	2010	H	2.44

Gooney Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**20.17**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-03-TEMP** **Gooney Run**

Cause Location: Gooney Run and tributary (Lands Run) from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 14.09 End Mile: 0.00 Total Impaired Size: 14.09 Miles.

City / County: Warren Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This segment is impaired due to exceedences of the temperature WQS at station: 1BGNY000.04 (4 exceedences of 36 samples for temperature). Initial Listing Date: 2018 (re-listing from 2016 of Stockable and Natural Trout waters)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B40R_GNY01A00 / Gooney Run / Gooney Run from its confluence with Broad Run downstream to its confluence with the South Fork Shenandoah River.	5A	Temperature, water	2006	L	6.73
VAV-B40R_GNY02A10 / Gooney Run / Gooney Run from its headwaters downstream to its confluence with Broad Run.	5A	Temperature, water	2008	L	3.39
VAV-B40R_LND01A10 / Lands Run / Lands Run from its headwaters downstream to its confluence with Gooney Run.	5A	Temperature, water	2008	L	3.97

Gooney Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**14.09**

Sources:

Source Unknown

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Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-04-TEMP** **Flint Run**

Cause Location: Flint Run from a point 4 miles upstream of its confluence with the South Fork Shenandoah River downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 4.10 End Mile: 0.00 Total Impaired Size: 4.10 Miles)

City / County: Warren Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This segment is impaired due to exceedences of the temperature WQS standard at station: 1BFNT-FW21-FOSR (9 exceedences of 38 samples for temperature in 2014, 2 of 16 samples in 2016, no new data in 2018). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B40R_FNT01A00 / Flint Run / Flint Run from a point 4 miles upstream of the South Fork Shenandoah River downstream to its confluence with the South Fork Shenandoah River.	5A	Temperature, water	2010	L	4.10

Flint Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**4.10**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B41R-01-BAC** **Happy Creek**

Cause Location: Happy Creek from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 8.55 End Mile: 0.00 Total Impaired Size: 8.55 Miles)

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment remains impaired due to exceedences of the e-coli WQS at station: 1BHPY001.29. (3 exceedences of 12 samples for e-coli) Initial Listing Date: 2004. This segment is included in the EPA Approved Happy Creek Bacteria TMDL Federal TMDL ID# 65527.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B41R_HPY01A00 / Happy Creek / Happy Creek from the Front Royal Public Water Intake downstream to its confluence with the South Fork Shenandoah River.	4A	Escherichia coli	2014	L	5.70
VAV-B41R_HPY02A00 / Happy Creek / Happy Creek from the headwaters downstream to the Front Royal Public Water Intake.	4A	Escherichia coli	2014	L	2.84

Happy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.54**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B41R_HPY01A00 / Happy Creek / Happy Creek from the Front Royal Public Water Intake downstream to its confluence with the South Fork Shenandoah River.	4A	Fecal Coliform	2004	L	5.70
VAV-B41R_HPY02A00 / Happy Creek / Happy Creek from the headwaters downstream to the Front Royal Public Water Intake.	4A	Fecal Coliform	2004	L	2.84

Happy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**8.54**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B41R-02-PCB** **South Fork Shenandoah River/North Fork Shenandoah River/Shenandoah River**

Cause Location: South Fork Shenandoah River from the Rivermont Drive Bridge downstream to the VA/WV state line on the Shenandoah River (inclusive of the North Fork Shenandoah River from its confluence with Passage Creek downstream to its confluence with the South Fork Shenandoah River). (Start Mile: 45.69 End Mile: 0.00 Total Impaired Size: 45.69 Miles)

City / County: Clarke Co. Warren Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCB in Fish Tissue / 4A

This segment is impaired due to the presence of PCB's in fish tissue at stations: 1BSSF000.19 (14 samples of PCB in Largemouth Bass (3), Redbreast Sunfish, Channel Catfish (5), Carp (5)); 1BSHN053.63 (9 samples of PCB in Carp (5), Lmouth Bass (1) & Channel Catfish (1), Smouth Bass (1) & Green Sunfish (1)); 1BSHN028.15 (10 samples with PCB in Carp (3), Channel Catfish (4), Shorthead Redhorse Sucker (1), Redbreast Sunfish (1) & Smouth Bass (1); 1BSHN038.27 (11 samples of PCB in Carp (6), Channel Catfish (1), Lmouth Bass (2) & Shorthead Redhorse Sucker (1) & Redbreast Sunfish (1). Initial Listing Date: 1998; This segment is included in the EPA approved Shenandoah River PCB TMDL. Federal TMDL ID # 7715 VDH Fish Consumption Advisory

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B41R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Cabin Run downstream to its confluence with the North Fork Shenandoah River.	4A	PCB in Fish Tissue	1998	L	1.85
VAV-B41R_SSF02A00 / South Fork Shenandoah River / South Fork Shenandoah River from the Rivermont Drive Bridge downstream to its confluence with Cabin Run.	4A	PCB in Fish Tissue	1998	L	2.45
VAV-B51R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from the old dam site at the boat ramp downstream to its confluence with the South Fork Shenandoah River.	4A	PCB in Fish Tissue	1998	L	0.71
VAV-B51R_NFS02A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Passage Creek downstream to the old dam site at the boat ramp.	4A	PCB in Fish Tissue	1998	L	4.71
VAV-B55R_SHN01A00 / Shenandoah River / Shenandoah River from its confluence with Oregon Hollow downstream to its confluence with Long Branch.	4A	PCB in Fish Tissue	1998	L	8.51
VAV-B55R_SHN01B10 / Shenandoah River / Shenandoah River from the power plant dam near Front Royal downstream to its confluence with Oregon Hollow.	4A	PCB in Fish Tissue	1998	L	4.42
VAV-B55R_SHN02A00 / Shenandoah River / Shenandoah River from the confluence of the North and South Fork's downstream to the power plant dam near Front Royal.	4A	PCB in Fish Tissue	1998	L	3.66
VAV-B57R_SHN01A00 / Shenandoah River / Shenandoah River from the 5 mile upper limit of the PWS designation for the Berryville Public Water Intake downstream to its confluence with Craig Run.	4A	PCB in Fish Tissue	1998	L	2.72
VAV-B57R_SHN02A00 / Shenandoah River / Shenandoah River from its confluence with Spout Run downstream to the 5 mile upper limit of the PWS designation for the Berryville Public Water Intake.	4A	PCB in Fish Tissue	1998	L	3.31
VAV-B57R_SHN03A00 / Shenandoah River / Shenandoah River from its confluence with Long Branch downstream to its confluence with Spout Run.	4A	PCB in Fish Tissue	1998	L	5.40

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Potomac and Shenandoah River Basins

VAV-B58R_SHN01A00 / Shenandoah River / Shenandoah River from its confluence with Dog Run downstream to the VA/WVA State Line.	4A	PCB in Fish Tissue	1998	L	5.10
VAV-B58R_SHN02A00 / Shenandoah River / Shenandoah River from its confluence with Craig Run downstream to its confluence with Dog Run.	4A	PCB in Fish Tissue	1998	L	2.80

South Fork Shenandoah River/North Fork Shenandoah River/Shenandoah River **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**45.64**

Sources:

Contaminated Sediments

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B41R-03-BEN** **Happy Creek**

Cause Location: Happy Creek from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 8.55 End Mile: 0.00 Total Impaired Size: 8.55 Miles)

City / County: Warren Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BHPY001.29 (Impaired for VSCI) and 1BHPY002.67 (Impaired for VSCI). Initial Listing Date: 2008. This segment is included in the EPA Approved Happy Creek Benthic TMDL. Federal TMDL ID# 65532.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B41R_HPY01A00 / Happy Creek / Happy Creek from the Front Royal Public Water Intake downstream to its confluence with the South Fork Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	2008	L	5.70
VAV-B41R_HPY02A00 / Happy Creek / Happy Creek from the headwaters downstream to the Front Royal Public Water Intake.	4A	Benthic-Macroinvertebrate Bioassessments	2008	L	2.84

Happy Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**8.54**

Sources:

Agriculture Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B41R-04-BAC** **South Fork Shenandoah River**

Cause Location: South Fork Shenandoah River from its confluence with Gooney Run downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 10.32 End Mile: 0.00 Total Impaired Size: 10.32 Miles) This segment was lengthened in 2012.

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BSSF000.19 (5 exceedences of 12 samples for e-coli); 1BSSF003.56 (3 exceedences of 56 samples for e-coli) and 1BSSF009.58 (2 exceedences of 13 samples for e-coli in 2014, no new data in 2018). While one station is fully supporting this cycle, upstream and downstream stations continue to be impaired, thus the Best Professional Judgement leaves the entire segment impaired in 2018. Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B41R_SSF01A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Cabin Run downstream to its confluence with the North Fork Shenandoah River.	5A	Escherichia coli	2012	H	1.85
VAV-B41R_SSF02A00 / South Fork Shenandoah River / South Fork Shenandoah River from the Rivermont Drive Bridge downstream to its confluence with Cabin Run.	5A	Escherichia coli	2012	H	2.45
VAV-B41R_SSF03A00 / South Fork Shenandoah River / South Fork Shenandoah River from the 5 mile upper limit of the PWS designation for the Front Royal Public Water Intake downstream to the Rivermont Drive Bridge.	5A	Escherichia coli	2012	H	1.54
VAV-B41R_SSF04A00 / South Fork Shenandoah River / South Fork Shenandoah River from its confluence with Gooney Run downstream to the 5 mile upper limit of the PWS designation for the Front Royal Public Water Intake.	5A	Escherichia coli	2010	H	4.47

South Fork Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.31**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B42R-01-BAC** **Crab Run**

Cause Location: Crab Run from the VA/WVA line downstream to its confluence with the German River. (Start Mile: 3.93 End Mile: 0.00 Total Impaired Size: 3.93 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BCRB000.18 (2 exceedences of 11 samples for e-coli). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B42R_CRB01A00 / Crab Run / Crab Run from the VA/WVA state line downstream to its confluence with the German River.	5A	Escherichia coli	2010	L	3.93

Crab Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.93**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B42R-01-BEN** **North Fork Shenandoah River**

Cause Location: North Fork Shenandoah River from its confluence with the German River downstream to its confluence with Capon Run (Start Mile: 107.67 End Mile: 105.08 Total Impaired Size: 2.59 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BNFS107.86 (Impaired for VSCI) This site is improving with two fall samples fully supporting. Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B42R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with the German River downstream to its confluence with Capon Run.	5A	Benthic-Macroinvertebrate Bioassessments	2010	L	2.59

North Fork Shenandoah River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.59**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B42R-02-BAC** **North Fork Shenandoah River**

Cause Location: North Fork Shenandoah River from its confluence with the German River downstream to its confluence with Capon Run (Start Mile: 107.67 End Mile: 105.08 Total Impaired Size: 2.59 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BNFS-EC01-FOSR (2 exceedences of 9 samples for e-coli). Initial Listing Date: 2018

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B42R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with the German River downstream to its confluence with Capon Run.	5A	Escherichia coli	2018	L	2.59

North Fork Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.59**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B44R-01-BAC** **Runions Creek**

Cause Location: Runions Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 14.8 End Mile: 0.00 Total Impaired Size: 14.8 Miles)

City / County: Rockingham Co. Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BRUN001.09 (4 exceedences of 12 samples for e-coli in 2014, no new data available in 2016/18). Initial Listing Date: 2010 This segment is included in the EPA approved North Fork Shenandoah River bacteria TMDL. Federal TMDL ID # 31235.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B44R_RUN01A00 / Runion Creek / Runion Creek and tributary from the headwaters downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2010	L	14.80

Runions Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.80**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-01-BAC** **Long Meadow Run**

Cause Location: Long Meadow Run from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 9.85 End Mile: 0.00 Total Impaired Size: 9.85 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BLOM001.45 (25 exceedences of 30 samples for e-coli). Initial Listing Date: 2002; This segment was included in the EPA approved North Fork Shenandoah River bacteria TMDL. Federal TMDL ID # 31235

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_LOM01A00 / Long Meadow Run / Long Meadow Run from the headwaters downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2008	L	9.85

Long Meadow Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.85**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-01-BEN** **Long Meadow Run**

Cause Location: Long Meadow Run from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 9.85 End Mile: 0.00 Total Impaired Size: 9.85 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BLOM000.24 (Impaired for VSCI). Initial Listing Date 2008. This segment is included in the EPA Approved Long Meadow Run Benthic TMDL. Federal TMDL ID # 66026/66027.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_LOM01A00 / Long Meadow Run / Long Meadow Run from the headwaters downstream to its confluence with the North Fork Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	2002	L	9.85

Long Meadow Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.85**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-02-BAC** **Turley Creek**

Cause Location: Turley Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 4.04 End Mile: 0.00 Total Impaired Size: 4.04 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment remains impaired due to exceedences of the e-coli bacteria WQS at station: 1BTRL000.02 (13 exceedences of 30 samples for e-coli). Initial Listing Date: 2002. This segment is included in the EPA approved North Fork Shenandoah River bacteria TMDL. Federal TMDL ID # 31235.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_TRL01A00 / Turley Creek / Turley Creek from just above its confluence with an unnamed tributary originating near Turleytown downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2010	L	2.20
VAV-B45R_TRL02A00 / Turley Creek / Turley Creek from the headwaters downstream to just above an unnamed tributary originating near Turleytown.	4A	Escherichia coli	2010	L	1.83

Turley Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.03**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_TRL01A00 / Turley Creek / Turley Creek from just above its confluence with an unnamed tributary originating near Turleytown downstream to its confluence with the North Fork Shenandoah River.	4A	Fecal Coliform	2002	L	2.20
VAV-B45R_TRL02A00 / Turley Creek / Turley Creek from the headwaters downstream to just above an unnamed tributary originating near Turleytown.	4A	Fecal Coliform	2002	L	1.83

Turley Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**4.03**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-02-BEN** **Turley Creek**

Cause Location: Turley Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 4.04 End Mile: 0.00 Total Impaired Size: 4.04 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BTRL000.02 (Impaired for VSCI). Initial Listing Date: 2002. This segment is included in the EPA Approved Turley Creek Benthic TMDL. Federal TMDL ID # 66025.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_TRL01A00 / Turley Creek / Turley Creek from just above its confluence with an unnamed tributary originating near Turleytown downstream to its confluence with the North Fork Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	2002	L	2.20
VAV-B45R_TRL02A00 / Turley Creek / Turley Creek from the headwaters downstream to just above an unnamed tributary originating near Turleytown.	4A	Benthic-Macroinvertebrate Bioassessments	2002	L	1.83

Turley Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.03**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-03-BAC** **Holmans Creek**

Cause Location: Holmans Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 11.10 End Mile: 0.00 Total Impaired Size: 11.10 Miles)

City / County: Rockingham Co. Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BHMN002.09 (13 exceedences of 24 samples for e-coli in 2014, no data in 2016/18). Initial Listing Date: 1996; This impairment is included in the EPA approved Holmans Creek bacteria TMDL. Federal TMDL ID # 24527/9577

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_HMN01A00 / Holmans Creek / Holmans Creek from its confluence with an unnamed tributary at the Quicksburg Road bridge downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2008	L	5.22
VAV-B45R_HMN02A00 / Holmans Creek / Holmans Creek from the Flat Rock Road bridge near Moores Store downstream to its confluence with an unnamed tributary at the Quicksburg Road bridge crossing.	4A	Escherichia coli	2008	L	2.65
VAV-B45R_HMN03A00 / Holmans Creek / Holmans Creek from the headwaters downstream to the Flat Rock Road bridge crossing near Moores Store.	4A	Escherichia coli	2008	L	3.22

Holmans Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.09**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_HMN01A00 / Holmans Creek / Holmans Creek from its confluence with an unnamed tributary at the Quicksburg Road bridge downstream to its confluence with the North Fork Shenandoah River.	4A	Fecal Coliform	1996	L	5.22
VAV-B45R_HMN02A00 / Holmans Creek / Holmans Creek from the Flat Rock Road bridge near Moores Store downstream to its confluence with an unnamed tributary at the Quicksburg Road bridge crossing.	4A	Fecal Coliform	1996	L	2.65
VAV-B45R_HMN03A00 / Holmans Creek / Holmans Creek from the headwaters downstream to the Flat Rock Road bridge crossing near Moores Store.	4A	Fecal Coliform	1996	L	3.22

Holmans Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**11.09**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-03-BEN** **Holmans Creek**

Cause Location: Holmans Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 11.10 End Mile: 0.00 Total Impaired Size: 11.10 Miles)

City / County: Rockingham Co. Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BHMN002.09 Impaired for VSCI) and 1BHMN007.59 (Impaired for VSCI). Initial Listing Date: 1996; This segment is included in the EPA approved Holmans Creek benthic TMDL. Federal TMDL ID # 19410

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_HMN01A00 / Holmans Creek / Holmans Creek from its confluence with an unnamed tributary at the Quicksburg Road bridge downstream to its confluence with the North Fork Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	5.22
VAV-B45R_HMN02A00 / Holmans Creek / Holmans Creek from the Flat Rock Road bridge near Moores Store downstream to its confluence with an unnamed tributary at the Quicksburg Road bridge crossing.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	2.65
VAV-B45R_HMN03A00 / Holmans Creek / Holmans Creek from the headwaters downstream to the Flat Rock Road bridge crossing near Moores Store.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	3.22

Holmans Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.09**

Sources:

Non-Point Source Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-04-BAC** **North Fork Shenandoah River**

Cause Location: North Fork Shenandoah River from its confluence with Turley Creek downstream to the 5 mile upper limit of the PWS designation for the Woodstock Public Water Intake. (Start Mile: 92.19 End Mile: 55.58 Total Impaired Size: 36.61 Miles) This impairment lengthened in 2012.

