Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* CRRMH-DO-BAY** **Corrotoman River Mesohaline Estuary (CRRMH)**

Cause Location: The Corrotoman River and its tidal tributaries (CRRMH).

City / County: Lancaster Co.

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

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

The mainstem Corrotoman River was included in EPA's 1998 Overlist. The Chesapeake Bay water quality standards were implemented during the 2006 cycle.

The Corrotoman River mesohaline estuary fails the Chesapeake Bay Open Water Subuse's summer 30-day mean dissolved oxygen criterion. The segment meets the Open Water rest-of-year criteria. There is insufficient data to assess the other dissolved oxygen criteria.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_BES01A98 / Bells Creek / The boundaries are described in VDH shellfish condemnation 58B, 4/28/1997. CRRMH	4A	Dissolved Oxygen	2006	L	0.055
VAP-E26E_BLD01A98 / Belwood Swamp / Tidal limit to its mouth at the Western Branch Corrotoman River. CRRMH	4A	Dissolved Oxygen	2006	L	0.009
VAP-E26E_CRR01A00 / Corrotoman River / The mainstem of the Corrotoman River within segment CRRMH.	4A	Dissolved Oxygen	1998	L	3.769
VAP-E26E_CTM01A00 / Eastern Branch Corrotoman River / The boundaries are described in VDH shellfish condemnations 021-058B, 10/31/2018. Size decreased in the 2020 cycle. CRRMH	4A	Dissolved Oxygen	2006	L	0.369
VAP-E26E_CTM01B10 / Eastern Branch Corrotoman River / Portion of VDH shellfish condemnation 058C, 4/28/1997 open on 11/16/2016. Segment split in the 2020 cycle. CRRMH	4A	Dissolved Oxygen	2006	L	0.046
VAP-E26E_CTM01C20 / Eastern Branch Corrotoman River / Described in VDH shellfish condemnation 021-058S61, 10/31/2018. Segment split in the 2020 cycle. CRRMH	4A	Dissolved Oxygen	2006	L	0.206
VAP-E26E_CTM02A08 / Eastern Branch Corrotoman River, UT / Described in VDH Shellfish Condemnation 021-058S60, 10/31/2018. CRRMH	4A	Dissolved Oxygen	2006	L	0.010
VAP-E26E_CTM03A08 / Eastern Branch Corrotoman River /	4A	Dissolved Oxygen	2006	L	0.758

Rappahannock River Basin

Downstream boundary of VDH condemnation 021-058C, 4/28/1997 to mouth.

CRRMH

VAP-E26E_CTO01A02 / Western Branch Corrotoman River / The boundaries are described in VDH shellfish condemnation 021-132A and -C, 10/31/2018, not otherwise segmented.	4A	Dissolved Oxygen	2006	L	0.296

Segment shrank in the 2020 cycle.

CRRMH

VAP-E26E_CTO01B12 / Western Branch Corrotoman River / Portion of SFC 132, 4/28/1997 included in 021-132S64, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.302

Segment expanded and merged in the 2020 cycle.

CRRMH

VAP-E26E_CTO02A06 / Western Branch Corrotoman River / Mainstem downstream of SFC 132A, 4/28/1997	4A	Dissolved Oxygen	2006	L	1.209

CRRMH

VAP-E26E_DAS01A02 / Davis Creek / As described in VDH-DSS SFC 021-132S63, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.043

Segment expanded in the 2020 cycle.

CRRMH

VAP-E26E_EWE01A00 / Ewells Prong / Portion of VDH condemnation 187A, 4/28/1997 open on 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.002

Split in the 2020 cycle.

CRRMH

VAP-E26E_EWE01B20 / Ewells Prong / As described in VDH shellfish condemnation 021-187S53, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.034

CRRMH

VAP-E26E_EWE02A08 / Ewells Prong / Portion of VDH Shellfish Condemnation 021-187B, 10/17/2012 not included on 187A, 4/28/1997.	4A	Dissolved Oxygen	2006	L	0.012

CRRMH

VAP-E26E_HLS01A00 / Hills Creek / The boundaries are described in VDH shellfish condemnation 021-058A, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.038

Split in the 2020 cycle.

CRRMH

VAP-E26E_HLS01B20 / Hills Creek / The portion of VDH shellfish condemnation 58A, 4/28/1997 seasonally condemned/open (021-058S59, 10/31/2018).	4A	Dissolved Oxygen	2006	L	0.024

CRRMH

VAP-E26E_JON01A08 / John Creek / Described in VDH-DSS	4A	Dissolved Oxygen	2006	L	0.036

Rappahannock River Basin

Condemnation 021-132D, 10/31/2018.

CRRMH

VAP-E26E_JON02A08 / John Creek / Downstream of condemnation 021-132D, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.016

CRRMH

VAP-E26E_LIT01A06 / Little Branch / Tidal limit to mouth at Western Branch Corrotoman River	4A	Dissolved Oxygen	2006	L	0.114

CRRMH

VAP-E26E_LOW01A08 / Lowrey Creek / Described in VDH Shellfish Condemnation 021-132S62, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.028

CRRMH

VAP-E26E_MIP01A00 / Millenbeck Prong / Portion of VDH shellfish condemnation 187B, 4/28/1997 open on 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.004

Split in the 2020 cycle.