City / County: Rockingham Co. Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BNFS073.75 (2 exceedences of 11 samples for e-coli); 1BNFS076.56 (3 exceedences of 11 samples for e-coli); 1BNFS081.42 (2 exceedences of 6 samples for e-coli in 2016, no data in 2018); 1BNFS070.67 (9 exceedences of 36 samples for e-coli); 1BNFS-EC03-FOSR (4 exceedences of 10 samples for e-coli) and 1BNFS-NS10-FOSR (2 exceedences of 18 samples for e-coli in 2016, no data in 2018) . Initial Listing Date: 1996; This assessment unit was included in the EPA approved North Fork Shenandoah River bacteria TMDL. Federal TMDL ID # 31235.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Holmans Creek downstream to its confluence with Smith Creek.	4A	Escherichia coli	2012	L	3.59
VAV-B45R_NFS01B14 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Plains Mill Spring Run downstream to its confluence with Holmans Creek.	4A	Escherichia coli	2008	L	7.07
VAV-B45R_NFS02A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Fort Run downstream to its confluence with Plains Mill Spring Run.	4A	Escherichia coli	2008	L	4.47
VAV-B45R_NFS03A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Turley Creek downstream to its confluence with Linville Creek.	4A	Escherichia coli	2012	L	2.93
VAV-B48R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Smith Creek downstream to its confluence with Stony Creek.	4A	Escherichia coli	2008	L	12.25
VAV-B50R_NFS04A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Stony Creek downstream to the 5 mile upper limit of the PWS designation for the Woodstock Public Water Intake.	4A	Escherichia coli	2012	L	4.29

North Fork Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**34.60**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Holmans Creek downstream to its confluence with Smith Creek.	4A	Fecal Coliform	1996	L	3.59
VAV-B45R_NFS01B14 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Plains Mill Spring Run downstream to its confluence with Holmans Creek.	4A	Fecal Coliform	1996	L	7.07

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

VAV-B45R_NFS02A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Fort Run downstream to its confluence with Plains Mill Spring Run.	4A	Fecal Coliform	1996	L	4.47
VAV-B45R_NFS02B08 / North Fork Shenandoah River / North Fork Shenandoah River from the dam near Timberville downstream to the confluence with Fort Run.	4A	Fecal Coliform	2008	L	1.05
VAV-B45R_NFS02C10 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Linville Creek downstream to the dam near Timberville.	4A	Fecal Coliform	2008	L	0.93
VAV-B45R_NFS03A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Turley Creek downstream to its confluence with Linville Creek.	4A	Fecal Coliform	1996	L	2.93
VAV-B48R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Smith Creek downstream to its confluence with Stony Creek.	4A	Fecal Coliform	1996	L	12.25

North Fork Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**32.29**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-05-BEN** **North Fork Shenandoah River**

Cause Location: North Fork Shenandoah River from its confluence with Linville Creek downstream to its confluence with Holmans Creek. (Start Mile: 89.24 End Mile: 75.71 Total Impaired Size: 13.53 Miles).

City / County: Rockingham Co. Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BNFS087.35 (Impaired for VSCI) and 1BNFS088.81 (Impaired for VSCI (improving)). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B45R_NFS01B14 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Plains Mill Spring Run downstream to its confluence with Holmans Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	7.07
VAV-B45R_NFS02A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Fort Run downstream to its confluence with Plains Mill Spring Run.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	4.47
VAV-B45R_NFS02B08 / North Fork Shenandoah River / North Fork Shenandoah River from the dam near Timberville downstream to the confluence with Fort Run.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	1.05
VAV-B45R_NFS02C10 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Linville Creek downstream to the dam near Timberville.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	0.93

North Fork Shenandoah River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**13.52**

Sources:

Industrial Point Source Discharge

Municipal (Urbanized High Density Area)

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B46R-01-BAC** **Linville Creek**

Cause Location: Linville Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 14.38 End Mile: 0.00 Total Impaired Size: 14.38 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BLNV001.22 (25 exceedences of 60 samples for e-coli) and 1BLNV006.49 (31 exceedences of 48 samples for e-coli). Initial Listing Date: 1996; This impairment was included in the EPA approved Linville Creek bacteria TMDL. Federal TMDL ID # 19713.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B46R_LNV01A00 / Linville Creek / Linville Creek from the 5 mile upper limit of the PWS designation for the Broadway Public Water Intake downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2004	L	5.38
VAV-B46R_LNV02A04 / Linville Creek / Linville Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Broadway Public Water Intake.	4A	Escherichia coli	2004	L	9.00

Linville Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**14.38**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B46R_LNV01A00 / Linville Creek / Linville Creek from the 5 mile upper limit of the PWS designation for the Broadway Public Water Intake downstream to its confluence with the North Fork Shenandoah River.	4A	Fecal Coliform	1996	L	5.38
VAV-B46R_LNV02A04 / Linville Creek / Linville Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Broadway Public Water Intake.	4A	Fecal Coliform	1996	L	9.00

Linville Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**14.38**

Sources:

Agriculture Non-Point Source Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B46R-01-BEN** **Linville Creek**

Cause Location: Linville Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 14.38 End Mile: 0.00 Total Impaired Size: 14.38 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BLNV000.16 (Impaired for VSCI) and 1BLNV000.71 (Impaired for VSCI). Initial Listing Date: 1996; This impairment was included in the EPA approved Linville Creek benthic TMDL. Federal TMDL ID # 19713.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B46R_LNV01A00 / Linville Creek / Linville Creek from the 5 mile upper limit of the PWS designation for the Broadway Public Water Intake downstream to its confluence with the North Fork Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	5.38
VAV-B46R_LNV02A04 / Linville Creek / Linville Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Broadway Public Water Intake.	4A	Benthic-Macroinvertebrate Bioassessments	1996	L	9.00

Linville Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**14.38**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B46R-02-BAC** **Daphna Creek**

Cause Location: Daphna Creek from the headwaters downstream to its confluence with Linville Creek. (Start Mile: 3.24 End Mile: 0.00 Total Impaired Size: 3.24 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BDPH-LC05-FOSR (4 exceedences of 4 samples for e-coli). Initial Listing Date: 2018. This impairment is included in the EPA Approved Linville Creek Bacteria TMDL. Federal TMDL ID # 19713.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B46R_DPH01A00 / Daphna Creek / Daphna Creek from the headwaters downstream to its confluence with Linville Creek.	4A	Escherichia coli	2018	L	3.24

Daphna Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.24**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B46R-03-BAC** **Joes Creek**

Cause Location: Joes Creek from the headwaters downstream to its confluence with Linville Creek. (Start Mile: 7.05 End Mile: 0.00 Total Impaired Size: 7.05 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BJOE-LC004-FOSR (4 exceedences of 4 samples for e-coli). Initial Listing Date: 2018. This impairment is included in the EPA Approved Linville Creek Bacteria TMDL. Federal TMDL ID # 19713.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B46R_JOE01A00 / Joe's Creek / Joes Creek from the headwaters downstream to its confluence with Linville Creek.	4A	Escherichia coli	2018	L	7.05

Joes Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.05**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B46R-04-BAC** **West Fork Linville Creek**

Cause Location: West Fork Linville Creek from the headwaters downstream to its confluence with Linville Creek. (Start Mile: 5.62 End Mile: 0.00 Total Impaired Size: 5.62 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BLVW-LC01-FOSR (4 exceedences of 4 samples for e-coli). Initial Listing Date: 2018. This impairment is included in the EPA Approved Linville Creek Bacteria TMDL. Federal TMDL ID # 19713.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B46R_LVW01A18 / West Fork Linville Creek. / West Fork Linville Creek from the headwaters downstream to its confluence with Linville Creek.	4A	Escherichia coli	2018	L	5.61

West Fork Linville Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.61**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B46R-05-BAC** **Tide Spring Branch**

Cause Location: Tide Spring Branch from the headwaters downstream to its confluence with Linville Creek. (Start Mile: 2.88 End Mile: 0.00 Total Impaired Size: 2.88 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BTSB-LC03-FOSR (4 exceedences of 4 samples for e-coli). Initial Listing Date: 2018. This impairment is included in the EPA Approved Linville Creek Bacteria TMDL. Federal TMDL ID # 19713.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B46R_TSB01A00 / Tide Spring Branch / Tide Spring Branch from the 5 mile upper limit of the PWS designation for the Broadway Public Water Intake downstream to its confluence with Linville Creek.	4A	Escherichia coli	2018	L	0.68
VAV-B46R_TSB02A04 / Tide Spring Branch / Tide Spring Branch from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Broadway Public Water Intake.	4A	Escherichia coli	2018	L	2.20

Tide Spring Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.88**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-01-BEN** **Fridley Run**

Cause Location: Fridley Run from the headwaters downstream to its confluence with Mountain Run. (Start Mile: 2.38 End Mile: 0.00 Total Impaired Size: 2.38 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BFDY000.02 (Impaired for VSCI). Initial Listing Date: 2002.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_FDY01A02 / Fridley Run / Fridley Run from the headwaters downstream to its confluence with Mountain Run.	5A	Benthic-Macroinvertebrate Bioassessments	2002	L	2.38

Fridley Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.38**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-01-PH** **Fridley Run**

Cause Location: Fridley Run from the headwaters downstream to its confluence with Mountain Run. (Start Mile: 2.38 End Mile: 0.00 Total Impaired Size: 2.38 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to excursions of the pH WQS at station: 1BFDY000.02 (25 excursions of 44 samples for pH). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_FDY01A02 / Fridley Run / Fridley Run from the headwaters downstream to its confluence with Mountain Run.	5A	pH	2006	L	2.38

Fridley Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.38**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-02-BAC** **Mountain Run/Smith Creek/War Branch**

Cause Location: Mountain Run from the headwaters downstream to its confluence with Smith Creek; Smith Creek from the headwaters (including x-trib) downstream to its confluence with the North Fork Shenandoah River; War Branch from the headwaters downstream to its confluence with Smith Creek. (Start Mile: 6.93, 35.65, 7.11 End Mile: 0.00, 0.00, 0.00 Total Impaired Size: 6.93 Miles, 35.65 Miles, 7.11 Miles)

City / County: Rockingham Co. Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

These segments are impaired due to exceedences of the e-coli bacteria WQS at stations: 1BMTR000.93 (25 exceedences of 72 samples for e-coli); 1BSMT004.60 (32 exceedences of 71 samples for e-coli); 1BSMT023.18 (37 exceedences of 72 samples for e-coli); 1BSMT026.41 (8 exceedences of 12 samples for e-coli); 1BXSG-SC-2-FOSR (7 exceedences of 7 samples for e-coli); 1BWAR003.88 (20 exceedences of 47 samples for e-coli), 1BWAR-SCW1-FOSR (12 exceedences of 21 samples for e-coli); 1BWAR-SCW2-FOSR (8 exceedences of 21 samples for e-coli) and 1BWAR-SCW3-FOSR (7 exceedences of 21 samples for e-coli). Initial Listing Dates: 2006 (Mountain Run), 1996 (Smith Creek), 2012 (Smith Creek X-trib), 2008 War Branch); These segments are included in the EPA approved Smith Creek bacteria TMDL. Federal TMDL ID # 21281

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_MTN01A00 / Mountain Run / Mountain Run and tributary from its confluence with Fridley Run downstream to its confluence with Smith Creek.	4A	Escherichia coli	2006	L	5.69
VAV-B47R_MTN02A00 / Mountain Run / Mountain Run from the headwaters downstream to its confluence with Fridley Run.	4A	Escherichia coli	2006	L	0.94
VAV-B47R_SMT01A00 / Smith Creek / Smith Creek from the New Market Public Water Intake downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2008	L	14.09
VAV-B47R_SMT02A00 / Smith Creek / Smith Creek from its confluence with War Branch downstream to the New Market Public Water Intake.	4A	Escherichia coli	2008	L	5.44
VAV-B47R_SMT03A00 / Smith Creek / Smith Creek from its confluence with Dry Fork downstream to its confluence with War Branch.	4A	Escherichia coli	2008	L	6.88
VAV-B47R_SMT04A00 / Smith Creek / Smith Creek from the headwaters downstream to its confluence with Dry Fork.	4A	Escherichia coli	2012	L	9.22
VAV-B47R_WAR01A00 / War Branch / War Branch from the headwaters downstream to its confluence with Smith Creek.	4A	Escherichia coli	2008	L	7.10
VAV-B47R_XSG01A12 / X-trib to Smith Creek / X-trib to Smith Creek from the headwaters downstream to its confluence with Smith Creek.	4A	Escherichia coli	2012	L	1.16

Mountain Run/Smith Creek/War Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**50.52**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_SMT01A00 / Smith Creek / Smith Creek from the New Market Public Water Intake downstream to its confluence with the	4A	Fecal Coliform	1996	L	14.09

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

North Fork Shenandoah River.

VAV-B47R_SMT02A00 / Smith Creek / Smith Creek from its confluence with War Branch downstream to the New Market Public Water Intake.	4A	Fecal Coliform	1996	L	5.44
VAV-B47R_SMT03A00 / Smith Creek / Smith Creek from its confluence with Dry Fork downstream to its confluence with War Branch.	4A	Fecal Coliform	1996	L	6.88
VAV-B47R_SMT04A00 / Smith Creek / Smith Creek from the headwaters downstream to its confluence with Dry Fork.	4A	Fecal Coliform	1996	L	9.22

Mountain Run/Smith Creek/War Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**35.63**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-03-BAC** **Lacey Spring Branch**

Cause Location: Lacey Spring Branch from the spring downstream to its confluence with Smith Creek. (Start Mile: .60 End Mile: 0.00 Total Impaired Size: .60 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment remains impaired due to exceedences of the e-coli WQS at station: 1BLAC-SCL-FOSR (9 exceedences of 24 samples for e-coli). Initial Listing Date: 2014; This impairment is included in the EPA approved Smith Creek Bacteria TMDL Federal TMDL ID # 21281

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_LAC01A00 / Lacey Spring Branch / Lacey Spring Branch from the spring downstream to its confluence with Smith Creek.	4A	Escherichia coli	2014	L	0.59

Lacey Spring Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.59**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-03-BEN** **Lacey Spring Branch**

Cause Location: Lacey Spring Branch from the spring downstream to its confluence with Smith Creek. (Start Mile: .60 End Mile: 0.00 Total Impaired Size: .60 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment remains impaired due to severely impaired benthic ratings in previous assessment cycles. It was not visited during the 2018 cycle. Initial Listing Date: 1998; The aquatic life impairment is included in the EPA approved TMDL for Commercial Fish farms. Federal TMDL ID # 9496

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_LAC01A00 / Lacey Spring Branch / Lacey Spring Branch from the spring downstream to its confluence with Smith Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	0.59

Lacey Spring Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.59**

Sources:

Aquaculture (Permitted)

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-05-BEN** **Smith Creek**

Cause Location: Smith Creek from the Shenandoah Fisheries outfall downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 26.43 End Mile: 0.00 Total Impaired Size: 26.43 Miles)

City / County: Rockingham Co. Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BSMT06.62 (Impaired for VSCI) and 1BSMT009.08 (Impaired for VSCI in 2016, no data in 2018). Initial Listing Date: 1998; This segment is included in the EPA approved Smith Creek benthic TMDL. Federal TMDL ID # 21280

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_SMT01A00 / Smith Creek / Smith Creek from the New Market Public Water Intake downstream to its confluence with the North Fork Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	14.09
VAV-B47R_SMT02A00 / Smith Creek / Smith Creek from its confluence with War Branch downstream to the New Market Public Water Intake.	4A	Benthic-Macroinvertebrate Bioassessments	2006	L	5.44
VAV-B47R_SMT03A00 / Smith Creek / Smith Creek from its confluence with Dry Fork downstream to its confluence with War Branch.	4A	Benthic-Macroinvertebrate Bioassessments	2004	L	6.88

Smith Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**26.41**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-06-BAC** **Dry Fork**

Cause Location: Dry Fork from the headwaters downstream to its confluence with Smith Creek. (Start Mile: 10.85 End Mile: 0.00 Total Impaired Size: 10.85 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment remains impaired due to exceedences of the e-coli bacteria WQS at station: 1BDFK000.76 (37 exceedences of 72 samples for e-coli). Initial Listing Date: 2004. This impairment is addressed in the EPA approved Smith Creek bacteria TMDL. Federal TMDL ID # 21281

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_DFK01A00 / Dry Fork / Dry Fork and tributary from the headwaters downstream to its confluence with Smith Creek.	4A	Escherichia coli	2012	L	10.85

Dry Fork **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.85**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_DFK01A00 / Dry Fork / Dry Fork and tributary from the headwaters downstream to its confluence with Smith Creek.	4A	Fecal Coliform	2004	L	10.85

Dry Fork **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**10.85**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-07-BEN** **Dry Fork**

Cause Location: Dry Fork from the headwaters downstream to its confluence with Smith Creek. (Start Mile: 10.85 End Mile: 0.00 Total Impaired Size: 10.85 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BDFK003.82 (Impaired for VSCI) and 1BDFK004.03 (Impaired for VSCI) in the 2010 cycle, no new data in 2018. Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B47R_DFK01A00 / Dry Fork / Dry Fork and tributary from the headwaters downstream to its confluence with Smith Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2006	L	10.85

Dry Fork **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.85**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B48R-01-BAC** **Mill Creek**

Cause Location: Mill Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 15.67 End Mile: 0.00 Total Impaired Size: 15.67 Miles)

City / County: Rockingham Co. Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment remains impaired due to exceedences of the e-coli bacteria WQS at stations: 1BMIL002.20 (3 exceedences of 12 samples for e-coli in 2016, no data in 2018) Initial Listing Date: 2002; This segment is included in the EPA approved Mill Creek bacteria TMDL. Federal TMDL ID # 31235

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B48R_MIL01A00 / Mill Creek / Mill Creek from its confluence with Crooked Run downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2012	L	2.88
VAV-B48R_MIL02A04 / Mill Creek / Mill Creek from a point 3.5 miles above Mt. Jackson downstream to its confluence with Crooked Run.	4A	Escherichia coli	2012	L	1.66

Mill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.54**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B48R_MIL01A00 / Mill Creek / Mill Creek from its confluence with Crooked Run downstream to its confluence with the North Fork Shenandoah River.	4A	Fecal Coliform	2002	L	2.88
VAV-B48R_MIL02A04 / Mill Creek / Mill Creek from a point 3.5 miles above Mt. Jackson downstream to its confluence with Crooked Run.	4A	Fecal Coliform	2002	L	1.66
VAV-B48R_MIL02B10 / Mill Creek / Mill Creek from its confluence with Straight Run downstream to a point 3.5 miles above Mt. Jackson.	4A	Fecal Coliform	2002	L	3.23
VAV-B48R_MIL03A04 / Mill Creek / Mill Creek from the headwaters downstream to its confluence with Straight Run.	4A	Fecal Coliform	2002	L	7.88

Mill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**15.65**

Sources:

Agriculture Non-Point Source Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

Cause Group Code: **B48R-02-BEN** **Crooked Run**

Cause Location: Crooked Run from the headwaters downstream to its confluence with Mill Creek. (Start Mile: 4.08 End Mile: 0.00 Total Impaired Size: 4.08 Miles)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BCKD000.38 (Impaired for VSCI). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B48R_CKD01A00 / Crooked Run / Crooked Run from its headwaters downstream to its confluence with Mill Creek.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	4.07

Crooked Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.07**

Sources:

Agriculture Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B49L-01-DO** **Lake Laura**

Cause Location: Lake Laura (Total Impaired Size: 46.25 Acres)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4C

The lake is impaired due to exceedences of the DO WQS. These exceedences have been determined to be a naturally occurring DO impairment in the Hypolimnion during the summer months when the lake is thermally stratified. TSI results indicate that this is naturally occurring. This lake will be added to the Virginia Lake Nutrient Criteria (187) in the future for nutrient evaluation. This assessment unit is considered 4C-No TMDL Needed due to natural conditions. Initial Listing Date: 2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B49L_STY01A10 / Lake Laura / Lake Laura	4C	Oxygen, Dissolved			46.25

Lake Laura **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:		**46.25**	

Sources:

Natural Sources

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-01-BAC** **Stony Creek**

Cause Location: Stony Creek from its confluence with Riles Run downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 13.99 End Mile: 0.00 Total Impaired Size: 13.99 Miles) Segmentation error corrected in 2012, impairment length shortened to align with assessment unit boundaries.

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BSTY001.22 (2 exceedences of 11 samples for e-coli) Initial Listing Date: 1998; This segment was included in the EPA approved Stony Creek bacteria TMDL. Federal TMDL ID # 31238

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B49R_STY01A00 / Stony Creek / Stony Creek from the Route 682 (Wakemans Grove Road) bridge crossing downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2008	L	4.58
VAV-B49R_STY02A00 / Stony Creek / Stony Creek from the Georges Chicken discharge downstream to the Route 682 (Wakemans Grove Road) bridge crossing.	4A	Escherichia coli	2008	L	1.27
VAV-B49R_STY03A00 / Stony Creek / Stony Creek from its confluence with Yellow Spring Run downstream to the Georges Chicken discharge.	4A	Escherichia coli	2012	L	3.43
VAV-B49R_STY04A04 / Stony Creek / Stony Creek from its confluence with Riles Run downstream to its confluence with Yellow Spring Run.	4A	Escherichia coli	2008	L	4.68

Stony Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**13.96**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B49R_STY01A00 / Stony Creek / Stony Creek from the Route 682 (Wakemans Grove Road) bridge crossing downstream to its confluence with the North Fork Shenandoah River.	4A	Fecal Coliform	2002	L	4.58
VAV-B49R_STY02A00 / Stony Creek / Stony Creek from the Georges Chicken discharge downstream to the Route 682 (Wakemans Grove Road) bridge crossing.	4A	Fecal Coliform	1998	L	1.27
VAV-B49R_STY03A00 / Stony Creek / Stony Creek from its confluence with Yellow Spring Run downstream to the Georges Chicken discharge.	4A	Fecal Coliform	2006	L	3.43
VAV-B49R_STY04A04 / Stony Creek / Stony Creek from its confluence with Riles Run downstream to its confluence with Yellow Spring Run.	4A	Fecal Coliform	2004	L	4.68

Stony Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**13.96**

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-01-BEN** **Stony Creek**

Cause Location: Stony Creek from its confluence with Yellow Spring Run downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 9.28 End Mile: 0.00 Total Impaired Size: 9.28 Miles)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BSTY004.24 (Impaired for VSCI); 1BSTY004.68 (Impaired for VSCI) and 1BSTY005.91 (Impaired for VSCI). Initial Listing Date: 2008. This impairment was lengthened (added upstream segment) in 2016.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B49R_STY01A00 / Stony Creek / Stony Creek from the Route 682 (Wakemans Grove Road) bridge crossing downstream to its confluence with the North Fork Shenandoah River.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	4.58
VAV-B49R_STY02A00 / Stony Creek / Stony Creek from the Georges Chicken discharge downstream to the Route 682 (Wakemans Grove Road) bridge crossing.	5A	Benthic-Macroinvertebrate Bioassessments	2008	L	1.27
VAV-B49R_STY03A00 / Stony Creek / Stony Creek from its confluence with Yellow Spring Run downstream to the Georges Chicken discharge.	5A	Benthic-Macroinvertebrate Bioassessments	2016	L	3.43

Stony Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.28**

Sources:

Agriculture	Municipal (Urbanized High Density Area)	Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-05-TEMP** **Little Stony Creek**

Cause Location: Little Stony Creek and tributary from the headwaters of the tributary and the confluence of the tributary with Little Stony Creek near USFS Road 92 downstream to the confluence with Stony Creek. (Start Mile: 4.91 End Mile: 0.00 Total Impaired Size: 4.91 Miles.

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This segment is impaired due to exceedences of the temperature WQS at station: 1BLSC000.50 (3 exceedences of 10 for temperature) Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B49R_LSC01B08 / Little Stony Creek / Little Stony Creek and tributary from the headwaters of the tributary and the confluence of the tributary with Little Stony Creek near USFS Road 92 downstream to the confluence with Stony Creek.	5A	Temperature, water	2012	L	4.91

Little Stony Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**4.91**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-07-TEMP** **Stony Creek**

Cause Location: Stony Creek from the Lake Laura dam outfall downstream to the Route 682 bridge (Wakeman's Grove Road). (Start Mile: 23.44 End Mile: 4.59 Total Impaired Size: 18.85 Miles) This impairments downstream extents was modified in 2012 and the impairment lengthened based on additional data.

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This segment is impaired due to exceedences of the temperature WQS at station: 1BSTY013.85 (2 exceedences of 12 samples for temperature); 1BSTY-NS30-FOSR (9 exceedences of 71 samples for temperature); 1BSTY-NS58-FOSR (7 exceedences of 70 samples for temperature, remains impaired, no new additional data) and 1BSTY-NS29-FOSR (9 exceedences of 74 samples for temperature). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B49R_STY02A00 / Stony Creek / Stony Creek from the Georges Chicken discharge downstream to the Route 682 (Wakemans Grove Road) bridge crossing.	5A	Temperature, water	2002	L	1.27
VAV-B49R_STY03A00 / Stony Creek / Stony Creek from its confluence with Yellow Spring Run downstream to the Georges Chicken discharge.	5A	Temperature, water	2002	L	3.43
VAV-B49R_STY04A04 / Stony Creek / Stony Creek from its confluence with Riles Run downstream to its confluence with Yellow Spring Run.	5A	Temperature, water	2004	L	4.68
VAV-B49R_STY05A04 / Stony Creek / Stony Creek from the Lake Laura Dam downstream to its confluence with Riles Run.	5A	Temperature, water	2006	L	9.46

Stony Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**18.84**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-08-BAC** **Orkney Springs Run**

Cause Location: Orkney Springs Run from the headwaters downstream to its confluence with Stony Creek above Lake Laura. (Start Mile: 2.19 End Mile 0.00 Total Impaired Size: 2.19.

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BXBP-OS01-FNFSR (8 exceedences of 24 samples for e-coli in 2016, no data in 2018) and 1BXBP-OS03-FNFSR (3 exceedences of 7 samples for e-coli). Initial Listing Date: 2012. This segment was included in the EPA approved Stony Creek bacteria TMDL. Federal TMDL ID # 31238

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B49R_XBP01A10 / Orkney Springs Run / Orkney Springs Run from the headwaters downstream to its confluence with Stony Creek.	4A	Escherichia coli	2012	L	2.19

Orkney Springs Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.19**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-09-BAC** **Stony Creek**

Cause Location: Stony Creek from the headwaters downstream to the upper end of the normal pool of Lake Laura. (Start Mile: 26.94 End Mile: 23.44 Total Impaired Size: 3.5 Miles)

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BSTY-STY-3-FNFSR (3 exceedences of 12 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2014. This segment was included in the EPA approved Stony Creek bacteria TMDL. Federal TMDL ID # 31238

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B49R_STY06A10 / Stony Creek / Stony Creek from the headwaters downstream to the upper end of the normal pool of Lake Laura.	4A	Escherichia coli	2014	L	3.50

Stony Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.50**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B50R-01-BAC** **Toms Brook**

Cause Location: Toms Brook from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 9.51 End Mile: 0.00 Total Impaired Size: 9.51 Miles)

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BTMB000.54 (3 exceedences of 12 samples for e-coli). Initial Listing Date; 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B50R_TMB01A00 / Toms Brook / Toms Brook from the headwaters downstream to its confluence with the North Fork Shenandoah River.	5A	Escherichia coli	2018	L	9.51

Toms Brook **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.51**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B50R-01-BEN** **Toms Brook**

Cause Location: Toms Brook from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 9.51 End Mile: 0.00 Total Impaired Size: 9.51 Miles)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for benthics at station: 1BTMB000.70 (Impaired for VSCI). This is a re-list of a previous impairment that is included in the EPA Approved Toms Brook Benthic TMDL. Federal TMDL ID # 21697.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B50R_TMB01A00 / Toms Brook / Toms Brook from the headwaters downstream to its confluence with the North Fork Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	2002	L	9.51

Toms Brook **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.51**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B50R-02-BAC** **Narrow Passage Creek**

Cause Location: Narrow Passage Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 11.62 End Mile: 0.00 Total Impaired Size: 11.62 Miles)

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BNPC000.02 (13 exceedences of 36 samples for e-coli). Initial Listing Date: 2002. This segment is included in the North Fork Shenandoah River bacteria TMDL. Federal TMDL ID # 31235.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B50R_NPC01A00 / Narrow Passage Creek / Narrow Passage Creek from the 5 mile upper limit of the PWS designation for the Woodstock Public Water Intake downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2008	L	0.55
VAV-B50R_NPC02A00 / Narrow Passage Creek / Narrow Passage Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Woodstock Public Water Intake.	4A	Escherichia coli	2008	L	11.06

Narrow Passage Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.61**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B50R_NPC01A00 / Narrow Passage Creek / Narrow Passage Creek from the 5 mile upper limit of the PWS designation for the Woodstock Public Water Intake downstream to its confluence with the North Fork Shenandoah River.	4A	Fecal Coliform	2002	L	0.55
VAV-B50R_NPC02A00 / Narrow Passage Creek / Narrow Passage Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Woodstock Public Water Intake.	4A	Fecal Coliform	2002	L	11.06

Narrow Passage Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**11.61**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B50R-03-BAC** **Pughs Run**

Cause Location: Pughs Run from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 7.00 End Mile: 0.00 Total Impaired Size: 7.00 Miles)

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BPGH000.60 (4 exceedences of 10 samples for e-coli in 2012, no data in 2016/18, impairment carried forward). Initial Listing Date: 2004

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B50R_PGH01A00 / Pugh's Run / Pugh's Run from the headwaters downstream to its confluence with the North Fork Shenandoah River.	5A	Escherichia coli	2008	L	7.00

Pughs Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.00**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B50R_PGH01A00 / Pugh's Run / Pugh's Run from the headwaters downstream to its confluence with the North Fork Shenandoah River.	5A	Fecal Coliform	2004	L	7.00

Pughs Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**7.00**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B50R-03-BEN** **Pughs Run**

Cause Location: Pughs Run from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 7.00 End Mile: 0.00 Total Impaired Size: 7.00 Miles)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for benthics at station(s): 1BPGH000.29 (Impaired for VSCI in 2016, no data in 2018) and 1BPGH000.60 (Impaired for VSCI). Initial Listing Date: 2012

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B50R_PGH01A00 / Pugh's Run / Pugh's Run from the headwaters downstream to its confluence with the North Fork Shenandoah River.	5A	Benthic-Macroinvertebrate Bioassessments	2012	L	7.00

Pughs Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**7.00**

Sources:

Agriculture Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B50R-05-BAC** **Spring Hollow**

Cause Location: Spring Hollow from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 6.40 End Mile: 0.00 Total Impaired Size: 6.40 Miles)

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BXSH-NS64-FOSR (13 exceedences of 18 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2012. This impairment is included in the EPA Approved North Fork Shenandoah River bacteria TMDL. Federal TMDL ID # 31235.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B50R_XSH01A10 / Spring Hollow / Spring Hollow from the headwaters downstream to its confluence with the North Fork Shenandoah River.	4A	Escherichia coli	2012	L	6.39

Spring Hollow **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.39**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B51R-01-BAC** **Tumbling Run**

Cause Location: Tumbling Run from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Strasburg Public Water Intake. (Start Mile: 5.20 End Mile: .95 Total Impaired Size: 4.25 Miles)

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BTBL-NS44-FOSR (5 exceedences of 18 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2004

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B51R_TBL02A04 / Tumbling Run / Tumbling Run from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Strasburg Public Water Intake.	5A	Escherichia coli	2008	H	4.24

Tumbling Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.24**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B51R_TBL02A04 / Tumbling Run / Tumbling Run from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Strasburg Public Water Intake.	5A	Fecal Coliform	2004	H	4.24

Tumbling Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**4.24**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B51R-02-BAC** **North Fork Shenandoah River**

Cause Location: North Fork Shenandoah River from the Winchester Public Water intake downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 6.7 End Mile: 0.00 Total Impaired Size: 6.7 Miles) This impairment was shortened in 2018 as upstream assessment units became fully supporting..

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BNFS000.57 (4 exceedences of 36 samples for e-coli). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B51R_NFS01A00 / North Fork Shenandoah River / North Fork Shenandoah River from the old dam site at the boat ramp downstream to its confluence with the South Fork Shenandoah River.	5A	Escherichia coli	2008	H	0.71
VAV-B51R_NFS02A00 / North Fork Shenandoah River / North Fork Shenandoah River from its confluence with Passage Creek downstream to the old dam site at the boat ramp.	5A	Escherichia coli	2008	H	4.71
VAV-B51R_NFS03A00 / North Fork Shenandoah River / North Fork Shenandoah River from the Winchester Public Water Intake downstream to its confluence with Passage Creek.	5A	Escherichia coli	2010	H	1.28

North Fork Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.70**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-01-PH** **Cedar Creek**

Cause Location: Cedar Creek from the headwaters downstream to the U.S. Forest Service boundary. (Start Mile: 40.57 End Mile: 32.28 Total Impaired Area: 8.29 Miles.

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to excursions of the pH WQS at station: 1BCDR045.30 (5 excursions of 43 samples for e-coli. Initial Listing Date: 2014 (Upstream assessment unit added in 2016)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B52R_CDR03B10 / Cedar Creek / Cedar Creek from its confluence with a spring branch near Van Buren Furnace downstream to the U.S. Forest Service boundary.	5A	pH	2014	M	4.82
VAV-B52R_CDR04A02 / Cedar Creek / Cedar Creek from the headwaters downstream to its confluence with a spring branch near Van Buren Furnace.	5A	pH	2016	M	3.45

Cedar Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**8.27**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-02-BEN** **Orndorff Spring Branch**

Cause Location: Orndorff Spring Branch from the spring downstream to its confluence with Cedar Creek. (Start Mile: .24 End Mile: 0.00 Total Impaired Size: .24 Miles)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment remains impaired for aquatic life use based on a severely impaired benthic status during the 1998 cycle. This site has not had a benthic survey since. Initial Listing Date: 1998; This segment is included in the EPA approved TMDL for Impairments from Commercial Fish Farming operations. Federal TMDL ID # 9460

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B52R_XOS01A00 / Orndorff Spring Branch / Orndorff Spring Branch from the spring down stream to its confluence with Cedar Creek.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	0.23

Orndorff Spring Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.23**

Sources:

Aquaculture (Permitted)

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-04-BAC** **Cedar Creek**

Cause Location: Cedar Creek from its confluence with a spring branch near Van Buren Furnace downstream to its confluence with Duck Run. (Start Mile: 37.11 End Mile: 20.29 Total Impaired Size: 16.82 Miles) This impairment was lengthened in 2014 adding two downstream segments.

City / County: Frederick Co. Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BCDR023.47 (2 exceedences of 12 samples for e-coli); 1BCDR027.00 (2 exceedences of 11 samples for e-coli); 1BCDR028.86 (2 exceedences of 12 samples for e-coli) 1BCDR-CC06-FOSR (9 exceedences of 17 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B52R_CDR02A00 / Cedar Creek / Cedar Creek from the Route 55 bridge crossing downstream to its confluence with Duck Run.	5A	Escherichia coli	2014	H	3.14
VAV-B52R_CDR02B10 / Cedar Creek / Cedar Creek from its confluence with Paddy Run downstream to the Route 55 bridge crossing.	5A	Escherichia coli	2014	H	6.08
VAV-B52R_CDR03A00 / Cedar Creek / Cedar Creek from the U.S. Forest Service boundary downstream to its confluence with Paddy Run.	5A	Escherichia coli	2012	H	2.76
VAV-B52R_CDR03B10 / Cedar Creek / Cedar Creek from its confluence with a spring branch near Van Buren Furnace downstream to the U.S. Forest Service boundary.	5A	Escherichia coli	2012	H	4.82

Cedar Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**16.80**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-05-BAC** **Fall Run**

Cause Location: Fall Run and its tributaries from the headwaters downstream to its confluence with Cedar Creek. (Start Mile: 15.17 End Mile: 0.00 Total Impaired Size: 15.17 Miles

City / County: Frederick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BFLR000.57 (2 exceedences of 12 samples for e-coli) Initial Listing Date: 2014

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B52R_FLR01A14 / Fall Run / Fall Run and its tributaries from the headwaters downstream to its confluence with Cedar Creek.	5A	Escherichia coli	2014	H	15.17

Fall Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**15.17**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-06-BAC** **Gravel Springs**

Cause Location: Gravel Springs from the headwaters downstream to its confluence with Cedar Creek. (Start Mile: 3.29 End Mile: 0.00 Total Impaired Size: 3.29 Miles

City / County: Frederick Co. Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BGSR000.40 (3 exceedences of 10 samples for e-coli) Initial Listing Date: 2016

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B52R_GSR01A16 / Gravel Springs / Gravel Springs from the headwaters downstream to its confluence with Cedar Creek.	5A	Escherichia coli	2016	L	3.29

Gravel Springs **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.29**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B53R-01-BAC** **Cedar Creek**

Cause Location: Cedar Creek from its confluence with Fall Run downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 18.11 End Mile: 0.00 Total Impaired Size: 18.11 Miles) This impairment was lengthened in 2018 re-listing two upstream segments.