CRRMH

VAP-E26E_MIP01B20 / Millenbeck Prong / Described in VDH shellfish condemnation 021-187S101, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.037

CRRMH

VAP-E26E_MOR01A08 / Moran Creek / Described in VDH Condemnation 021-198S56, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.049

CRRMH

VAP-E26E_MOR01B12 / Moran Creek / Described in VDH-DSS condemnation 021-198F, 10/17/2012.	4A	Dissolved Oxygen	2006	L	0.010

CRRMH

VAP-E26E_MOR02A08 / Moran Creek / Downstream of condemnations 021-198, 10/17/2012.	4A	Dissolved Oxygen	2006	L	0.095

CRRMH

VAP-E26E_MYE01A00 / Myer Creek / As described in VDH shellfish condemnation 021-198A, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.021

Split in the 2020 cycle.

CRRMH

VAP-E26E_MYE01B02 / Myer Creek, UT / As described in VDH-DSS SFC 021-198S58, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.026

Size decreased in the 2020 cycle.

CRRMH

VAP-E26E_MYE01C04 / Myer Creek / Described in VDH-DSS condemnation 021-198M1, 11/16/2016.	4A	Dissolved Oxygen	2006	L	0.074

CRRMH

VAP-E26E_MYE01D18 / Myer Creek / Portion of VDH-DSS	4A	Dissolved Oxygen	2006	L	0.004

Rappahannock River Basin

condemnation 021-198B, 11/16/2016 open in 198, 4/28/1997.

CRRMH

VAP-E26E_MYE01E20 / Myer Creek / Portion of VDH shellfish condemnation 198, 4/28/1997 not restricted (021-198S104, 10/31/2018).	4A	Dissolved Oxygen	2006	L	0.060

CRRMH

VAP-E26E_MYE02C16 / Myer Creek / Described in VDH Condemnation 021-198F, 11/16/2016.	4A	Dissolved Oxygen	2006	L	0.017

CRRMH

VAP-E26E_MYE03A08 / Myer Creek / Downstream of condemnations to mouth at Corrotoman River	4A	Dissolved Oxygen	2006	L	0.470

CRRMH

VAP-E26E_SEN01A00 / Senior Creek / The boundaries are described in VDH shellfish condemnation 021-132B, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.040

Segment split in the 2020 cycle.

CRRMH

VAP-E26E_SEN01B20 / Senior Creek / The boundaries are described in VDH shellfish condemnation 021-132S105, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.030

CRRMH

VAP-E26E_TAY01A00 / Taylor Creek / As described in VDH-DSS condemnations 021-198S102 and -S103, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.078

CRRMH

VAP-E26E_TAY02A08 / Taylor Creek / Described in VDH Shellfish Condemnation 021-198S55, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.024

CRRMH

VAP-E26E_TAY03A12 / Taylor Creek / Portion of VDH-DSS condemnation 205, 4/28/1997 open 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.088

CRRMH

VAP-E26E_TON01A00 / Town Creek / The boundaries are described in VDH shellfish condemnation 021-187S54, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.057

Expanded in the 2020 cycle.

CRRMH

VAP-E26E_WHR01A00 / Whitehouse Creek / The boundaries are described in VDH shellfish condemnation 021-187S100 and -187S52, 10/31/2018.	4A	Dissolved Oxygen	2006	L	0.050

CRRMH

VAP-E26E_ZZZ02A14 / Unsegmented estuaries in E26 / Unsegmented portion of watershed RA70	4A	Dissolved Oxygen	2006	L	0.091

CRRMH

VAP-E26E_ZZZ02C14 / Unsegmented estuaries in E26 /	4A	Dissolved Oxygen	2006	L	0.504

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Rappahannock River Basin

Unsegmented portion of watershed RA72

CRRMH

Corrotoman River Mesohaline Estuary (CRRMH) **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	**9.203**		

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)

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* CRRMH-SAV-BAY** **Corrotoman River Mesohaline Estuary (CRRMH)**

Cause Location: The Corrotoman River and its tidal tributaries (CRRMH).

City / County: Lancaster Co.

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

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

The mesohaline Corrotoman River (CRRMH) has been impaired of the Chesapeake Bay Shallow Water Subuse since the 2012 cycle. CRRMH does not meet the Shallow Water Subuse's submerged aquatic vegetation acreage criterion and there is insufficient information to assess the water clarity acreage criterion.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_BES01A98 / Bells Creek / The boundaries are described in VDH shellfish condemnation 58B, 4/28/1997.	4A	Aquatic Plants (Macrophytes)	2012	L	0.055
CRRMH					
VAP-E26E_BLD01A98 / Belwood Swamp / Tidal limit to its mouth at the Western Branch Corrotoman River.	4A	Aquatic Plants (Macrophytes)	2012	L	0.009
CRRMH					
VAP-E26E_CRR01A00 / Corrotoman River / The mainstem of the Corrotoman River within segment CRRMH.	4A	Aquatic Plants (Macrophytes)	2012	L	3.769
VAP-E26E_CTM01A00 / Eastern Branch Corrotoman River / The boundaries are described in VDH shellfish condemnations 021-058B, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.369
Size decreased in the 2020 cycle.					
CRRMH					
VAP-E26E_CTM01B10 / Eastern Branch Corrotoman River / Portion of VDH shellfish condemnation 058C, 4/28/1997 open on 11/16/2016.	4A	Aquatic Plants (Macrophytes)	2012	L	0.046
Segment split in the 2020 cycle.					
CRRMH					
VAP-E26E_CTM01C20 / Eastern Branch Corrotoman River / Described in VDH shellfish condemnation 021-058S61, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.206
Segment split in the 2020 cycle.					
CRRMH					
VAP-E26E_CTM02A08 / Eastern Branch Corrotoman River, UT / Described in VDH Shellfish Condemnation 021-058S60, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.010
CRRMH					
VAP-E26E_CTM03A08 / Eastern Branch Corrotoman River / Downstream boundary of VDH condemnation 021-058C, 4/28/1997 to mouth.	4A	Aquatic Plants (Macrophytes)	2012	L	0.758

Rappahannock River Basin

CRRMH

VAP-E26E_CTO01A02 / Western Branch Corrotoman River / The boundaries are described in VDH shellfish condemnation 021-132A and -C, 10/31/2018, not otherwise segmented.	4A	Aquatic Plants (Macrophytes)	2012	L	0.296

Segment shrank in the 2020 cycle.