City / County: Frederick Co. Shenandoah Co. Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BCDR000.81 (2 exceedences of 12 samples for e-coli) and 1BCDR013.29 (4 exceedences of 36 samples for e-coli). Initial Listing Date: 2008. Upper segments re-listed and impairment lengthened in 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B53R_CDR01A00 / Cedar Creek / Cedar Creek from its confluence with Stickley Run downstream to its confluence with the North Fork Shenandoah River.	5A	Escherichia coli	2014	H	3.75
VAV-B53R_CDR02A00 / Cedar Creek / Cedar Creek from its confluence with Fawcett Run downstream to its confluence with Stickley Run.	5A	Escherichia coli	2008	H	9.77
VAV-B53R_CDR03A10 / Cedar Creek / Cedar Creek from its confluence with Fall Run downstream to its confluence with Fawcett Run.	5A	Escherichia coli	2008	H	4.57

Cedar Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**18.09**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B54R-01-BAC** **Passage Creek**

Cause Location: Passage Creek from its confluence with Peters Mill Run downstream to a point 4.6 miles upstream of the U.S. Forest Service boundary. (Start Mile: 19.08 End Mile: 8.66 Total Impaired Size: 10.42 Miles)

City / County: Shenandoah Co. Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at stations: 1BPSG018.13 (9 exceedences of 36 samples for e-coli). Initial Listing Date: 2006. Lower segments were de-listed in 2016 and impairment length shortened.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B54R_PSG01C10 / Passage Creek / Passage Creek from its confluence with Peters Mill Run downstream to a point 4.6 miles upstream of the U. S. Forest Service boundary.	5A	Escherichia coli	2008	H	10.42

Passage Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.42**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B54R_PSG01C10 / Passage Creek / Passage Creek from its confluence with Peters Mill Run downstream to a point 4.6 miles upstream of the U. S. Forest Service boundary.	5A	Fecal Coliform	2006	H	10.42

Passage Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**10.42**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B54R-01-PH** **Passage Creek**

Cause Location: Passage Creek from the headwaters downstream to the Route 675 bridge crossing. (Start Mile: 37.38 End Mile: 31.93 Total Impaired Size: 5.45 Miles)

City / County: Page Co. Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to excursions of the pH WQS at station: 1BPSG031.99 (2 excursions of 5 samples for pH in 2010, no new data in 2016/18). Initial Listing Date: 2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B54R_PSG03A10 / Passage Creek / Passage Creek from the headwaters downstream to the Route 675 bridge crossing at Big Spring.	5A	pH	2010	L	5.44

Passage Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.44**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B55R-01-BAC** **Manassas Run**

Cause Location: Manassas Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 15.10 End Mile: 0.00 Total Impaired Size: 15.10 Miles)

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment remains impaired due to exceedences of the e-coli bacteria WQS at station: 1BMAN002.55 (4 exceedences of 35 samples for e-coli). Initial Listing Date: 2004. This segment is included in the EPA Approved Manassas Run Bacteria TMDL. Federal TMDL ID # 65525.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B55R_MAN01A00 / Manassas Run / Manassas Run from the Apple House WWTP discharge downstream to its confluence with the Shenandoah River.	4A	Escherichia coli	2014	L	5.01
VAV-B55R_MAN02A04 / Manassas Run / Manassas Run and tributaries from the headwaters downstream to the Apply House WWTP discharge.	4A	Escherichia coli	2014	L	10.08

Manassas Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**15.09**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B55R_MAN01A00 / Manassas Run / Manassas Run from the Apple House WWTP discharge downstream to its confluence with the Shenandoah River.	4A	Fecal Coliform	2004	L	5.01
VAV-B55R_MAN02A04 / Manassas Run / Manassas Run and tributaries from the headwaters downstream to the Apply House WWTP discharge.	4A	Fecal Coliform	2004	L	10.08

Manassas Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**15.09**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B55R-02-BAC** **Borden Marsh Run**

Cause Location: Borden Marsh Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 15.68 End Mile: 0.00 Total Impaired Size: 15.68 Miles)

City / County: Clarke Co. Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BBMR000.20 (16 exceedences of 41 samples for e-coli). Initial Listing Date: 2006. This segment is included in the EPA Approved Bordon Marsh Run Bacteria TMDL. Federal TMDL ID # 65530.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B55R_BMR01A00 / Borden Marsh Run / Borden Marsh Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River.	4A	Escherichia coli	2006	L	15.68

Borden Marsh Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**15.68**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B55R-03-BAC** **Willow Brook**

Cause Location: Willow Brook from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 4.10 End Mile: 0.00 Total Impaired Size: 4.10 Miles)

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BWLO000.71 (10 exceedences of 36 samples for e-coli). Initial Listing Date: 2006. This segment is included in the EPA Approved Willow Brook Bacteria TMDL. Federal TMDL ID # 65520.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B55R_WLO01A06 / Willow Brook / Willow Brook from the headwaters downstream to its confluence with the Shenandoah River.	4A	Escherichia coli	2006	L	4.09

Willow Brook **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.09**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B56R-01-BAC** **Crooked Run**

Cause Location: Crooked Run from the Lake Frederick dam downstream to its confluence with the Shenandoah River. (Start Mile: 9.23 End Mile: 0.00 Total Impaired Size: 9.23 Miles)

City / County: Frederick Co. Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BCRO002.75 (12 exceedences of 72 samples for e-coli). Initial Listing Date: 2008. This segment is included in the EPA approved Crooked Run Bacteria TMDL Federal TMDL ID# 65528.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B56R_CRO01A00 / Crooked Run / Crooked Run from the Nineveh Spring outfall downstream to its confluence with the Shenandoah River.	4A	Escherichia coli	2008	L	6.90
VAV-B56R_CRO01B16 / Crooked Run / Crooked Run from the Lake Frederick dam downstream to its confluence with the Nineveh Spring outfall.	4A	Escherichia coli	2008	L	2.32

Crooked Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.22**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B56R_CRO01A00 / Crooked Run / Crooked Run from the Nineveh Spring outfall downstream to its confluence with the Shenandoah River.	4A	Fecal Coliform	2002	L	6.90
VAV-B56R_CRO01B16 / Crooked Run / Crooked Run from the Lake Frederick dam downstream to its confluence with the Nineveh Spring outfall.	4A	Fecal Coliform	2002	L	2.32

Crooked Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**9.22**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B56R-01-DO** **Crooked Run**

Cause Location: Crooked Run from the Lake Frederick dam downstream to its confluence with the Nineveh Spring outfall. (Start Mile: 9.23 End Mile: 6.90 Total Impaired Size: 2.33 Miles) Impairment length shortened in 2016 with delist of downstream assessment unit.

City / County: Frederick Co. Warren Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

This segment is impaired due to excursions of the DO WQS at station: 1BCRO006.93 (11 excursions of 35 samples for DO). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B56R_CRO01B16 / Crooked Run / Crooked Run from the Lake Frederick dam downstream to its confluence with the Nineveh Spring outfall.	5A	Oxygen, Dissolved	2008	L	2.32

Crooked Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.32**

Sources:

Upstream Impoundments (e.g., PI-566 NRCS Structures)

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B56R-02-BAC** **Stephens Run**

Cause Location: Stephens Run from an unnamed tributary 1 mile upstream of Crooked Run downstream to its confluence with Crooked Run. (Start Mile: 1.00 End Mile: 0.00 Total Impaired Size: 1.00 Miles)

City / County: Frederick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BSTV000.20 (10 exceedences of 69 samples for e-coli). Initial Listing Date: 2010. This segment is included in the EPA Approved Stephens Run Bacteria TMDL. Federal TMDL ID # 65524.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B56R_STV01A00 / Stephens Run / Stephens Run from an unnamed tributary .99 miles upstream of Crooked Run downstream to its confluence with Crooked Run.	4A	Escherichia coli	2010	L	0.99

Stephens Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.99**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B56R-02-BEN** **Stephens Run**

Cause Location: Stephens Run from an unnamed tributary 1 mile upstream of Crooked Run downstream to its confluence with Crooked Run. (Start Mile: 1.00 End Mile: 0.00 Total Impaired Size: 1.00 Miles)

City / County: Frederick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BSTV000.20 (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-B56R_STV01A00 / Stephens Run / Stephens Run from an unnamed tributary .99 miles upstream of Crooked Run downstream to its confluence with Crooked Run.	5A	Benthic-Macroinvertebrate Bioassessments	2016	L	0.99

Stephens Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.99**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B56R-03-BAC** **West Run**

Cause Location: West Run from the headwaters downstream to its confluence with Crooked Run (Start Mile: 8.08 End Mile: 0.00 Total Impaired Size: 8.08 Miles) This segment was lengthened in 2014 due to a segmentation error in the 2012 assessment cycle.

City / County: Frederick Co. Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BWST000.20 (14 exceedences of 71 samples for e-coli) and 1BWST000.33 (3 exceedences of 13 samples for e-coli in 2016, no data in 2018). Initial Listing Date: 2010 This segment is included in the EPA Approved West Run Bacteria TMDL. Federal TMDL ID # 65523.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B56R_WST01A00 / West Run / West Run from the headwaters downstream to its confluence with Crooked Run.	4A	Escherichia coli	2010	L	8.08

West Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.08**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-01-BAC** **Page Brook Run/Spout Run**

Cause Location: Page Brook Run from the headwaters downstream to its confluence with Roseville Run; Spout Run from its confluence with Page Brook Run downstream to its confluence with the Shenandoah River. (Start Mile: 10.98, 4.12 End Mile: 0.00, 0.00 Total Impaired Size: 10.98 Miles, 4.12 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment remains impaired due to exceedences of the e-coli bacteria WQS at stations: 1BPGE000.09 (35 exceedences of 59 samples for e-coli); 1BPGE-SRPFC09-FOSR (7 exceedences of 10 samples for e-coli); 1BSPR000.40 (14 exceedences of 66 samples for e-coli) and 1BSPR-SRPFC02-FOSR (6 exceedences of 22 samples for e-coli). Initial Listing Date: 2004 (Page Brook Run), 1998 (Spout Run). This impairment is included in the EPA Approved Page Brook Run/Spout Run bacteria TMDL. Federal TMDL ID # 38674 and 38686.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_PGE01A00 / Page Brook Run / Page Brook Run and tributary from a point 1 mile upstream of Spout Run downstream to its confluence with Spout Run.	4A	Escherichia coli	2004	L	1.31
VAV-B57R_PGE02A10 / Page Brook Run / Page Brook Run and tributaries from the headwaters downstream to a point 1 mile upstream of Spout Run.	4A	Escherichia coli	2004	L	9.66
VAV-B57R_SPR01A00 / Spout Run / Spout Run from its confluence with Page Brook Run downstream to its confluence with the Shenandoah River.	4A	Escherichia coli	2010	L	4.12

Page Brook Run/Spout Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**15.09**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_PGE01A00 / Page Brook Run / Page Brook Run and tributary from a point 1 mile upstream of Spout Run downstream to its confluence with Spout Run.	4A	Fecal Coliform	2004	L	1.31
VAV-B57R_PGE02A10 / Page Brook Run / Page Brook Run and tributaries from the headwaters downstream to a point 1 mile upstream of Spout Run.	4A	Fecal Coliform	2004	L	9.66
VAV-B57R_SPR01A00 / Spout Run / Spout Run from its confluence with Page Brook Run downstream to its confluence with the Shenandoah River.	4A	Fecal Coliform	1998	L	4.12

Page Brook Run/Spout Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**15.09**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-01-BEN** **Spout Run**

Cause Location: Spout Run from its confluence with Page Brook Run downstream to its confluence with the Shenandoah River. (Start Mile: 4.12 End Mile: 0.00 Total Impaired Size: 4.12 Miles)

City / County: Clarke Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

This segment is impaired due to exceedences of the General Standard for Benthics at station: 1BSPR000.40 (Impaired for VSCI) and 1BSPR003.13 (Impaired for VSCI). Initial Listing Date: 1998. This impairment is included in the EPA Approved Spout Run benthic TMDL. Federal TMDL ID # 38673.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_SPR01A00 / Spout Run / Spout Run from its confluence with Page Brook Run downstream to its confluence with the Shenandoah River.	4A	Benthic-Macroinvertebrate Bioassessments	1998	L	4.12

Spout Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.12**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-02-BAC** **Long Branch**

Cause Location: Long Branch from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 3.87 End Mile: 0.00 Total Impaired Size: 3.87 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A Fecal Coliform / 4A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BLNG000.24 (8 exceedences of 35 samples for e-coli). Initial Listing Date: 2004. This segment is included in the EPA Approved Long Branch Bacteria TMDL. Federal TMDL ID # 65526.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_LNG01A04 / Long Branch / Long Branch from the headwaters downstream to its confluence with the Shenandoah River.	4A	Escherichia coli	2008	L	3.87

Long Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.87**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_LNG01A04 / Long Branch / Long Branch from the headwaters downstream to its confluence with the Shenandoah River.	4A	Fecal Coliform	2004	L	3.87

Long Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**3.87**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-03-BAC** **Chapel Run**

Cause Location: Chapel Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 11.75 End Mile: 0.00 Total Impaired Size: 11.75 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BCPL000.95 (5 exceedences of 35 samples for e-coli). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_CPL01A00 / Chapel Run / Chapel Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River.	5A	Escherichia coli	2008	H	11.74

Chapel Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.74**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-03-BEN** **Chapel Run**

Cause Location: Chapel Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 11.75 End Mile: 0.00 Total Impaired Size: 11.75 Miles)

City / County: Clarke Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to exceedences of the General Standard for Benthics at stations: 1BCPL000.95 (Impaired for VSCI). Initial Listing Date: 2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_CPL01A00 / Chapel Run / Chapel Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River.	5A	Benthic-Macroinvertebrate Bioassessments	2006	L	11.74

Chapel Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.74**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-04-BAC** **Roseville Run**

Cause Location: Roseville Run from the headwaters downstream to its confluence with Page Brook Run. (Start Mile: 6.4 End Mile: 0.00 Total Impaired Size: 6.4 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BRSC001.42 (28 exceedences of 60 samples for e-coli). Initial Listing Date: 2010 This impairment is included in the EPA Approved Roseville Run bacteria TMDL. Federal TMDL ID # 39303.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_RSC01A00 / Roseville Run / Roseville Run from the headwaters downstream to its confluence with Page Brook Run.	4A	Escherichia coli	2010	L	6.39

Roseville Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.39**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-05-BAC** **Shenandoah River**

Cause Location: Shenandoah River from its confluence with Long Branch downstream to its confluence with Spout Run. (Start Mile: 39.63 End Mile: 34.23 Total Impaired Size: 5.4 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BSHN038.48 (5 exceedences of 24 samples for e-coli). Initial Listing Date: 2014

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_SHN03A00 / Shenandoah River / Shenandoah River from its confluence with Long Branch downstream to its confluence with Spout Run.	5A	Escherichia coli	2014	L	5.40

Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.40**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-06-BAC** **Westbrook Run**

Cause Location: Westbrook Run and tributaries from the headwaters downstream to its confluence with Roseville Run. (Start Mile: 9.16 End Mile: 0.00 Total Impaired Size: 9.16 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 4A

This segment is impaired due to exceedences of the e-coli WQS at station 1BWBK-SRPFC43-FOSR (15 exceedences of 22 samples for e-coli). Initial Listing Date: 2018 This impairment is included in the EPA Approved Roseville Run Bacteria TMDL. Federal TMDL ID # 39303.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B57R_WBK01A00 / Westbrook Run / Westbrook Run and tributaries from the headwaters downstream to its confluence with Roseville Run.	4A	Escherichia coli	2018	L	9.16

Westbrook Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.16**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-02-BAC** **Dog Run**

Cause Location: Dog Run from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 6.13 End Mile: 0.00 Total Impaired Size: 6.13 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BDGR000.23 (9 exceedences of 23 samples for e-coli). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B58R_DGR01A00 / Dog Run / Dog Run from the headwaters downstream to its confluence with the Shenandoah River.	5A	Escherichia coli	2008	H	6.13

Dog Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.13**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-03-BAC** **Wheat Spring Branch**

Cause Location: Wheat Spring Branch from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 4.69 End Mile: 0.00 Total Impaired Size: 4.69 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli bacteria WQS at station: 1BWSB000.22 (18 exceedences of 18 samples for e-coli). Initial Listing Date: 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B58R_WSB01A00 / Wheat Spring Branch / Wheat Spring Branch from the headwaters downstream to its confluence with the Shenandoah River.	5A	Escherichia coli	2008	H	4.69

Wheat Spring Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.69**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-04-BAC** **Long Marsh Run**

Cause Location: Long Marsh Run from the headwaters downstream to the VA/WVA State Line. (Start Mile: 7.09 End Mile: 0.00 Total Impaired Size: 7.09 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at station: 1ALMR001.82 (8 exceedences of 12 samples for e-coli). Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B58R_LSR01A00 / Long Marsh Run / Long Marsh Run from the headwaters downstream to the VA/WVA State Line.	5A	Escherichia coli	2012	L	7.09

Long Marsh Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.09**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-05-BAC** **Shenandoah River**

Cause Location: Shenandoah River from its confluence with Craig Run downstream to the VA/WVA State Line. (Start Mile: 28.20 End Mile: 20.29 Total Impaired Size 7.91 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at station: 1BSHN022.63 (4 exceedences of 36 samples for e-coli) and 1BSHN-EC10-FOSR (3 exceedences of 8 samples for e-coli). Initial Listing Date: 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B58R_SHN01A00 / Shenandoah River / Shenandoah River from its confluence with Dog Run downstream to the VA/WVA State Line.	5A	Escherichia coli	2012	L	5.10
VAV-B58R_SHN02A00 / Shenandoah River / Shenandoah River from its confluence with Craig Run downstream to its confluence with Dog Run.	5A	Escherichia coli	2012	L	2.80

Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.90**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-06-BAC** **Craig Run**

Cause Location: Craig Run from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 4.40 End Mile 0.00 Total Impaired Size: 4.40 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to exceedences of the e-coli WQS at stations: 1BCRG-EC10TRIB-FOSR (5 exceedences of 6 samples for e-coli) and 1BCRG-FS340-FOSR (7 exceedences of 18 samples for e-coli). Initial Listing Date: 2018 1BCRG-EC10TRIB-FOSR (5 exceedences of 6 samples for e-coli) and 1BCRG-FS340-FOSR (7 exceedences of 18 samples for e-coli). Initial Listing Date: 2018.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAV-B58R_CRG01A16 / Craig Run / Craig Run from the 5 mile upper limit of the Mt. Weather PWS designation downstream to its confluence with the Shenandoah River.	5A	Escherichia coli	2018	L	2.72
VAV-B58R_CRG02A16 / Craig Run / Craig Run from the headwaters downstream to the 5 mile upper limit of the Mt. Weather PWS designation.	5A	Escherichia coli	2018	L	1.68

Craig Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.40**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

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***Cause Group Code:* CB5MH-DO-BAY** **Chesapeake Bay segment CB5MH**

Cause Location: This cause encompasses the complete CBP segment CB5MH.

City / County: Chesapeake Bay - County Not Applicable. Lancaster Co. Northumberland Co.

Use(s): Aquatic Life Deep-Water Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

The 30-day dissolved oxygen criteria for open water use (summer) and the 30-day dissolved oxygen criteria for deep water use failed for the 2018 assessment in segment CB5MH. There are insufficient data to assess remaining shorter-term dissolved oxygen criteria for the open water and deep water uses. The instantaneous oxygen criteria for deep channel use was met.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_LIS02A00 / Little Wicomico River / Boundary of VDH-DSS Condemnation Notice 010-105, 6/14/2016 downstream to Sunnybank Ferry. Expanded in the 2018 cycle. CB5MH	4A	Oxygen, Dissolved	2016	L	0.704
VAP-A34E_LIS03A98 / Little Wicomico River / Confined to approximately the Sunnybank Ferry Route. CB5MH	4A	Oxygen, Dissolved	2016	L	0.025
VAP-A34E_LIS04A00 / Little Wicomico River / Downstream of the Sunnybank Ferry Route, except as otherwise segmented. CB5MH	4A	Oxygen, Dissolved	2016	L	0.971

Chesapeake Bay segment CB5MH **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:	**1.700**		

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
Sources Outside State Jurisdiction or Borders	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)		

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* CB5MH-SAV-BAY** **Chesapeake Bay segment CB5MH**

Cause Location: This cause encompasses the complete CBP segment CB5MH.

City / County: Chesapeake Bay - County Not Applicable. Lynnhaven Inlet Northumberland Co.

Use(s): Aquatic Life Shallow-Water Submerged Aquatic Vegetation

Cause(s) / VA Category: Aquatic Plants (Macrophytes) / 4A

Submerged Aquatic Vegetation acres goal is 7,633 acres but only 16% was attained found in the most recent 3 years according to aerial analysis of SAV. Only 69% of water clarity goal met according to 2013 and 2014 Dataflow surveys.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-A34E_BAC01A12 / Back Creek / Described in VDH SFC 010-105F, 6/14/2016. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.038
VAP-A34E_BBC01A08 / Bridgemans Back Creek / Described in VDH Shellfish Condemnation 010-105E, 6/9/2014. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.055
VAP-A34E_BRI01C98 / Bridge Creek / VDH condemnation 010-105B and portion of 010-105D, 6/14/2016 not otherwise segmented. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.129
VAP-A34E_BRI02C98 / Bridge Creek / Described in the condemnation notice 010-105D, 9/15/2004 CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.089
VAP-A34E_COO01A98 / Cod Creek, Trib to Little Wicomico / Described in VDH condemnation notice 105A, 06/10/1997 CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.078
VAP-A34E_COO02A14 / Little Wicomico River / Cod Creek / Portion of VDH condemnation 010-105G, 6/9/2014 open on 6/10/1997. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.012
VAP-A34E_ELL01A06 / Ellyson Creek / Described in VDH-DSS condemnation 010-105C, 6/9/2014. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.098
VAP-A34E_LIS01A02 / Little Wicomico River / Portion of VDH-DSS Condemnation 010-105A, 6/14/2016 open on 6/10/1997 as well as sections 010-105E and -105C. Segment shortened and split in the 2018 cycle. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.179
VAP-A34E_LIS01A98 / Little Wicomico River / Described in the VDH-DSS Condemnation Notice 105B, 6/10/1997 CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.203

VAP-A34E_LIS01B12 / Little Wicomico River / Described in VDH-DSS condemnation 010-105M3, 6/9/2014. Adjusted slightly in the 2018 cycle. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.021
VAP-A34E_LIS01C18 / Little Wicomico River / Described in VDH-DSS Condemnation 010-105M4. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.016
VAP-A34E_LIS02A00 / Little Wicomico River / Boundary of VDH-DSS Condemnation Notice 010-105, 6/14/2016 downstream to Sunnybank Ferry. Expanded in the 2018 cycle. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.704
VAP-A34E_LIS02B08 / Little Wicomico River / Described in VDH condemnation 010-105M2, 6/14/2016 CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.006
VAP-A34E_LIS03A98 / Little Wicomico River / Confined to approximately the Sunnybank Ferry Route. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.025
VAP-A34E_LIS04A00 / Little Wicomico River / Downstream of the Sunnybank Ferry Route, except as otherwise segmented. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.971
VAP-A34E_LIS04B12 / Little Wicomico River, UT / Described in VDH condemnation 010-105H, 6/14/2016. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.024
VAP-A34E_SLO05A98 / Little Wicomico River: Slough Creek / Described in the condemnation notice 010-105E, 5/15/2012. CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.032
VAP-A34E_SLO06A06 / Slough Creek / Described in VDH-DSS condemnation 010-105M1, 5/15/2012 CB5MH	4A	Aquatic Plants (Macrophytes)	2006	L	0.028

Chesapeake Bay segment CB5MH **Shallow-Water Submerged Aquatic Vegetation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	**2.708**		

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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)	

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* POTMH-DO-BAY** **Potomac Mesohaline Embayments**

Cause Location: Includes all waters in the mesohaline portion of the Potomac River (POTMH).

City / County: King George Co. Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life Deep-Water Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

An open-water assessment of dissolved oxygen values during the summer season showed that the POTMH was not supporting.

2016 Assessment: A deep-water assessment of dissolved oxygen values during the summer season showed that the POTMH was not supporting. The POTMH was 4.01 percent above CFD. (Applies to areas noted as impaired for deep-water subuse in 2016IR. Because the deep-water subuse does not apply in 2018IR, the impairment remains applicable.)

The Chesapeake Bay TMDL was established by the EPA on 12/29/2010

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30E_DEE01A00 / Deep Creek / Segment includes the downstream portion of Deep Creek to the confluence with Upper Machodoc Creek within the boundaries described in the VDH Shellfish Area Condemnation Number 001A-036, Section D, effective 05/07/13. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.019
VAN-A30E_GAM01A02 / Gambo Creek / The Gambo Creek portion of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section A, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.163
VAN-A30E_UMC01A02 / Upper Machodoc Creek / The boundaries of the condemned (prohibited) area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section F, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.022
VAN-A30E_UMC01B06 / Upper Machodoc Creek / The Upper Machodoc Creek portion of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section A, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.064
VAN-A30E_UMC02A04 / Upper Machodoc Creek / The boundaries of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section B, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.028
VAN-A30E_UMC03A04 / Upper Machodoc Creek / A portion of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section E, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.043
VAN-A30E_UMC03B10 / Upper Machodoc Creek / Segment includes the area of UMC described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section M1, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.049
VAN-A30E_UMC04A10 / Upper Machodoc Creek / Segment	4A	Oxygen, Dissolved	2006	L	0.419

includes main body of tidal Upper Machodoc Creek not included in segment VAN-A30E_UMC04B06 or the Sections described in VDH Shellfish Area Condemnation Number 001A-36, dated May 7, 2013. Portion of CBP segment POTMH.					
VAN-A30E_UMC04B06 / Upper Machodoc Creek / Segment includes main body of tidal Upper Machodoc Creek not included in segment VAN-A30E_UMC04A10 or the Sections described in VDH Shellfish Area Condemnation Number 001A-36, dated May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.418
VAN-A30E_UMC04C06 / Upper Machodoc Creek / Segment includes the downstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, dated 05/07/13, and continuing until the open embayment of Upper Machodoc Creek. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2014	L	0.184
VAN-A30E_UMC05A02 / Upper Machodoc Creek / Segment includes the upstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, effective May 07, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2006	L	0.705
VAN-A30E_WLL01A02 / Williams Creek / The boundaries of the condemned (prohibited) area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section G, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2002	L	0.041
VAN-A30E_WLL01B10 / Williams Creek / The downstream portion of the boundary of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section C, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2002	L	0.113
VAN-A30E_WLL02A02 / Williams Creek / The upstream portion of the boundary of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section C, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Oxygen, Dissolved	2002	L	0.022
VAP-A30E_ZZZ01A10 / Unsegmented estuaries in PRO's portion of A30 / Unsegmented portion of watershed.	4A	Oxygen, Dissolved	2014	L	0.034
POTMH					
VAP-A31E_BRG01A04 / Bridges Creek / Tidal limit to mouth	4A	Oxygen, Dissolved	2014	L	0.182
POTMH					
VAP-A31E_GLD01A00 / Goldman Creek / Described in VDH-DSS condemnation notice 001-088B, 8/20/2015	4A	Oxygen, Dissolved	2014	L	0.043
Slight adjustment in the 2018 cycle					
POTMH					
VAP-A31E_MAO01A98 / Mattox Creek / Portion of the condemnation notice 002-001B, 6/17/2016 that is not administratively condemned	4A	Oxygen, Dissolved	2014	L	0.429
Segment extended in the 2018 cycle.					
POTMH					

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VAP-A31E_MAO01B10 / Mattox Creek / Upper portion of the condemnation notice 002-001B, 6/17/2016 which is administratively condemned.	4A	Oxygen, Dissolved	2014	L	0.366

Segment merged in the 2018 cycle.

POTMH

VAP-A31E_MAO02A00 / Mattox Creek / Downstream of VDH-DSS condemnation area 002-001B 6/17/2016.	4A	Oxygen, Dissolved	2014	L	0.338

Segment shrunk in the 2018 cycle.

POTMH

VAP-A31E_MAO05A08 / Mattox Creek / VDH-DSS condemnation 002-001M1, 6/17/2016	4A	Oxygen, Dissolved	2014	L	0.007
VAP-A31E_MON01A00 / Monroe Creek/Monroe Bay / Prohibited area around STP outfall as described in VDH shellfish condemnation 002-001D, 6/7/2016	4A	Oxygen, Dissolved	2014	L	0.176
VAP-A31E_MON02A98 / Monroe Bay / Administratively condemned portion of VDH condemnation notice 002-001A, 6/17/2016	4A	Oxygen, Dissolved	2014	L	0.355

POTMH

VAP-A31E_MON03A98 / Monroe Bay / Portion of VDH condemnation notice 002-001A, 6/17/2016	4A	Oxygen, Dissolved	2014	L	0.172

POTMH

VAP-A31E_MON03B16 / Monroe Bay / Described in VDH condemnation notice 002-001M2, 6/17/2016	4A	Oxygen, Dissolved	2014	L	0.063

POTMH

VAP-A31E_MON04A00 / Monroe Bay / Downstream of VDH-DSS condemnation area 002-001A, 6/17/2016	4A	Oxygen, Dissolved	2014	L	0.221

POTMH

VAP-A31E_MON05A04 / Monroe Bay / Described in VDH Condemnation 002-001C, 6/7/2016	4A	Oxygen, Dissolved	2014	L	0.002

POTMH

VAP-A31E_POP01A98 / Popes Creek / Described in condemnation notice 003-146, 9/23/2008.	4A	Oxygen, Dissolved	2014	L	0.576
VAP-A31E_ROS01A08 / Rosier Creek / Portion of VDH condemnation notice 001-088A, 8/20/2015 not included in the 2006 TMDL.	4A	Oxygen, Dissolved	2014	L	0.149

Segment shrunk and split in 2018 cycle.

POTMH

VAP-A31E_ROS01A98 / Rosier Creek / Described in VDH condemnation notice 088A, 7/1/1998.	4A	Oxygen, Dissolved	2014	L	0.206
VAP-A31E_ROS02A00 / Rosier Creek / From the downstream limit of segment ROS01A08 to its mouth at the Potomac River	4A	Oxygen, Dissolved	2014	L	0.242

Expanded in the 2018 cycle.

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POTMH					
VAP-A31E_ROS02B18 / Rosier Creek / Described in VDH condemnation notice 001-088M1, 8/20/2015	4A	Oxygen, Dissolved	2014	L	0.008
POTMH					
VAP-A31E_XFF01A04 / XFF - Mattox Creek, UT / As described in VDH Condemnation 002-001E, 6/17/2016	4A	Oxygen, Dissolved	2014	L	0.010
POTMH					
VAP-A31E_ZZZ01A14 / Unsegmented estuaries in A31 / Unsegmented portion of watershed PL66.	4A	Oxygen, Dissolved	2014	L	0.006
POTMH					
VAP-A31E_ZZZ01B14 / Unsegmented estuaries in A31 / Unsegmented portion of watershed PL67.	4A	Oxygen, Dissolved	2014	L	0.317
POTMH					
VAP-A32E_BAN01A00 / Barnes Creek / Downstream of VDH Shellfish Condemnation 082C, 2/10/1997	4A	Oxygen, Dissolved	2014	L	0.027
Merged in the 2018 cycle.					
POTMH					
VAP-A32E_BAN02A08 / Barnes Creek / Described in VDH Shellfish Condemnation 082C, 2/10/1997	4A	Oxygen, Dissolved	2014	L	0.057
POTMH					
VAP-A32E_BRA01A98 / Branson Cove / Described in the condemnation notice 005-083C, 7/14/2016	4A	Oxygen, Dissolved	2014	L	0.020
POTMH					
VAP-A32E_BUB01B16 / Buckner Creek / Described in VDH Condemnation 004-082D, 2/10/1997	4A	Oxygen, Dissolved	2014	L	0.183
Merged in the 2018 cycle.					
POTMH					
VAP-A32E_BUB02A06 / Buckner Creek / Downstream of condemnation 004-082B, 2/1/2016	4A	Oxygen, Dissolved	2014	L	0.372
POTMH					
VAP-A32E_BUB02B14 / Buckner Creek / Portion of condemnation 004-082B, 2/1/2016 not included in 082D, 2/10/1997	4A	Oxygen, Dissolved	2014	L	0.065
POTMH					
VAP-A32E_CAP01A04 / Cabin Point Creek / As described in the condemnation notice 005-083B, 7/14/2016	4A	Oxygen, Dissolved	2014	L	0.123
POTMH					
VAP-A32E_CHB01A98 / Cold Harbor Bay / Described in the condemnation notice 004-184A, 2/1/2016	4A	Oxygen, Dissolved	2014	L	0.083
POTMH					

VAP-A32E_CHB02A06 / Cold Harbor Creek / Currioman Bay / Described in VDH condemnation 004-184M1, 2/1/2016	4A	Oxygen, Dissolved	2014	L	0.044
POTMH					
VAP-A32E_CRB02A00 / Currioman Bay / Downstream of Currioman Creek.	4A	Oxygen, Dissolved	2014	L	0.729
POTMH					
VAP-A32E_CRB03A14 / Currioman Bay / Upstream of Currioman Creek	4A	Oxygen, Dissolved	2014	L	0.923
POTMH					
VAP-A32E_CUR01A98 / Currioman Creek / Described in the condemnation notice 004-184, 2/10/1997	4A	Oxygen, Dissolved	2014	L	0.052
POTMH					
VAP-A32E_CUR01B08 / Currioman Creek / From the limit of VDH condemnation 004-184, 2/10/1997 downstream to the limit of 004-184B, 2/1/2016.	4A	Oxygen, Dissolved	2014	L	0.020
POTMH					
VAP-A32E_DAV01A08 / Davis Creek / Described in VDH condemnation 004-082G, 2/1/2016	4A	Oxygen, Dissolved	2014	L	0.026
POTMH					
VAP-A32E_GLB01A00 / Glebe Creek / Downstream of condemnation 005-083A, 12/28/2007	4A	Oxygen, Dissolved	2014	L	0.039
POTMH					
VAP-A32E_GLB02A08 / Aimes and Glebe Creeks / As described in VDH Shellfish Condemnation 005-083E and -083F, 7/14/2016.	4A	Oxygen, Dissolved	2014	L	0.120
Split in the 2018 cycle.					
POTMH					
Mileage adjusted in 2006 and 2008 cycles.					
VAP-A32E_GLB02B18 / Aimes and Glebe Creeks / Portion of VDH Shellfish Condemnation 005-083A, 12/28/2007 open 7/14/2016	4A	Oxygen, Dissolved	2014	L	0.015
POTMH					
Mileage adjusted in 2006 and 2008 cycles.					
VAP-A32E_JUL01A08 / Jules Creek / Described in VDH Shellfish Condemnation 004-082C, 2/1/2016	4A	Oxygen, Dissolved	2014	L	0.045
POTMH					
VAP-A32E_LOW01A04 / Lower Machodoc Creek / As described in VDH condemnation notice 005-083B, 12/28/2007	4A	Oxygen, Dissolved	2014	L	0.536
Merged in the 2018 cycle.					
POTMH					
VAP-A32E_LOW01B18 / Lower Machodoc Creek / Boundary of	4A	Oxygen, Dissolved	2014	L	0.626

condemned area 005-083B, 12/28/2007 downstream to limit of 005-083A, 7/14/2016					
POTMH					
VAP-A32E_LOW02A00 / Lower Machodoc Creek / Boundary of condemned area 005-083A, 7/14/2016 downstream to approximately rivermile 2.68	4A	Oxygen, Dissolved	2014	L	0.205
Split in the 2018 cycle.					
POTMH					
VAP-A32E_LOW02B16 / Lower Machodoc Creek / One-half mile upstream and downstream of station 1ALOW002.18.	4A	Oxygen, Dissolved	2014	L	0.687
POTMH					
VAP-A32E_LOW02C12 / Lower Machodoc Creek, UT / Described in VDH condemnation 005-083C, 12/21/2010	4A	Oxygen, Dissolved	2014	L	0.059
POTMH					
VAP-A32E_LOW02D16 / Lower Machodoc Creek / Approximately river mile 1.68 downstream to mouth.	4A	Oxygen, Dissolved	2014	L	2.145
POTMH					
VAP-A32E_MAT01A08 / Matthews Cove / Described in VDH Shellfish Condemnation 004-082E, 2/1/2016	4A	Oxygen, Dissolved	2014	L	0.019
POTMH					
VAP-A32E_NOM01A04 / Nomini Creek, Pierce Creek / Portion of VDH Shellfish Condemnation 004-082D, 2/1/2016 downstream of 082B, 7/3/1997 and portion upstream of 082A, 7/3/1997.	4A	Oxygen, Dissolved	2014	L	0.247
Segment shortened in 2018 cycle					
POTMH					
VAP-A32E_NOM01A98 / Nomini Creek / As described in VDH Shellfish Condemnation 082B, 7/3/1997.	4A	Oxygen, Dissolved	2014	L	0.540
POTMH					
VAP-A32E_NOM02A00 / Nomini Creek / Downstream condemnation boundary to approximately river mile 1.	4A	Oxygen, Dissolved	2014	L	2.249
POTMH					
VAP-A32E_NOM04A00 / Nomini Bay / Downstream of approx. river mile 1.0.	4A	Oxygen, Dissolved	2014	L	2.500
POTMH					
VAP-A32E_NOP01A02 / North Prong Buckner Creek / Described in the condemnation notice 082E, 2/10/1997.	4A	Oxygen, Dissolved	2014	L	0.023
POTMH					
VAP-A32E_NOP02A08 / North Prong Buckner Creek / Portion of VDH condemnation 004-082A, 2/1/2016 that was not included in 082E, 2/10/1997	4A	Oxygen, Dissolved	2014	L	0.060

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Expanded in the 2018 cycle.