CRRMH

VAP-E26E_CTO01B12 / Western Branch Corrotoman River / Portion of SFC 132, 4/28/1997 included in 021-132S64, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.302

Segment expanded and merged in the 2020 cycle.

CRRMH

VAP-E26E_CTO02A06 / Western Branch Corrotoman River / Mainstem downstream of SFC 132A, 4/28/1997	4A	Aquatic Plants (Macrophytes)	2012	L	1.209

CRRMH

VAP-E26E_DAS01A02 / Davis Creek / As described in VDH-DSS SFC 021-132S63, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.043

Segment expanded in the 2020 cycle.

CRRMH

VAP-E26E_EWE01A00 / Ewells Prong / Portion of VDH condemnation 187A, 4/28/1997 open on 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.002

Split in the 2020 cycle.

CRRMH

VAP-E26E_EWE01B20 / Ewells Prong / As described in VDH shellfish condemnation 021-187S53, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.034

CRRMH

VAP-E26E_EWE02A08 / Ewells Prong / Portion of VDH Shellfish Condemnation 021-187B, 10/17/2012 not included on 187A, 4/28/1997.	4A	Aquatic Plants (Macrophytes)	2012	L	0.012

CRRMH

VAP-E26E_HLS01A00 / Hills Creek / The boundaries are described in VDH shellfish condemnation 021-058A, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.038

Split in the 2020 cycle.

CRRMH

VAP-E26E_HLS01B20 / Hills Creek / The portion of VDH shellfish condemnation 58A, 4/28/1997 seasonally condemned/open (021-058S59, 10/31/2018).	4A	Aquatic Plants (Macrophytes)	2012	L	0.024

CRRMH

VAP-E26E_JON01A08 / John Creek / Described in VDH-DSS Condemnation 021-132D, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.036

Rappahannock River Basin

CRRMH VAP-E26E_JON02A08 / John Creek / Downstream of condemnation 021-132D, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.016
CRRMH VAP-E26E_LIT01A06 / Little Branch / Tidal limit to mouth at Western Branch Corrotoman River	4A	Aquatic Plants (Macrophytes)	2012	L	0.114
CRRMH VAP-E26E_LOW01A08 / Lowrey Creek / Described in VDH Shellfish Condemnation 021-132S62, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.028
CRRMH VAP-E26E_MIP01A00 / Millenbeck Prong / Portion of VDH shellfish condemnation 187B, 4/28/1997 open on 10/31/2018. Split in the 2020 cycle.	4A	Aquatic Plants (Macrophytes)	2012	L	0.004
CRRMH VAP-E26E_MIP01B20 / Millenbeck Prong / Described in VDH shellfish condemnation 021-187S101, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.037
CRRMH VAP-E26E_MOR01A08 / Moran Creek / Described in VDH Condemnation 021-198S56, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.049
CRRMH VAP-E26E_MOR01B12 / Moran Creek / Described in VDH-DSS condemnation 021-198F, 10/17/2012.	4A	Aquatic Plants (Macrophytes)	2012	L	0.010
CRRMH VAP-E26E_MOR02A08 / Moran Creek / Downstream of condemnations 021-198, 10/17/2012.	4A	Aquatic Plants (Macrophytes)	2012	L	0.095
CRRMH VAP-E26E_MYE01A00 / Myer Creek / As described in VDH shellfish condemnation 021-198A, 10/31/2018. Split in the 2020 cycle.	4A	Aquatic Plants (Macrophytes)	2012	L	0.021
CRRMH VAP-E26E_MYE01B02 / Myer Creek, UT / As described in VDH-DSS SFC 021-198S58, 10/31/2018. Size decreased in the 2020 cycle.	4A	Aquatic Plants (Macrophytes)	2012	L	0.026
CRRMH VAP-E26E_MYE01C04 / Myer Creek / Described in VDH-DSS condemnation 021-198M1, 11/16/2016.	4A	Aquatic Plants (Macrophytes)	2012	L	0.074
CRRMH VAP-E26E_MYE01D18 / Myer Creek / Portion of VDH-DSS condemnation 021-198B, 11/16/2016 open in 198, 4/28/1997.	4A	Aquatic Plants (Macrophytes)	2012	L	0.004

Rappahannock River Basin

CRRMH

VAP-E26E_MYE01E20 / Myer Creek / Portion of VDH shellfish condemnation 198, 4/28/1997 not restricted (021-198S104, 10/31/2018).	4A	Aquatic Plants (Macrophytes)	2012	L	0.060

CRRMH

VAP-E26E_MYE02C16 / Myer Creek / Described in VDH Condemnation 021-198F, 11/16/2016.	4A	Aquatic Plants (Macrophytes)	2012	L	0.017

CRRMH

VAP-E26E_MYE03A08 / Myer Creek / Downstream of condemnations to mouth at Corrotoman River	4A	Aquatic Plants (Macrophytes)	2012	L	0.470

CRRMH

VAP-E26E_SEN01A00 / Senior Creek / The boundaries are described in VDH shellfish condemnation 021-132B, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.040

Segment split in the 2020 cycle.

CRRMH

VAP-E26E_SEN01B20 / Senior Creek / The boundaries are described in VDH shellfish condemnation 021-132S105, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.030

CRRMH

VAP-E26E_TAY01A00 / Taylor Creek / As described in VDH-DSS condemnations 021-198S102 and -S103, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.078

CRRMH

VAP-E26E_TAY02A08 / Taylor Creek / Described in VDH Shellfish Condemnation 021-198S55, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.024

CRRMH

VAP-E26E_TAY03A12 / Taylor Creek / Portion of VDH-DSS condemnation 205, 4/28/1997 open 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.088

CRRMH

VAP-E26E_TON01A00 / Town Creek / The boundaries are described in VDH shellfish condemnation 021-187S54, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.057

Expanded in the 2020 cycle.

CRRMH

VAP-E26E_WHR01A00 / Whitehouse Creek / The boundaries are described in VDH shellfish condemnation 021-187S100 and -187S52, 10/31/2018.	4A	Aquatic Plants (Macrophytes)	2012	L	0.050

CRRMH

VAP-E26E_ZZZ02A14 / Unsegmented estuaries in E26 / Unsegmented portion of watershed RA70	4A	Aquatic Plants (Macrophytes)	2012	L	0.091

CRRMH

VAP-E26E_ZZZ02C14 / Unsegmented estuaries in E26 / Unsegmented portion of watershed RA72	4A	Aquatic Plants (Macrophytes)	2012	L	0.504

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Rappahannock River Basin

CRRMH

Corrotoman River Mesohaline Estuary (CRRMH)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Shallow-Water Submerged Aquatic Vegetation			
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	**9.203**		

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 2020

Rappahannock River Basin

***Cause Group Code:* E01R-01-BAC** **Thumb Run**

Cause Location: Begins at the confluence of West Branch Thumb Run and East Branch Thumb Run and continues downstream until the confluence with the Rappahannock River.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (16 of 45 samples - 35.6%) at DEQ station 3-THU004.69 at Route 688 (Leeds Manor Road).

The Thumb Run Watershed bacteria TMDL (Eq ID POL0117) was approved by the EPA on 05/31/2002 (Fed ID 24413). The SWCB approved the TMDL on 06/17/2004. A bacteria TMDL Implementation Plan for the Thumb Run watershed (ID 98) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E01R_THU01A00 / Thumb Run / Segment begins at the confluence of West Branch Thumb Run and East Branch Thumb Run and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2010	L	7.67

Thumb Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**7.67**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Runoff from Forest/Grassland/Parkland	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-01-BEN** **Thumb Run, East Branch**

Cause Location: Begins at the headwaters of East Branch Thumb Run and continues downstream until the confluence of East Branch to the mainstem Thumb Run.

City / County: Fauquier Co.

Use(s): Aquatic Life

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

2018 Assessment: A total of three biological monitoring events in 2011 and 2012 at DEQ station 3-THM001.40 at Route 647 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-E01R_THM01A02 / Thumb Run, East Branch / Segment begins at the headwaters of East Branch Thumb Run and continues downstream until the confluence of East Branch to the mainstem Thumb Run.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	6.59

Thumb Run, East Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**6.59**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-02-BAC** **Thumb Run, West Branch**

Cause Location: Begins at the headwaters of West Branch Thumb Run and continues downstream until the confluence of West Branch to the mainstem Thumb Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 16 samples - 12.5%) at station 3-THW004.68 at Route 635.

A new TMDL is not required for this impaired segment of West Branch Thumb Run because the downstream Thumb Run Watershed bacteria TMDL (Fed ID 24413, 05/31/2002) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0117).

A bacteria TMDL Implementation Plan for the Thumb Run watershed (ID 98) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E01R_THW01A02 / Thumb Run, West Branch / Segment starts at the headwaters of West Branch Thumb Run and continues downstream until the confluence of West Branch to the mainstem Thumb Run.	4A	Escherichia coli (E. coli)	2002	L	12.08

Thumb Run, West Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**12.08**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Runoff from Forest/Grassland/Parkland	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-02-BEN** **Unnamed Tributary to Thumb Run, West Branch**

Cause Location: Segment begins at the headwaters of an unnamed tributary to West Branch Thumb Run and continues downstream until the confluence with West Branch Thumb Run.

City / County: Fauquier Co.

Use(s): Aquatic Life

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

2018 Assessment: A total of two biological monitoring events in 2011 at station 3-XHU000.04 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-E01R_XHU01A14 / Unnamed Tributary to Thumb Run, West Branch / Segment begins at the headwaters of an unnamed tributary to West Branch Thumb Run and continues downstream until the confluence with West Branch Thumb Run.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	0.80

Unnamed Tributary to Thumb Run, West Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**0.80**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-03-BAC** **Rappahannock River**

Cause Location: Begins at the headwaters of the Rappahannock River and continues downstream until the confluence with Fiery Run. Begins again at the confluence with the Jordan River, at rivermile 175.58, and continues downstream until the confluence with an unnamed tributary to the Rappahannock River, at rivermile 173.41.

City / County: Fauquier Co. Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 33 samples - 21.2%) at DEQ station 3-RPP175.51 at Route 647. Four exceedances of the monthly geometric mean E. coli criterion at DEQ station 3-RPP186.59 at Route 635.