POTMH

VAP-A32E_PEI01A98 / Peirce Creek / As described in VDH Shellfish Condemnation 082A, 7/3/1997.	4A	Oxygen, Dissolved	2014	L	0.142

POTMH

VAP-A32E_POO01A08 / Poor Jack Creek / Described in VDH Shellfish Condemnation 004-184C, 2/1/2016	4A	Oxygen, Dissolved	2014	L	0.147

POTMH

VAP-A32E_WEA02A04 / Weatherall Creek / As described in VDH condemnation 005-083D, 7/14/2016	4A	Oxygen, Dissolved	2014	L	0.055

POTMH

VAP-A32E_ZZZ01A14 / Unsegmented estuaries in A32 / Unsegmented portion of watershed PL68.	4A	Oxygen, Dissolved	2014	L	0.009

POTMH

VAP-A32E_ZZZ01B14 / Unsegmented estuaries in A32 / Unsegmented portion of watershed PL69.	4A	Oxygen, Dissolved	2014	L	0.053

POTMH

VAP-A33E_BOM01A98 / Bonum Creek / Described in the condemnation notice 006-143C, 8/4/2016.	4A	Oxygen, Dissolved	2014	L	0.180

Shortened in the 2018 cycle.

POTMH

VAP-A33E_BOM01B10 / Bonum Creek / Portion of condemnation notice 143C, 5/5/2005 in 006-143S3, 8/4/2016.	4A	Oxygen, Dissolved	2014	L	0.030

Expanded in the 2018 cycle.

POTMH

VAP-A33E_DUA01A04 / Dungan Cove / As described in VDH Shellfish Condemnation 007-028G, 5/12/1997	4A	Oxygen, Dissolved	2014	L	0.024

POTMH

VAP-A33E_DUA01B08 / Dungan Cove / Downstream of VDH condemnation 028G, 5/12/1997 to limit of condemnation 007-028G, 11/1/2010	4A	Oxygen, Dissolved	2014	L	0.005

POTMH

VAP-A33E_GAD01A98 / Gardner Creek / Described in condemnations 006-143A and -E, 8/4/2016.	4A	Oxygen, Dissolved	2014	L	0.008

Size reduced in the 2018 cycle.

POTMH

VAP-A33E_GAD01B14 / Gardner Creek / Portion of condemnation notice 006-143A, 5/5/2005 seasonally condemned on 8/4/2016	4A	Oxygen, Dissolved	2014	L	0.104

Expanded in the 2018 cycle.

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POTMH

VAP-A33E_GAD02A00 / Gardner Creek / Downstream of VDH condemnation 006-143A, 5/5/2005	4A	Oxygen, Dissolved	2014	L	0.013

POTMH

VAP-A33E_HAM01A02 / Hampton Hall Branch / Tidal Hampton Hall Branch	4A	Oxygen, Dissolved	2014	L	0.274

POTMH

VAP-A33E_JCK01A98 / Jackson Creek / Described in VDH condemnation notice 006-143B and -D, 8/4/2016	4A	Oxygen, Dissolved	2014	L	0.096

Segment split in the 2018 cycle.

POTMH

VAP-A33E_JCK01B18 / Jackson Creek / Portion of VDH condemnation notice 006-143B, 5/5/2005 seasonally condemned in 006-143S2, 8/4/2016	4A	Oxygen, Dissolved	2014	L	0.042

POTMH

VAP-A33E_KIN01A12 / Kinsale Branch / Tidal limit to mouth	4A	Oxygen, Dissolved	2014	L	0.108

POTMH

VAP-A33E_LOG01A98 / Lodge Creek / Described in the condemnation notice 007-225C, 9/26/2016.	4A	Oxygen, Dissolved	2014	L	0.030

POTMH

VAP-A33E_LOG02A98 / Lodge Creek / Portion of condemnation notice 007-225A, 9/26/2016 that is not administratively condemned.	4A	Oxygen, Dissolved	2014	L	0.138

Shrank in the 2018 cycle.

POTMH

VAP-A33E_LOG02B10 / Lodge Creek / Portion of condemnation notice 007-225A, 9/26/2016 that is administratively condemned.	4A	Oxygen, Dissolved	2014	L	0.074

POTMH

VAP-A33E_LOG02C12 / Lodge Creek / Portion of condemnation notice 007-028F, 5/12/1997 that is within 007-225M2, 9/26/2016.	4A	Oxygen, Dissolved	2014	L	0.058

Expanded in the 2018 cycle.

POTMH

VAP-A33E_LOG03A08 / Lodge Creek / Downstream boundary of 028F 5/12/1997 to downstream boundary of VDH condemnation 007-225M2, 9/26/2016	4A	Oxygen, Dissolved	2014	L	0.019

POTMH

VAP-A33E_MIA01A98 / Mill Creek / Described in the condemnation notice 007-225B, 9/26/2016	4A	Oxygen, Dissolved	2014	L	0.149

Expanded in the 2018 cycle.

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POTMH

VAP-A33E_MIA01B10 / Mill Creek / Portion of condemnation notice 028E, 5/12/1997 open on 9/26/2016.	A	Oxygen, Dissolved	2014	L	0.064

Shrunk in the 2018 cycle.

POTMH

VAP-A33E_RAG01A06 / Ragged Point Bay / Described in VDH-DSS condemnation 006-143M1, 8/4/2016	A	Oxygen, Dissolved	2014	L	0.226

POTMH

VAP-A33E_SHA01A98 / Shannon Branch / Described in the condemnation notice 007-028A, 9/26/2016.	A	Oxygen, Dissolved	2014	L	0.036

POTMH

VAP-A33E_SHA03A06 / Shannon Branch / Described in VDH-DSS condemnation 007-028M1, 9/26/2016.	A	Oxygen, Dissolved	2014	L	0.035

POTMH

VAP-A33E_SOV01A02 / South Yeocomico River / South Yeocomico River excluding condemnation 007-225M1, 9/26/2016	A	Oxygen, Dissolved	2014	L	0.594

POTMH

VAP-A33E_SOV02A06 / South Yeocomico River / Described in VDH-DSS condemnation 007-225M1, 9/26/2016	A	Oxygen, Dissolved	2014	L	0.048

POTMH

VAP-A33E_WES01A06 / West Yeocomico River / Described in VDH-DSS condemnation 007-028M3, 9/26/2016	A	Oxygen, Dissolved	2014	L	0.030

POTMH

VAP-A33E_WES01B12 / West Yeocomico River / Portion of the West Yeocomico River mainstem within condemnation notice 007-028C, 5/12/1997	A	Oxygen, Dissolved	2014	L	0.052

POTMH

VAP-A33E_WES02A06 / West Yeocomico River / Downstream of condemnations	A	Oxygen, Dissolved	2014	L	0.394

POTMH

VAP-A33E_WHP01A98 / White Point Creek / Described in the condemnation notice 007-028C, 9/28/2016	A	Oxygen, Dissolved	2014	L	0.044

POTMH

VAP-A33E_WHP01B18 / White Point Creek / Portion of condemnation notice 007-028B, 5/12/1997 open in 007-082C, 9/26/2016	A	Oxygen, Dissolved	2014	L	0.035

POTMH

VAP-A33E_WHP03A06 / NW Yeocomico (White Point Creek/Shannon Branch) / Described in VDH-DSS condemnation 007-028M2, 9/26/2016	A	Oxygen, Dissolved	2014	L	0.033

POTMH

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VAP-A33E_YEO01A02 / Yeocomico River and Tributaries / Yeocomico River	A	Oxygen, Dissolved	2014	L	1.878
POTMH					
VAP-A33E_ZZZ01A14 / Unsegmented estuaries in A33 / Unsegmented portion of watershed PL71.	A	Oxygen, Dissolved	2014	L	1.376
POTMH					
VAP-A33E_ZZZ01C14 / Unsegmented estuaries in A33 / Unsegmented portion of watershed PL70.	A	Oxygen, Dissolved	2014	L	0.120
POTMH					
VAP-A34E_BOT01A04 / Boathouse Creek / As described in VDH Shellfish Condemnation 008-214D, 2/23/2012	A	Oxygen, Dissolved	2014	L	0.067
POTMH					
VAP-A34E_BRD01A98 / Bridgeman Creek / Described in the condemnation notice 009-142A, 3/20/2012.	A	Oxygen, Dissolved	2014	L	0.045
POTMH					
VAP-A34E_COA01A02 / Coan River / Portion of VDH-DSS Condemnation Notice 008-214B, 2/23/2012 not included on SFC 145, 2/23/1997.	A	Oxygen, Dissolved	2014	L	0.009
POTMH					
VAP-A34E_COA01A98 / Coan River / Described in the VDH-DSS Condemnation Notice 008-214B, 2/19/2016, excluding Mill Creek.	4A	Oxygen, Dissolved	2014	L	0.330
POTMH					
VAP-A34E_COA01B16 / Coan River / Portion of VDH-DSS Condemnation Notice 145I, 2/25/1997 open in 008-214, 2/19/2016.	4A	Oxygen, Dissolved	2014	L	0.028
POTMH					
VAP-A34E_COA02A02 / Coan River / From SFC 008-214B, 2/23/2012 to its mouth at the Potomac, excluding otherwise segmented waterbodies.	4A	Oxygen, Dissolved	2014	L	2.756
POTMH					
VAP-A34E_COC01A98 / Cod Creek / Described in the condemnation notice 009-141A, 3/26/2014.	4A	Oxygen, Dissolved	2014	L	0.049
POTMH					
VAP-A34E_COC01B02 / Cod Creek, UT / Described in the condemnation notice 009-141B, 3/26/2014	4A	Oxygen, Dissolved	2014	L	0.054
POTMH					
VAP-A34E_COC02A14 / Cod Creek / Portion of 141, 1/31/1997 open in 009-141, 3/26/2014.	4A	Oxygen, Dissolved	2014	L	0.066
POTMH					
VAP-A34E_COC02B14 / Cod Creek, UT / Portion of condemnation notice 141B, 1/31/1997 open in 009-141, 3/26/2014	4A	Oxygen, Dissolved	2014	L	0.025

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POTMH					
VAP-A34E_CUT01A98 / Cubitt Creek / Described in the condemnation notice 009-161A, 3/26/2014	4A	Oxygen, Dissolved	2014	L	0.225
POTMH					
VAP-A34E_FLP01A10 / Flag Pond / Described in VDH-DSS condemnation 009-161C, 3/26/2014	4A	Oxygen, Dissolved	2014	L	0.035
POTMH					
VAP-A34E_FTN01A06 / Fountain Cove / As described in VDH condemnation 009-142E, 3/30/2009	4A	Oxygen, Dissolved	2014	L	0.069
POTMH					
VAP-A34E_GLE01A04 / The Glebe / Portion of VDH-DSS notice 008-213B, 3/5/2015 open on 145D, 2/25/1997	4A	Oxygen, Dissolved	2014	L	0.045
POTMH					
VAP-A34E_GLE01A98 / The Glebe / Described in the condemnation notice 145D, 2/25/1997.	4A	Oxygen, Dissolved	2014	L	0.132
POTMH					
VAP-A34E_GLE03A00 / The Glebe / Glebe Creek downstream of condemnations.	4A	Oxygen, Dissolved	2014	L	0.770
POTMH					
VAP-A34E_GLE04A04 / Wrights Cove, UT / Described in the VDH-DSS Shellfish Condemnation 08-213C, 3/10/2014	4A	Oxygen, Dissolved	2014	L	0.046
POTMH					
VAP-A34E_HAC01A00 / Hack Creek / Tidal limit to mouth at Potomac River.	4A	Oxygen, Dissolved	2014	L	0.224
POTMH					
VAP-A34E_HEA01A98 / Headly Cove / Described in the VDH-DSS Condemnation Notice 008-214D, 2/19/2016	4A	Oxygen, Dissolved	2014	L	0.026
POTMH					
VAP-A34E_HUL01A02 / Hull Creek and Floyd Cove / Described in VDH condemnations 009-142A and -E, 4/12/2016, excluding Spring Cove.	4A	Oxygen, Dissolved	2014	L	0.252
Expanded slightly in the 2018 cycle..					
POTMH					
VAP-A34E_HUL01B12 / Hull Creek / Portion of VDH condemnation 142B, 8/21/2000 open in 009-142, 4/12/2016, excluding Spring Cove and Fountain Cove.	4A	Oxygen, Dissolved	2014	L	0.273
Shrunk slightly in the 2018 cycle.					
POTMH					
VAP-A34E_HUL01C12 / Fleets Cove (Hull Creek, UT) / Described in VDH condemnation 009-142B, 4/12/2016	4A	Oxygen, Dissolved	2014	L	0.024

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

POTMH					
VAP-A34E_KIN01A00 / Kingscote Creek / Downstream of condemnations 008-213, 3/5/2015 to the Coan River.	4A	Oxygen, Dissolved	2014	L	0.349
POTMH					
VAP-A34E_KIN02A06 / Kingscote Creek / Described in VDH-DSS condemnation 008-213M1, 3/5/2015	4A	Oxygen, Dissolved	2014	L	0.007
POTMH					
VAP-A34E_KIN03A06 / Kingscote Creek / Described in VDH-DSS condemnation 008-213M2, 3/5/2015	4A	Oxygen, Dissolved	2014	L	0.006
POTMH					
VAP-A34E_KIN04A06 / Kingscote Creek / Described in VDH-DSS condemnation 008-213A, 3/5/2015	4A	Oxygen, Dissolved	2014	L	0.009
POTMH					
VAP-A34E_KNC01A98 / Killneck Creek / Described in the condemnation notice 008-214A, 2/19/2016.	4A	Oxygen, Dissolved	2014	L	0.027
POTMH					
VAP-A34E_KNC01B06 / Killneck Creek, UT / Described in VDH-DSS condemnation 008-214M2, 2/19/2016	4A	Oxygen, Dissolved	2014	L	0.014
POTMH					
VAP-A34E_KNC02A10 / Killneck Creek / Portion of condemnation notice 145E, 2/25/1997 open on 2/19/2016.	4A	Oxygen, Dissolved	2014	L	0.021
POTMH					
VAP-A34E_MII01A06 / Mill Creek / Tidal limit to mouth at Coan River	4A	Oxygen, Dissolved	2014	L	0.104
POTMH					
VAP-A34E_PRE01A98 / Presley Creek / Described in the condemnation notice 009-141C, 3/26/2014.	4A	Oxygen, Dissolved	2014	L	0.332
POTMH					
VAP-A34E_ROG01A98 / Rogers Creek / Described in the condemnation notice 009-142C, 4/12/2016.	4A	Oxygen, Dissolved	2014	L	0.035
POTMH					
VAP-A34E_ROG01B16 / Rogers Creek / Portion of VDH-DSS Condemnation 009-142C, 3/17/2008 open for harvest on 4/12/2016.	4A	Oxygen, Dissolved	2014	L	0.023
POTMH					
VAP-A34E_SPN01A04 / Spring Cove / Tidal limit to mouth at Hull Creek	4A	Oxygen, Dissolved	2014	L	0.010
POTMH					
VAP-A34E_XFI01A98 / Coan River, UT - Stevens Point / Described in the condemnation notice 008-214M1, 2/19/2016	4A	Oxygen, Dissolved	2014	L	0.038
POTMH					
VAP-A34E_XFJ01A98 / XFJ - Coan River, UT (Cellars Cove) /	4A	Oxygen, Dissolved	2014	L	0.032

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

Described in the condemnation notice 008-214C, 2/19/2016.

POTMH

VAP-A34E_XLV01A10 / XLV - Potomac River, UT (aka Corbin Pond) / As described in VDH-DSS condemnation 009-142D, 4/12/2016	4A	Oxygen, Dissolved	2014	L	0.043

POTMH

VAP-A34E_ZZZ01A00 / Unsegmented estuaries in A34 / Unsegmented portion of the watershed.	4A	Oxygen, Dissolved	2014	L	0.291

POTMH

Potomac Mesohaline Embayments **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:	**32.636**		

Sources:

Agriculture	Atmospheric Deposition - Nitrogen	Industrial Point Source Discharge	Internal Nutrient Recycling
Livestock (Grazing or Feeding Operations)	Loss of Riparian Habitat	Municipal Point Source Discharges	Sources Outside State Jurisdiction or Borders
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* POTMH-SAV-BAY Potomac Mesohaline Embayments**

Cause Location: Includes all waters in the mesohaline portion of the Potomac River (POTMH).

City / County: King George Co. Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life Shallow-Water Submerged Aquatic Vegetation

Cause(s) / VA Category: Aquatic Plants (Macrophytes) / 4A

Submerged aquatic vegetation evaluation determined that the POTMH was below the segment goal. The Chesapeake Bay TMDL was established by the EPA on 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A30E_DEE01A00 / Deep Creek / Segment includes the downstream portion of Deep Creek to the confluence with Upper Machodoc Creek within the boundaries described in the VDH Shellfish Area Condemnation Number 001A-036, Section D, effective 05/07/13. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.019
VAN-A30E_GAM01A02 / Gambo Creek / The Gambo Creek portion of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section A, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.163
VAN-A30E_UMC01A02 / Upper Machodoc Creek / The boundaries of the condemned (prohibited) area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section F, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.022
VAN-A30E_UMC01B06 / Upper Machodoc Creek / The Upper Machodoc Creek portion of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section A, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.064
VAN-A30E_UMC02A04 / Upper Machodoc Creek / The boundaries of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section B, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.028
VAN-A30E_UMC03A04 / Upper Machodoc Creek / A portion of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section E, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.043
VAN-A30E_UMC03B10 / Upper Machodoc Creek / Segment includes the area of UMC described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section M1, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.049
VAN-A30E_UMC04A10 / Upper Machodoc Creek / Segment includes main body of tidal Upper Machodoc Creek not included in segment VAN-A30E_UMC04B06 or the Sections described in VDH Shellfish Area Condemnation Number 001A-36, dated May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.419

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

VAN-A30E_UMC04B06 / Upper Machodoc Creek / Segment includes main body of tidal Upper Machodoc Creek not included in segment VAN-A30E_UMC04A10 or the Sections described in VDH Shellfish Area Condemnation Number 001A-36, dated May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.418
VAN-A30E_UMC04C06 / Upper Machodoc Creek / Segment includes the downstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, dated 05/07/13, and continuing until the open embayment of Upper Machodoc Creek. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.184
VAN-A30E_UMC05A02 / Upper Machodoc Creek / Segment includes the upstream portion of UMC within the boundaries described in VDH Shellfish Area Condemnation #001A-36, Section D, effective May 07, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.705
VAN-A30E_WLL01A02 / Williams Creek / The boundaries of the condemned (prohibited) area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section G, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.041
VAN-A30E_WLL01B10 / Williams Creek / The downstream portion of the boundary of the condemned area described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section C, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.113
VAN-A30E_WLL02A02 / Williams Creek / The upstream portion of the boundary of the condemned area are described in VDH Notice and Description of Shellfish Area Condemnation Number 001A-36, Upper Machodoc Creek, Section C, effective May 7, 2013. Portion of CBP segment POTMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.022
VAP-A30E_ZZZ01A10 / Unsegmented estuaries in PRO's portion of A30 / Unsegmented portion of watershed.	4A	Aquatic Plants (Macrophytes)	2006	L	0.034
POTMH					
VAP-A31E_BRG01A04 / Bridges Creek / Tidal limit to mouth	4A	Aquatic Plants (Macrophytes)	2006	L	0.182
POTMH					
VAP-A31E_GLD01A00 / Goldman Creek / Described in VDH-DSS condemnation notice 001-088B, 8/20/2015	4A	Aquatic Plants (Macrophytes)	2006	L	0.043
Slight adjustment in the 2018 cycle					
POTMH					
VAP-A31E_MAO01A98 / Mattox Creek / Portion of the condemnation notice 002-001B, 6/17/2016 that is not administratively condemned	4A	Aquatic Plants (Macrophytes)	2006	L	0.429
Segment extended in the 2018 cycle.					
POTMH					
VAP-A31E_MAO01B10 / Mattox Creek / Upper portion of the condemnation notice 002-001B, 6/17/2016 which is administratively condemned.	4A	Aquatic Plants (Macrophytes)	2006	L	0.366

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

Segment merged in the 2018 cycle.

POTMH

VAP-A31E_MAO02A00 / Mattox Creek / Downstream of VDH-DSS condemnation area 002-001B 6/17/2016.	A	Aquatic Plants (Macrophytes)	2006	L	0.338

Segment shrunk in the 2018 cycle.

POTMH

VAP-A31E_MAO05A08 / Mattox Creek / VDH-DSS condemnation 002-001M1, 6/17/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.007
VAP-A31E_MON01A00 / Monroe Creek/Monroe Bay / Prohibited area around STP outfall as described in VDH shellfish condemnation 002-001D, 6/7/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.176
VAP-A31E_MON02A98 / Monroe Bay / Administratively condemned portion of VDH condemnation notice 002-001A, 6/17/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.355

POTMH

VAP-A31E_MON03A98 / Monroe Bay / Portion of VDH condemnation notice 002-001A, 6/17/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.172

POTMH

VAP-A31E_MON03B16 / Monroe Bay / Described in VDH condemnation notice 002-001M2, 6/17/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.063

POTMH

VAP-A31E_MON04A00 / Monroe Bay / Downstream of VDH-DSS condemnation area 002-001A, 6/17/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.221

POTMH

VAP-A31E_MON05A04 / Monroe Bay / Described in VDH Condemnation 002-001C, 6/7/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.002

POTMH

VAP-A31E_POP01A98 / Popes Creek / Described in condemnation notice 003-146, 9/23/2008.	A	Aquatic Plants (Macrophytes)	2006	L	0.576
VAP-A31E_ROS01A08 / Rosier Creek / Portion of VDH condemnation notice 001-088A, 8/20/2015 not included in the 2006 TMDL.	A	Aquatic Plants (Macrophytes)	2006	L	0.149

Segment shrunk and split in 2018 cycle.

POTMH

VAP-A31E_ROS01A98 / Rosier Creek / Described in VDH condemnation notice 088A, 7/1/1998.	A	Aquatic Plants (Macrophytes)	2006	L	0.206
VAP-A31E_ROS02A00 / Rosier Creek / From the downstream limit of segment ROS01A08 to its mouth at the Potomac River	A	Aquatic Plants (Macrophytes)	2006	L	0.242

Expanded in the 2018 cycle.

POTMH

VAP-A31E_ROS02B18 / Rosier Creek / Described in VDH	A	Aquatic Plants (Macrophytes)	2006	L	0.008

condemnation notice 001-088M1, 8/20/2015

POTMH

VAP-A31E_XFF01A04 / XFF - Mattox Creek, UT / As described in VDH Condemnation 002-001E, 6/17/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.010

POTMH

VAP-A31E_ZZZ01A14 / Unsegmented estuaries in A31 / Unsegmented portion of watershed PL66.	4A	Aquatic Plants (Macrophytes)	2006	L	0.006

POTMH

VAP-A31E_ZZZ01B14 / Unsegmented estuaries in A31 / Unsegmented portion of watershed PL67.	4A	Aquatic Plants (Macrophytes)	2006	L	0.317

POTMH

VAP-A32E_BAN01A00 / Barnes Creek / Downstream of VDH Shellfish Condemnation 082C, 2/10/1997	4A	Aquatic Plants (Macrophytes)	2006	L	0.027

Merged in the 2018 cycle.

POTMH

VAP-A32E_BAN02A08 / Barnes Creek / Described in VDH Shellfish Condemnation 082C, 2/10/1997	4A	Aquatic Plants (Macrophytes)	2006	L	0.057

POTMH

VAP-A32E_BRA01A98 / Branson Cove / Described in the condemnation notice 005-083C, 7/14/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.020

POTMH

VAP-A32E_BUB01B16 / Buckner Creek / Described in VDH Condemnation 004-082D, 2/10/1997	4A	Aquatic Plants (Macrophytes)	2006	L	0.183

Merged in the 2018 cycle.

POTMH

VAP-A32E_BUB02A06 / Buckner Creek / Downstream of condemnation 004-082B, 2/1/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.372

POTMH

VAP-A32E_BUB02B14 / Buckner Creek / Portion of condemnation 004-082B, 2/1/2016 not included in 082D, 2/10/1997	4A	Aquatic Plants (Macrophytes)	2006	L	0.065

POTMH

VAP-A32E_CAP01A04 / Cabin Point Creek / As described in the condemnation notice 005-083B, 7/14/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.123

POTMH

VAP-A32E_CHB01A98 / Cold Harbor Bay / Described in the condemnation notice 004-184A, 2/1/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.083

POTMH

VAP-A32E_CHB02A06 / Cold Harbor Creek / Currioman Bay / Described in VDH condemnation 004-184M1, 2/1/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.044

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

POTMH VAP-A32E_CRB02A00 / Currioman Bay / Downstream of Currioman Creek.	4A	Aquatic Plants (Macrophytes)	2006	L	0.729
POTMH VAP-A32E_CRB03A14 / Currioman Bay / Upstream of Currioman Creek	4A	Aquatic Plants (Macrophytes)	2006	L	0.923
POTMH VAP-A32E_CUR01A98 / Currioman Creek / Described in the condemnation notice 004-184, 2/10/1997	4A	Aquatic Plants (Macrophytes)	2006	L	0.052
POTMH VAP-A32E_CUR01B08 / Currioman Creek / From the limit of VDH condemnation 004-184, 2/10/1997 downstream to the limit of 004-184B, 2/1/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.020
POTMH VAP-A32E_DAV01A08 / Davis Creek / Described in VDH condemnation 004-082G, 2/1/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.026
POTMH VAP-A32E_GLB01A00 / Glebe Creek / Downstream of condemnation 005-083A, 12/28/2007	4A	Aquatic Plants (Macrophytes)	2006	L	0.039
POTMH VAP-A32E_GLB02A08 / Aimes and Glebe Creeks / As described in VDH Shellfish Condemnation 005-083E and -083F, 7/14/2016. Split in the 2018 cycle.	4A	Aquatic Plants (Macrophytes)	2006	L	0.120
POTMH Mileage adjusted in 2006 and 2008 cycles. VAP-A32E_GLB02B18 / Aimes and Glebe Creeks / Portion of VDH Shellfish Condemnation 005-083A, 12/28/2007 open 7/14/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.015
POTMH Mileage adjusted in 2006 and 2008 cycles. VAP-A32E_JUL01A08 / Jules Creek / Described in VDH Shellfish Condemnation 004-082C, 2/1/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.045
POTMH VAP-A32E_LOW01A04 / Lower Machodoc Creek / As described in VDH condemnation notice 005-083B, 12/28/2007 Merged in the 2018 cycle.	4A	Aquatic Plants (Macrophytes)	2006	L	0.536
POTMH VAP-A32E_LOW01B18 / Lower Machodoc Creek / Boundary of condemned area 005-083B, 12/28/2007 downstream to limit of 005-083A, 7/14/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.626

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

POTMH

VAP-A32E_LOW02A00 / Lower Machodoc Creek / Boundary of condemned area 005-083A, 7/14/2016 downstream to approximately rivermile 2.68	4A	Aquatic Plants (Macrophytes)	2006	L	0.205

Split in the 2018 cycle.

POTMH

VAP-A32E_LOW02B16 / Lower Machodoc Creek / One-half mile upstream and downstream of station 1ALOW002.18.	4A	Aquatic Plants (Macrophytes)	2006	L	0.687

POTMH

VAP-A32E_LOW02C12 / Lower Machodoc Creek, UT / Described in VDH condemnation 005-083C, 12/21/2010	4A	Aquatic Plants (Macrophytes)	2006	L	0.059

POTMH

VAP-A32E_LOW02D16 / Lower Machodoc Creek / Approximately river mile 1.68 downstream to mouth.	4A	Aquatic Plants (Macrophytes)	2006	L	2.145

POTMH

VAP-A32E_MAT01A08 / Matthews Cove / Described in VDH Shellfish Condemnation 004-082E, 2/1/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.019

POTMH

VAP-A32E_NOM01A04 / Nomini Creek, Pierce Creek / Portion of VDH Shellfish Condemnation 004-082D, 2/1/2016 downstream of 082B, 7/3/1997 and portion upstream of 082A, 7/3/1997.	4A	Aquatic Plants (Macrophytes)	2006	L	0.247

Segment shortened in 2018 cycle

POTMH

VAP-A32E_NOM01A98 / Nomini Creek / As described in VDH Shellfish Condemnation 082B, 7/3/1997.	4A	Aquatic Plants (Macrophytes)	2006	L	0.540

POTMH

VAP-A32E_NOM02A00 / Nomini Creek / Downstream condemnation boundary to approximately river mile 1.	4A	Aquatic Plants (Macrophytes)	2006	L	2.249

POTMH

VAP-A32E_NOM04A00 / Nomini Bay / Downstream of approx. river mile 1.0.	4A	Aquatic Plants (Macrophytes)	2006	L	2.500

POTMH

VAP-A32E_NOP01A02 / North Prong Buckner Creek / Described in the condemnation notice 082E, 2/10/1997.	4A	Aquatic Plants (Macrophytes)	2006	L	0.023

POTMH

VAP-A32E_NOP02A08 / North Prong Buckner Creek / Portion of VDH condemnation 004-082A, 2/1/2016 that was not included in 082E, 2/10/1997	4A	Aquatic Plants (Macrophytes)	2006	L	0.060

Expanded in the 2018 cycle.

POTMH

Potomac and Shenandoah River Basins

VAP-A32E_PEI01A98 / Peirce Creek / As described in VDH Shellfish Condemnation 082A, 7/3/1997.	4A	Aquatic Plants (Macrophytes)	2006	L	0.142
POTMH					
VAP-A32E_POO01A08 / Poor Jack Creek / Described in VDH Shellfish Condemnation 004-184C, 2/1/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.147
POTMH					
VAP-A32E_WEA02A04 / Weatherall Creek / As described in VDH condemnation 005-083D, 7/14/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.055
POTMH					
VAP-A32E_ZZZ01A14 / Unsegmented estuaries in A32 / Unsegmented portion of watershed PL68.	4A	Aquatic Plants (Macrophytes)	2006	L	0.009
POTMH					
VAP-A32E_ZZZ01B14 / Unsegmented estuaries in A32 / Unsegmented portion of watershed PL69.	4A	Aquatic Plants (Macrophytes)	2006	L	0.053
POTMH					
VAP-A33E_BOM01A98 / Bonum Creek / Described in the condemnation notice 006-143C, 8/4/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.180
Shortened in the 2018 cycle.					
POTMH					
VAP-A33E_BOM01B10 / Bonum Creek / Portion of condemnation notice 143C, 5/5/2005 in 006-143S3, 8/4/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.030
Expanded in the 2018 cycle.					
POTMH					
VAP-A33E_DUA01A04 / Dungan Cove / As described in VDH Shellfish Condemnation 007-028G, 5/12/1997	4A	Aquatic Plants (Macrophytes)	2006	L	0.024
POTMH					
VAP-A33E_DUA01B08 / Dungan Cove / Downstream of VDH condemnation 028G, 5/12/1997 to limit of condemnation 007-028G, 11/1/2010	4A	Aquatic Plants (Macrophytes)	2006	L	0.005
POTMH					
VAP-A33E_GAD01A98 / Gardner Creek / Described in condemnations 006-143A and -E, 8/4/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.008
Size reduced in the 2018 cycle.					
POTMH					
VAP-A33E_GAD01B14 / Gardner Creek / Portion of condemnation notice 006-143A, 5/5/2005 seasonally condemned on 8/4/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.104
Expanded in the 2018 cycle.					
POTMH					
VAP-A33E_GAD02A00 / Gardner Creek / Downstream of VDH	4A	Aquatic Plants (Macrophytes)	2006	L	0.013

condemnation 006-143A, 5/5/2005

POTMH

VAP-A33E_HAM01A02 / Hampton Hall Branch / Tidal Hampton Hall Branch	4A	Aquatic Plants (Macrophytes)	2006	L	0.274

POTMH

VAP-A33E_JCK01A98 / Jackson Creek / Described in VDH condemnation notice 006-143B and -D, 8/4/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.096

Segment split in the 2018 cycle.

POTMH

VAP-A33E_JCK01B18 / Jackson Creek / Portion of VDH condemnation notice 006-143B, 5/5/2005 seasonally condemned in 006-143S2, 8/4/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.042

POTMH

VAP-A33E_KIN01A12 / Kinsale Branch / Tidal limit to mouth	4A	Aquatic Plants (Macrophytes)	2006	L	0.108

POTMH

VAP-A33E_LOG01A98 / Lodge Creek / Described in the condemnation notice 007-225C, 9/26/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.030

POTMH

VAP-A33E_LOG02A98 / Lodge Creek / Portion of condemnation notice 007-225A, 9/26/2016 that is not administratively condemned.	4A	Aquatic Plants (Macrophytes)	2006	L	0.138

Shrank in the 2018 cycle.

POTMH

VAP-A33E_LOG02B10 / Lodge Creek / Portion of condemnation notice 007-225A, 9/26/2016 that is administratively condemned.	4A	Aquatic Plants (Macrophytes)	2006	L	0.074

POTMH

VAP-A33E_LOG02C12 / Lodge Creek / Portion of condemnation notice 007-028F, 5/12/1997 that is within 007-225M2, 9/26/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.058

Expanded in the 2018 cycle.

POTMH

VAP-A33E_LOG03A08 / Lodge Creek / Downstream boundary of 028F 5/12/1997 to downstream boundary of VDH condemnation 007-225M2, 9/26/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.019

POTMH

VAP-A33E_MIA01A98 / Mill Creek / Described in the condemnation notice 007-225B, 9/26/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.149

Expanded in the 2018 cycle.

POTMH

VAP-A33E_MIA01B10 / Mill Creek / Portion of condemnation notice 028E, 5/12/1997 open on 9/26/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.064

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Shrunk in the 2018 cycle.