The Upper Rappahannock River Watershed bacteria TMDL for the Rappahannock River (1) watershed (Eq ID POL0516) was approved by the EPA on 01/23/2008 (Fed ID 33913). 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-E01R_RPP02A00 / Rappahannock River / Segment begins at the confluence with the Jordan River, at rivermile 175.58, and continues downstream until the confluence with an unnamed tributary to the Rappahannock River, at rivermile 173.41.	4A	Escherichia coli (E. coli)	2006	L	2.27
VAN-E01R_RPP03A04 / Rappahannock River / Segment begins at the headwaters of the Rappahannock River and continues downstream until the confluence with Fiery Run.	4A	Escherichia coli (E. coli)	2020	L	7.76

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**10.03**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-03-BEN** **Hittles Mill Stream**

Cause Location: Begins at the confluence with Bearwallow Creek and Bolton Branch and continues downstream to the confluence with Jordan River.

City / County: Rappahannock Co.

Use(s): Aquatic Life

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

A total of four biological monitoring events in 2017 and 2018 at station 3-HIT003.43 at Route 631 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-E01R_HIT01A14 / Hittles Mill Stream / Segment begins at the confluence with Bearwallow Creek and Bolton Branch and continues downstream to the confluence with Jordan River.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	3.83

Hittles Mill Stream **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**3.83**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-04-BAC** **Thumb Run, East Branch**

Cause Location: Begins at the headwaters of East Branch Thumb Run and continues downstream until the confluence of East Branch to the mainstem Thumb Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (13 of 18 samples - 72.2%) at DEQ station 3-THM001.40 at Route 647.

A new TMDL is not required for this impaired segment of Thumb Run, East Branch because the downstream Thumb Run Watershed bacteria TMDL (Fed ID 24413, 05/31/2002) included modeling, source identification, and reductions that covered the entire Thumb Run watershed (Eq ID POL0117).

The bacteria TMDL Implementation Plan for the Thumb Run watershed (ID 98) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E01R_THM01A02 / Thumb Run, East Branch / Segment begins at the headwaters of East Branch Thumb Run and continues downstream until the confluence of East Branch to the mainstem Thumb Run.	4A	Escherichia coli (E. coli)	2004	L	6.59

Thumb Run, East Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**6.59**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Runoff from Forest/Grassland/Parkland	Wastes from Pets
Waterfowl	Wildlife Other than Waterfowl		

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-05-BAC** **Fiery Run**

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

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 3-FIR002.35 at Route 635.

A new TMDL is not required for this impaired segment of Fiery Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33913, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (1) watershed (Eq ID POL0516).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E01R_FIR01A04 / Fiery Run / Segment begins at the headwaters of Fiery Run and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2010	L	9.38

Fiery Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**9.38**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-06-BAC** **Jordan River**

Cause Location: Begins at the start of Class III water at rivermile 10.9 and continues downstream until the confluence with the Rappahannock River.

City / County: Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-JOR000.50 at Route 637. E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at DEQ station 3-JOR007.56 at Route 522.

A new TMDL is not required for this impaired segment of Fiery Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33913, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (1) watershed (Eq ID POL0516).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E01R_JOR01A04 / Jordan River / Segment begins at the confluence of Hittles Mill Stream, at rivermile 7.05, and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2012	L	7.05
VAN-E01R_JOR02A20 / Jordan River / Segment begins at the start of Class III water at rivermile 10.9 and continues downstream to the confluence with Hittles Mill Stream.	4A	Escherichia coli (E. coli)	2020	L	3.84

Jordan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**10.89**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-07-BAC** **Buck Run**

Cause Location: Begins at the headwaters of Buck Run to the confluence with the Rappahannock River.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at DEQ station 3-BUC001.54 at Route 735.

A new TMDL is not required for this impaired segment of Buck Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33913, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (1) watershed (Eq ID POL0516).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E01R_BUC01A10 / Buck Run / Headwaters of Buck Run to the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2016	L	9.76

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

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-08-BAC** **Rappahannock River**

Cause Location: Begins at the confluence with an unnamed tributary to the Rappahannock River, at rivermile 173.41, and continues downstream until the mouth of watershed E01R, at the confluence with Thumb Run.

City / County: Fauquier Co. Rappahannock Co.

Use(s): Recreation

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

Five exceedances of the monthly geometric mean E. coli criterion at DEQ station 3-RPP170.36 at Route 645.

A new TMDL is not required for this impaired segment of the Rappahannock River because the downstream Upper Rappahannock River bacteria TMDL (Fed ID 33951, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (2) watershed (Eq ID POL0508).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E01R_RPP01A04 / Rappahannock River / Segment begins at the confluence with an unnamed tributary to the Rappahannock River, at rivermile 173.41, and continues downstream until the mouth of watershed E01R, at the confluence with Thumb Run.	4A	Escherichia coli (E. coli)	2020	L	4.09

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.09**

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E01R-09-BAC** **Indian Run**

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 1.87 and continues downstream to the confluence with Hittles Mill Stream.

City / County: Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 12 samples - 50%) at DEQ station 3-INA000.38 at Route 637.

A new TMDL is not required for this impaired segment of Fiery Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33913, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (1) watershed (Eq ID POL0516).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E01R_INA01A20 / Indian Run / Segment begins at the confluence with an unnamed tributary at rivermile 1.87 and continues downstream to the confluence with Hittles Mill Stream.	4A	Escherichia coli (E. coli)	2020	L	1.87

Indian Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.87**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E02R-01-BAC** **Carter Run**

Cause Location: Begins at the confluence with Horner Run and continues downstream until the confluence with the Rappahannock River.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (9 of 39 samples - 23.1%) at DEQ station 3-CAE000.25 at Route 688. E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 3-CAE002.79 at Route 681. E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ station 3-CAE006.32 at Route 738.