POTMH					
VAP-A33E_RAG01A06 / Ragged Point Bay / Described in VDH-DSS condemnation 006-143M1, 8/4/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.226
POTMH					
VAP-A33E_SHA01A98 / Shannon Branch / Described in the condemnation notice 007-028A, 9/26/2016.	A	Aquatic Plants (Macrophytes)	2006	L	0.036
POTMH					
VAP-A33E_SHA03A06 / Shannon Branch / Described in VDH-DSS condemnation 007-028M1, 9/26/2016.	A	Aquatic Plants (Macrophytes)	2006	L	0.035
POTMH					
VAP-A33E_SOV01A02 / South Yeocomico River / South Yeocomico River excluding condemnation 007-225M1, 9/26/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.594
POTMH					
VAP-A33E_SOV02A06 / South Yeocomico River / Described in VDH-DSS condemnation 007-225M1, 9/26/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.048
POTMH					
VAP-A33E_WES01A06 / West Yeocomico River / Described in VDH-DSS condemnation 007-028M3, 9/26/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.030
POTMH					
VAP-A33E_WES01B12 / West Yeocomico River / Portion of the West Yeocomico River mainstem within condemnation notice 007-028C, 5/12/1997	A	Aquatic Plants (Macrophytes)	2006	L	0.052
POTMH					
VAP-A33E_WES02A06 / West Yeocomico River / Downstream of condemnations	A	Aquatic Plants (Macrophytes)	2006	L	0.394
POTMH					
VAP-A33E_WHP01A98 / White Point Creek / Described in the condemnation notice 007-028C, 9/28/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.044
POTMH					
VAP-A33E_WHP01B18 / White Point Creek / Portion of condemnation notice 007-028B, 5/12/1997 open in 007-082C, 9/26/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.035
POTMH					
VAP-A33E_WHP03A06 / NW Yeocomico (White Point Creek/Shannon Branch) / Described in VDH-DSS condemnation 007-028M2, 9/26/2016	A	Aquatic Plants (Macrophytes)	2006	L	0.033
POTMH					
VAP-A33E_YEO01A02 / Yeocomico River and Tributaries / Yeocomico River	A	Aquatic Plants (Macrophytes)	2006	L	1.878

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Potomac and Shenandoah River Basins

POTMH					
VAP-A33E_ZZZ01A14 / Unsegmented estuaries in A33 / Unsegmented portion of watershed PL71.	4A	Aquatic Plants (Macrophytes)	2006	L	1.376
POTMH					
VAP-A33E_ZZZ01C14 / Unsegmented estuaries in A33 / Unsegmented portion of watershed PL70.	4A	Aquatic Plants (Macrophytes)	2006	L	0.120
POTMH					
VAP-A34E_BOT01A04 / Boathouse Creek / As described in VDH Shellfish Condemnation 008-214D, 2/23/2012	4A	Aquatic Plants (Macrophytes)	2006	L	0.067
POTMH					
VAP-A34E_BRD01A98 / Bridgeman Creek / Described in the condemnation notice 009-142A, 3/20/2012.	4A	Aquatic Plants (Macrophytes)	2006	L	0.045
POTMH					
VAP-A34E_COA01A02 / Coan River / Portion of VDH-DSS Condemnation Notice 008-214B, 2/23/2012 not included on SFC 145, 2/23/1997.	4A	Aquatic Plants (Macrophytes)	2006	L	0.009
POTMH					
VAP-A34E_COA01A98 / Coan River / Described in the VDH-DSS Condemnation Notice 008-214B, 2/19/2016, excluding Mill Creek.	4A	Aquatic Plants (Macrophytes)	2006	L	0.330
POTMH					
VAP-A34E_COA01B16 / Coan River / Portion of VDH-DSS Condemnation Notice 145I, 2/25/1997 open in 008-214, 2/19/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.028
POTMH					
VAP-A34E_COA02A02 / Coan River / From SFC 008-214B, 2/23/2012 to its mouth at the Potomac, excluding otherwise segmented waterbodies.	4A	Aquatic Plants (Macrophytes)	2006	L	2.756
POTMH					
VAP-A34E_COC01A98 / Cod Creek / Described in the condemnation notice 009-141A, 3/26/2014.	4A	Aquatic Plants (Macrophytes)	2006	L	0.049
POTMH					
VAP-A34E_COC01B02 / Cod Creek, UT / Described in the condemnation notice 009-141B, 3/26/2014	4A	Aquatic Plants (Macrophytes)	2006	L	0.054
POTMH					
VAP-A34E_COC02A14 / Cod Creek / Portion of 141, 1/31/1997 open in 009-141, 3/26/2014.	4A	Aquatic Plants (Macrophytes)	2006	L	0.066
POTMH					
VAP-A34E_COC02B14 / Cod Creek, UT / Portion of condemnation notice 141B, 1/31/1997 open in 009-141, 3/26/2014	4A	Aquatic Plants (Macrophytes)	2006	L	0.025
POTMH					
VAP-A34E_CUT01A98 / Cubitt Creek / Described in the condemnation notice 009-161A, 3/26/2014	4A	Aquatic Plants (Macrophytes)	2006	L	0.225

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Potomac and Shenandoah River Basins

POTMH					
VAP-A34E_FLP01A10 / Flag Pond / Described in VDH-DSS condemnation 009-161C, 3/26/2014	4A	Aquatic Plants (Macrophytes)	2006	L	0.035
POTMH					
VAP-A34E_FTN01A06 / Fountain Cove / As described in VDH condemnation 009-142E, 3/30/2009	4A	Aquatic Plants (Macrophytes)	2006	L	0.069
POTMH					
VAP-A34E_GLE01A04 / The Glebe / Portion of VDH-DSS notice 008-213B, 3/5/2015 open on 145D, 2/25/1997	4A	Aquatic Plants (Macrophytes)	2006	L	0.045
POTMH					
VAP-A34E_GLE01A98 / The Glebe / Described in the condemnation notice 145D, 2/25/1997.	4A	Aquatic Plants (Macrophytes)	2006	L	0.132
POTMH					
VAP-A34E_GLE03A00 / The Glebe / Glebe Creek downstream of condemnations.	4A	Aquatic Plants (Macrophytes)	2006	L	0.770
POTMH					
VAP-A34E_GLE04A04 / Wrights Cove, UT / Described in the VDH-DSS Shellfish Condemnation 08-213C, 3/10/2014	4A	Aquatic Plants (Macrophytes)	2006	L	0.046
POTMH					
VAP-A34E_HAC01A00 / Hack Creek / Tidal limit to mouth at Potomac River.	4A	Aquatic Plants (Macrophytes)	2006	L	0.224
POTMH					
VAP-A34E_HEA01A98 / Headly Cove / Described in the VDH-DSS Condemnation Notice 008-214D, 2/19/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.026
POTMH					
VAP-A34E_HUL01A02 / Hull Creek and Floyd Cove / Described in VDH condemnations 009-142A and -E, 4/12/2016, excluding Spring Cove.	4A	Aquatic Plants (Macrophytes)	2006	L	0.252
Expanded slightly in the 2018 cycle..					
POTMH					
VAP-A34E_HUL01B12 / Hull Creek / Portion of VDH condemnation 142B, 8/21/2000 open in 009-142, 4/12/2016, excluding Spring Cove and Fountain Cove.	4A	Aquatic Plants (Macrophytes)	2006	L	0.273
Shrunk slightly in the 2018 cycle.					
POTMH					
VAP-A34E_HUL01C12 / Fleets Cove (Hull Creek, UT) / Described in VDH condemnation 009-142B, 4/12/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.024
POTMH					
VAP-A34E_KIN01A00 / Kingscote Creek / Downstream of condemnations 008-213, 3/5/2015 to the Coan River.	4A	Aquatic Plants (Macrophytes)	2006	L	0.349

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

POTMH						
VAP-A34E_KIN02A06 / Kingscote Creek / Described in VDH-DSS condemnation 008-213M1, 3/5/2015	4A	Aquatic Plants (Macrophytes)	2006	L	0.007
POTMH						
VAP-A34E_KIN03A06 / Kingscote Creek / Described in VDH-DSS condemnation 008-213M2, 3/5/2015	4A	Aquatic Plants (Macrophytes)	2006	L	0.006
POTMH						
VAP-A34E_KIN04A06 / Kingscote Creek / Described in VDH-DSS condemnation 008-213A, 3/5/2015	4A	Aquatic Plants (Macrophytes)	2006	L	0.009
POTMH						
VAP-A34E_KNC01A98 / Killneck Creek / Described in the condemnation notice 008-214A, 2/19/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.027
POTMH						
VAP-A34E_KNC01B06 / Killneck Creek, UT / Described in VDH-DSS condemnation 008-214M2, 2/19/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.014
POTMH						
VAP-A34E_KNC02A10 / Killneck Creek / Portion of condemnation notice 145E, 2/25/1997 open on 2/19/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.021
POTMH						
VAP-A34E_MII01A06 / Mill Creek / Tidal limit to mouth at Coan River	4A	Aquatic Plants (Macrophytes)	2006	L	0.104
POTMH						
VAP-A34E_PRE01A98 / Presley Creek / Described in the condemnation notice 009-141C, 3/26/2014.	4A	Aquatic Plants (Macrophytes)	2006	L	0.332
POTMH						
VAP-A34E_ROG01A98 / Rogers Creek / Described in the condemnation notice 009-142C, 4/12/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.035
POTMH						
VAP-A34E_ROG01B16 / Rogers Creek / Portion of VDH-DSS Condemnation 009-142C, 3/17/2008 open for harvest on 4/12/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.023
POTMH						
VAP-A34E_SPN01A04 / Spring Cove / Tidal limit to mouth at Hull Creek	4A	Aquatic Plants (Macrophytes)	2006	L	0.010
POTMH						
VAP-A34E_XFI01A98 / Coan River, UT - Stevens Point / Described in the condemnation notice 008-214M1, 2/19/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.038
POTMH						
VAP-A34E_XFJ01A98 / XFJ - Coan River, UT (Cellars Cove) / Described in the condemnation notice 008-214C, 2/19/2016.	4A	Aquatic Plants (Macrophytes)	2006	L	0.032
POTMH						

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

VAP-A34E_XLV01A10 / XLV - Potomac River, UT (aka Corbin Pond) / As described in VDH-DSS condemnation 009-142D, 4/12/2016	4A	Aquatic Plants (Macrophytes)	2006	L	0.043
POTMH					
VAP-A34E_ZZZ01A00 / Unsegmented estuaries in A34 / Unsegmented portion of the watershed.	4A	Aquatic Plants (Macrophytes)	2006	L	0.291
POTMH					

Potomac Mesohaline Embayments	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Shallow-Water Submerged Aquatic Vegetation			
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	**32.636**		

Sources:

Agriculture	Atmospheric Deposition - Nitrogen	Clean Sediments	Industrial Point Source Discharge
Internal Nutrient Recycling	Loss of Riparian Habitat	Municipal Point Source Discharges	Sediment Resuspension (Clean Sediment)
Sources Outside State Jurisdiction or Borders	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)		

Fact Sheets for Impaired (Category 4 or 5) Waters in 2018

Potomac and Shenandoah River Basins

***Cause Group Code:* POTTF-DO-BAY** **Potomac Tidal Fresh Embayments**

Cause Location: Includes all waters in the tidal fresh portion of the Potomac River (POTTF).

City / County: Alexandria City Arlington Co. Fairfax Co. Prince William Co. Stafford Co.

Use(s): Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 4A

An open-water assessment of dissolved oxygen values during the summer season showed that the POTTF was not supporting. The Chesapeake Bay TMDL was established by the EPA on 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-A12E_FOU01A00 / Four Mile Run / Segment includes the tidal waters of Four Mile Run; from rivermile 1.46 downstream until the confluence with the Potomac River, at the state line. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.050
VAN-A12E_POT01A16 / Potomac River / Segment includes all tidal Virginia water adjacent to Alexandria, from Second Street to King Street. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2016	L	0.047
VAN-A13E_HFF01A06 / Hooff Run / Segment contains the tidal portion of Hooff Run; begins at the Alexandria National Cemetery and continues downstream until the confluence with Hunting Creek. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.003
VAN-A13E_HUT01A02 / Hunting Creek / Segment includes all tidal waters of Hunting Creek; beginning at the Route 241 (Telegraph Road) bridge crossing and continuing downstream until the mouth of the embayment, at Jones Point and Belle View. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.529
VAN-A14E_DOU01A00 / Dogue Creek / Segment includes all tidal waters of Dogue Creek, extending from approximately rivermile 2.1 until the confluence with the Potomac River. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.736
VAN-A14E_LIF01A00 / Little Hunting Creek / Segment includes all tidal waters of Little Hunting Creek, extending from approximately rivermile 1.7 downstream until the confluence with the Potomac River. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.250
VAN-A14E_POT01A08 / Potomac River / Segment includes all tidal waters downstream of the mouth of the Hunting Creek embayment, at Jones Point and Belle View. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.848
VAN-A14E_POT02A16 / Potomac River / Segment includes all tidal Virginia water adjacent to Alexandria, from King Street to the DC/MD boundary. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2016	L	0.029
VAN-A15E_ACO01A06 / Accotink Bay / Segment includes tidal waters of Accotink Creek until the confluence with the tidal waters of Pohick Bay/Gunston Cove. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.395
VAN-A15E_POH01A00 / Gunston Cove / Segment extends from rivermile 1.31 in Gunston Cove until the confluence with the Potomac River.	4A	Oxygen, Dissolved	2014	L	1.504

Portion of CBP segment POTTF.					
VAN-A15E_POH02A00 / Pohick Bay / Segment includes tidal waters of Pohick Creek, from the boundary of watershed A15, and extends until rivermile 1.31 in Gunston Cove. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.450
VAN-A16E_POH01A06 / Pohick Bay / Segment includes tidal waters of Pohick Creek upstream from the boundary of watershed A16. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.461
VAN-A25E_MAE01A16 / Massey Creek / Segment extends from 0.29 rivermile upstream of monitoring station 1aMAE000.21 until the confluence with the tidal waters of Occoquan River within Occoquan Bay. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.065
VAN-A25E_MAU01A12 / Marumsco Creek / Segment includes all the tidal waters of Marumsco Creek from the end of the free-flowing stream to the open Occoquan Bay. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.025
VAN-A25E_NEA01A00 / Neabsco Bay / Segment includes the tidal waters of Neabsco Bay, beginning at rivermile 1.37, downstream until the confluence with Occoquan Bay. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.545
VAN-A25E_NEA20A02 / Neabsco Creek / Segment begins at the upstream limit of the tidal waters on Neabsco Creek and continues downstream until the start of the open waters of Neabsco Bay, approximately 0.8 rivermile upstream from monitoring station 1aNEA000.57. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.182
VAN-A25E_OCC01A04 / Occoquan Bay / Segment extends 0.5 mile around the Coastal 2000 monitoring station 1aOCC000.77, just west of the Potomac Shoreline of Mason Neck State Park. The downstream limit is the state line at the Potomac River. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.720
VAN-A25E_OCC01A10 / Occoquan Bay / Segment includes waters of Occoquan Bay within a 0.5 mile radius of station 1aOCC001.29. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.598
VAN-A25E_OCC01A12 / Occoquan Bay/Belmont Bay / Segment includes waters of Occoquan Bay in a 0.5 mile radius around station 1aOCC000.01 down to the Virginia state line. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.412
VAN-A25E_OCC01B12 / Occoquan Bay / Segment includes waters of Occoquan Bay located approximately 0.5 mile radius around station 1aOCC001.69. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.709
VAN-A25E_OCC01C16 / Occoquan Bay/Belmont Bay / Segment includes waters of Occoquan Bay located approximately 0.5 mile radius around station 1aOCC001.04. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.438
VAN-A25E_OCC02A00 / Occoquan Bay / Segment extends 0.5 mile around the around monitoring station 1aOCC002.47. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.633
VAN-A25E_OCC03A04 / Belmont Bay (Occoquan River) / Segment extends 0.5 mile around Coastal 2000 monitoring station 1aOCC002.62 (coordinates 38.6382, -77.208). Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.286

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VAN-A25E_OCC04A02 / Belmont Bay / Segment extends 0.5 mile around the monitoring station 1AOCC-766-ALL (coordinates 38.647, -77.195). Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.412
VAN-A25E_OCC04B08 / Occoquan River / Segment extends from 0.5 rivermile upstream of monitoring station 1aOCC004.52 until 0.5 rivermile downstream of monitoring station 1aOCC003.82. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.561
VAN-A25E_OCC04C18 / Occoquan River / Segment extends from 0.5 rivermile upstream of monitoring station 1aOCC005.16 until 0.5 rivermile downstream of monitoring station 1aOCC005.16. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.104
VAN-A25E_OCC05A02 / Occoquan River / Segment extends from the end of the free-flowing waters to 0.5 rivermile upstream of monitoring station 1aOCC005.16. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.086
VAN-A25E_OCC20A02 / Occoquan Bay/Belmont Bay / Segment includes all waters of the Occoquan and Belmont Bays not included in other delineated segments. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	2.623
VAN-A25E_OCC30A02 / Occoquan Bay/Belmont Bay / Segment includes all tidal waters in the Occoquan watershed not included in other delineated stream segments. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.126
VAN-A25E_POT01A10 / Potomac River / Segment includes the Potomac River embayment located between Hallowing Point and Sycamore Point. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.633
VAN-A26E_POW01A02 / Powells Creek / Segment extends to a 0.5 mile radius around the ACB station 1aPOW-865-ALL (38.5862, -77.253). Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.229
VAN-A26E_POW02A02 / Powells Creek / Segment extends to a 0.5 mile radius around the ACB station 1aPOW-765-ALL (38.5842, -77.2647). Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.402
VAN-A26E_POW20A10 / Powells Creek / Segment includes all tidal waters in Powells Creek watershed not included in other delineated stream segments. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.663
VAN-A26E_QUA01A10 / Quantico Creek / Segment includes Quantico Creek approximately 0.2 miles upstream of station 1aQUA000.43 to the downstream limit of Quantico Creek at the state line at the Potomac River. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.187
VAN-A26E_QUA01B04 / Quantico Creek / Segment extends to a 0.5-mile radius around station 1aQUA001.09. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.419
VAN-A26E_QUA01C18 / Quantico Creek / Segment includes all tidal waters in Quantico Creek watershed not Segment extends from 0.5 mile downstream of station 1aQUA002.38 to 0.5 mile upstream of station 1aQUA001.09. Portion of CBP segment POTTF.	4A	Oxygen, Dissolved	2014	L	0.268
VAN-A26E_QUA02A06 / Quantico Creek / Segment extends to an	4A	Oxygen, Dissolved	2014	L	0.209

approximate 0.5 mile radius around station 1aQUA002.38. Portion of CBP segment POTTF.					
VAN-A26E_QUA20A10 / Quantico Creek / Segment includes all tidal waters in Quantico Creek watershed not included in other delineated segments. Portion of CBP segment POTTF.	A	Oxygen, Dissolved	2014	L	0.023

Potomac Tidal Fresh Embayments **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:	**16.859**		

Sources:

Agriculture	Atmospheric Deposition - Nitrogen	Industrial Point Source Discharge	Internal Nutrient Recycling
Loss of Riparian Habitat	Municipal Point Source Discharges	Sources Outside State Jurisdiction or Borders	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)