The Carter Run Watershed bacteria TMDL (Eq ID POL0155) was approved by the EPA on 03/10/2005 (Fed ID 24414).

The bacteria TMDL Implementation Plan for the Carter Run watershed (ID 99) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E02R_CAE01A00 / Carter Run / Segment begins at the confluence with South Run and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	1998	L	3.62
VAN-E02R_CAE02A04 / Carter Run / Segment begins at the PWS designation, at rivermile 5.0, and continues downstream until the confluence with South Run.	4A	Escherichia coli (E. coli)	2006	L	1.56
VAN-E02R_CAE02B12 / Carter Run / Segment begins at the confluence with Horner Run and continues downstream until the beginning of the PWS designation, at rivermile 5.0.	4A	Escherichia coli (E. coli)	2006	L	7.20

Carter Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**12.38**

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 2020

Rappahannock River Basin

***Cause Group Code:* E02R-01-BEN** **Great Run**

Cause Location: Begins at the confluence with an unnamed tributary to Great Run (streamcode XAC) at rivermile 7.20 (approximately 0.6 rivermile downstream from Route 802) and continues downstream until the confluence with the Rappahannock River.

City / County: Fauquier Co.

Use(s): Aquatic Life

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

2018 Assessment: A total of three biological monitoring events in 2011 and 2012 at DEQ station 3-GRT001.70 at Route 687 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-E02R_GRT01A00 / Great Run / Segment begins at the confluence with an unnamed tributary to Great Run, approximately 1.0 rivermile upstream of Route 687, and continues downstream until the confluence with the Rappahannock River.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	2.81
VAN-E02R_GRT02A04 / Great Run / Segment begins at the confluence of an unnamed tributary to Great Run, at approximately rivermile 5.5, and continues downstream until the confluence with an unnamed tributary to Great Run, approximately 1.0 rivermile upstream of Route 687.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	2.84
VAN-E02R_GRT03A02 / Great Run / Segment begins at the confluence with an unnamed tributary to Great Run at rivermile 7.20 (streamcode XAC) and continues downstream until the confluence with another unnamed tributary at approximately rivermile 5.5.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	1.54

Great Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**7.19**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E02R-02-BAC** **Great Run**

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

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 18 samples - 38.9%) at DEQ station 3-GRT001.70 at Route 687. E. coli bacteria criterion excursions (8 of 12 samples - 66.7%) at DEQ station 3-GRT007.72 at Route 802.

The Great Run Watershed bacteria TMDL (Eq ID POL0156) was approved by the EPA on 03/10/2005 (Fed ID 23325). The bacteria TMDL Implementation Plan for the Great Run watershed (ID 160) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E02R_GRT01A00 / Great Run / Segment begins at the confluence with an unnamed tributary to Great Run, approximately 1.0 rivermile upstream of Route 687, and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2004	L	2.81
VAN-E02R_GRT02A04 / Great Run / Segment begins at the confluence of an unnamed tributary to Great Run, at approximately rivermile 5.5, and continues downstream until the confluence with an unnamed tributary to Great Run, approximately 1.0 rivermile upstream of Route 687.	4A	Escherichia coli (E. coli)	2004	L	2.84
VAN-E02R_GRT03A02 / Great Run / Segment begins at the confluence with an unnamed tributary to Great Run at rivermile 7.20 (streamcode XAC) and continues downstream until the confluence with another unnamed tributary at approximately rivermile 5.5.	4A	Escherichia coli (E. coli)	2004	L	1.54
VAN-E02R_GRT04A04 / Great Run / Segment begins at the headwaters of Great Run and continues downstream until the confluence with an unnamed tributary to Great Run (streamcode XAC), at rivermile 7.20.	4A	Escherichia coli (E. coli)	2004	L	9.46

Great Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**16.65**

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 2020

Rappahannock River Basin

***Cause Group Code:* E02R-03-BAC** **Rappahannock River**

Cause Location: Begins at the dam at Waterloo (at rivermile 163.4) and continues downstream until the confluence with the Hazel River at rivermile 147.52.

City / County: Culpeper Co. Fauquier Co.

Use(s): Recreation

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

Five exceedances of the monthly geometric mean E. coli criterion at DEQ station 3-RPP150.32 at Route 621. Five exceedances of the monthly geometric mean E. coli criterion at DEQ station 3-RPP157.95 at Route 802. Five exceedances of the monthly geometric mean E. coli criterion at DEQ station 3-RPP163.41 at Route 613.

A new TMDL is not required for this impaired segment of the Rappahannock River because the downstream Upper Rappahannock River bacteria TMDL (Fed ID 33951, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (2) watershed (Eq ID POL0508).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E02R_RPP01A02 / Rappahannock River / Segment begins at the confluence with Great Run, at rivermile 154.9, and continues downstream until the confluence with the Hazel River, at rivermile 147.52.	4A	Escherichia coli (E. coli)	2006	L	7.04
VAN-E02R_RPP02A04 / Rappahannock River / Segment begins at the confluence with a tributary to the Rappahannock River at rivermile 160.4 and continues downstream until the confluence with Great Run.	4A	Escherichia coli (E. coli)	2020	L	6.24
VAN-E02R_RPP03A04 / Rappahannock River / Segment begins below the dam at Waterloo (rivermile 163.4) and continues downstream until the confluence with a tributary to the Rappahannock River at rivermile 160.4.	4A	Escherichia coli (E. coli)	2016	L	2.99

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**16.27**

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E02R-04-BAC** **Barrows Run**

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

City / County: Fauquier Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (3 of 4 samples - 75.0%) at DEQ station 3-BRW000.29 at Springs Drive.

A new TMDL is not required for this impaired segment of Barrows Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33951, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (2) watershed (Eq ID POL0508).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E02R_BRW01A06 / Barrows Run / Segment begins at the headwaters of Barrows Run and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2006	L	4.52

Barrows Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.52**

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E02R-05-BAC** **South Run**

Cause Location: Begins at the confluence with Tanner Branch and continues downstream until the confluence with Carter Run.

City / County: Fauquier Co.

Use(s): Recreation

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

2018 Assessment: E. coli bacteria criterion excursions (2 of 10 samples - 20.0%) at DEQ station 3-SUT002.62 at Route 737.

A new TMDL is not required for this impaired segment of South Run because the downstream Carter Run bacteria TMDL (Fed ID 24414, 03/10/2005) included modeling, source identification, and reductions that covered the entire Carter Run watershed (Eq ID POL0508). A bacteria TMDL Implementation Plan for the Carter Run watershed (ID 99) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E02R_SUT01A04 / South Run / Segment begins at the beginning of the PWS designation, at rivermile 1.47, and continues downstream until the confluence with Carter Run.	4A	Escherichia coli (E. coli)	2006	L	1.50
VAN-E02R_SUT01B12 / South Run / Segment begins at the confluence with Tanner Branch and continues downstream to the beginning of the PWS designation, at rivermile 1.47	4A	Escherichia coli (E. coli)	2006	L	2.59

South Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. 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	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E02R-07-BAC** **Glascock Run**

Cause Location: Begins at the headwaters of Glascock Run, and continues downstream to the confluence with Bee Branch.

City / County: Fauquier Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (7 of 11 samples -63.6%) at DEQ station 3-GLC002.03 at Citation Drive.

A new TMDL is not required for this impaired segment of the Rappahannock River because the downstream Upper Rappahannock River bacteria TMDL (Fed ID 33951, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (2) watershed (Eq ID POL0508).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E02R_GLC02A12 / Glascock Run / Segment begins at the beginning of the PWS designation, at rivermile 2.49, and continues downstream to the confluence with Bee Branch.	4A	Escherichia coli (E. coli)	2012	L	1.75
VAN-E02R_GLC02B12 / Glascock Run / Segment begins at the headwaters of Glascock Run, and continuous downstream to the beginning of the PWS designation, at rivermile 2.49.	4A	Escherichia coli (E. coli)	2012	L	2.06

Glascock Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.81**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E02R-08-BAC** **Horner Run**

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

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-HRN000.80 at Route 691.

A new TMDL is not required for this impaired segment of Horner Run because the downstream Carter Run Watershed bacteria TMDL (Fed ID 24414, 03/10/2005) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0155). The bacteria TMDL Implementation Plan for the Carter Run watershed (ID 99) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E02R_HRN01A20 / Horner Run / Segment begins at the perennial headwaters of Horner Run and continues downstream to the confluence with Carter Run.	4A	Escherichia coli (E. coli)	2020	L	2.35

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

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 2020

Rappahannock River Basin

***Cause Group Code:* E03R-01-BAC** **Hughes River**

Cause Location: Begins at the confluence with Kilbys Creek and continues downstream until the confluence with the Hazel River.

City / County: Culpeper Co. Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (10 of 32 samples - 31.3%) at DEQ station 3-HUE000.20 at Route 644.

The Upper Rappahannock River Watershed bacteria TMDL for the Hughes River watershed (Eq ID POL0512) was approved by the EPA on 01/23/2008 (Fed ID 33916). The SWCB approved the TMDL on 07/31/2008. A bacteria TMDL Implementation Plan for the Hughes River Run watershed (ID 269) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E03R_HUE01A00 / Hughes River / Segment begins at the confluence with Kilbys Creek and continues downstream until the confluence with the Hazel River.	4A	Escherichia coli (E. coli)	2004	L	3.84

Hughes River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.84**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E03R-01-BEN** **Popham Run**

Cause Location: Begins at the confluence with Ragged Run and continues downstream until the confluence with the Hughes River.

City / County: Culpeper Co. Madison Co. Rappahannock Co.

Use(s): Aquatic Life

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

A total of three biological monitoring events in 2015 and 2016 at DEQ station 3-POH000.48 at Route 603 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-E03R_POH01A02 / Popham Run / Segment begins at the confluence with Ragged Run and continues downstream until the confluence with the Hughes River.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	2.21

Popham Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**2.21**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E03R-01-TEMP** **Hughes River**

Cause Location: Begins at the upper crossing of Route 707 near the confluence of Rocky Run and continues downstream until the crossing of Route 231.

City / County: Madison Co. Rappahannock Co.

Use(s): Aquatic Life

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

2012 Assessment: Excursions greater than the maximum temperature criterion for stockable trout waters (2 of 6 samples - 33.3%) at DEQ station 3-HUE007.31 at the lower crossing of Route 707.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E03R_HUE02A02 / Hughes River / Segment begins at the upper crossing of Route 707 near the confluence of Rocky Run and continues downstream until the crossing of Route 231.	5A	Temperature	2008	L	3.21

Hughes River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			**3.21**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E03R-02-BAC** **Popham Run**

Cause Location: Begins at the confluence with Ragged Run and continues downstream until the confluence with the Hughes River.

City / County: Culpeper Co. Madison Co. Rappahannock Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (12 of 12 samples - 100.0%) at DEQ station 3-POH000.48 at Route 603.

A new TMDL is not required for this impaired segment of Popham Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33916, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hughes River watershed (Eq ID POL0512). A bacteria TMDL Implementation Plan for the Hughes River watershed (ID 269) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E03R_POH01A02 / Popham Run / Segment begins at the confluence with Ragged Run and continues downstream until the confluence with the Hughes River.	4A	Escherichia coli (E. coli)	2012	L	2.21

Popham Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.21**

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E04R-01-BAC** **Hazel River**

Cause Location: Begins at the confluence of an unnamed tributary to Hazel River at rivermile 36.80, approximately 1.6 rivermiles upstream of Route 607, and continues downstream until the confluence with an unnamed tributary to the Hazel River, at rivermile 16.03.

City / County: Culpeper Co. Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 32 samples - 21.9%) at DEQ station 3-HAZ018.29 at Route 729; E. coli bacteria criterion excursions (3 of 5 samples - 60.0%) at DEQ station 3-HAZ026.16 at Route 522 (2012 Assessment); Fecal coliform bacteria criterion excursions (1 of 4 samples - 25.0%) at DEQ station 3-HAZ032.54 at Route 644 (2006 Assessment); E. coli bacteria excursions (5 of 11 samples - 45.5%) at DEQ station 3-HAZ034.96 at Route 607.

The Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33915) for the Hazel River (1) watershed (Eq ID POL0514) was approved by the EPA on 01/23/2008. The SWCB approved the TMDL on 07/31/2008. A bacteria TMDL Implementation Plan for the Hazel River watershed (ID 157) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E04R_HAZ01B00 / Hazel River / Segment begins at the confluence with Blackwater Creek and continues downstream until the confluence with an unnamed tributary to the Hazel River, at rivermile 16.03.	4A	Escherichia coli (E. coli)	2002	L	5.77
VAN-E04R_HAZ01C06 / Hazel River / Segment begins at the confluence with the Hughes River and continues downstream until the confluence with Blackwater Creek.	4A	Escherichia coli (E. coli)	2006	L	10.13
VAN-E04R_HAZ02B06 / Hazel River / Segment begins at the confluence of an unnamed tributary to Hazel River at rivermile 36.80, approximately 1.6 rivermiles upstream of Route 607, and continues downstream until the Route 707 bridge.	4A	Escherichia coli (E. coli)	2016	L	3.63

Hazel River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**19.53**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E04R_HAZ02A02 / Hazel River / Segment begins at the Route 707 bridge and continues downstream until the confluence with the Hughes River.	4A	Fecal Coliform	2006	L	0.83

Hazel River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**0.83**

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E04R-01-TEMP** **Hazel River**

Cause Location: Begins at the crossing with the Shenandoah National Park boundary and continues downstream until the Route 707 bridge.

City / County: Rappahannock Co.

Use(s): Aquatic Life

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

Excursions greater than the maximum temperature criterion for natural trout waters (3 of 11 samples - 27.3%) at DEQ station 3-HAZ034.96 at Route 607. 2018 Assessment: Excursions greater than the maximum temperature criterion for natural trout waters (3 of 12 samples - 25.0%) at DEQ station 3-HAZ039.26 at Route 618.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E04R_HAZ02B06 / Hazel River / Segment begins at the confluence of an unnamed tributary to Hazel River at rivermile 36.80, approximately 1.6 rivermiles upstream of Route 607, and continues downstream until the Route 707 bridge.	5A	Temperature	2016	L	3.63
VAN-E04R_HAZ03A02 / Hazel River / Segment begins at the crossing with the Shenandoah National Park boundary and continues downstream until the confluence to an unnamed tributary to the Hazel River, at rivermile 36.80.	5A	Temperature	2018	L	6.78

Hazel River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			**10.41**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E04R-02-BAC** **Blackwater Creek**

Cause Location: Headwaters of Blackwater Creek, downstream to the confluence with the Hazel River.

City / County: Culpeper Co. Rappahannock Co.

Use(s): Recreation

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

2014 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 3-BLC001.08 at Route 615.

A new TMDL is not required for this impaired segment of Blackwater Creek because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33915, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hazel River (1) watershed (Eq ID POL0514). A bacteria TMDL Implementation Plan for the Hazel River watershed (ID 157) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E04R_BLC01A10 / Blackwater Creek / Headwaters of Blackwater Creek to the confluence with the Hazel River	4A	Escherichia coli (E. coli)	2010	L	8.97

Blackwater Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**8.97**

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E04R-03-BAC** **Hazel River**

Cause Location: Begins at the confluence with an unnamed tributary to Hazel River at rivermile 16.03 and continues downstream to the confluence with Thornton River.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 3-HAZ013.23 at Route 640.

A new TMDL is not required for this impaired segment of Hazel River because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entre Hazel River (2) watershed (Eq ID POL0517).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E04R_HAZ01A20 / Hazel River / Segment begins at the confluence with an unnamed tributary to Hazel River at rivermile 16.03 and continues downstream to the confluence with Thornton River.	4A	Escherichia coli (E. coli)	2020	L	2.96

Hazel River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.96**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E05R-01-BAC** **Rush River**

Cause Location: Begins at the confluence with unnamed tributary at approximately rivermile 7.12 and continues downstream until the confluence with Big Branch, approximately 0.98 rivermile upstream of Route 621.

City / County: Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ station 3-RUS005.24 at Route 626.

The Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33914) for the Rush River watershed (Eq ID POL0513) was approved by the EPA on 01/23/2008. The SWCB approved the TMDL on 07/31/2008. A bacteria TMDL Implementation Plan for the Rush River watershed (ID 270) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E05R_RUS02A02 / Rush River / Segment begins at the confluence with unnamed tributary at approximately rivermile 7.12. and continues downstream until the confluence with Big Branch, approximately 0.98 rivermile upstream of Route 621.	4A	Escherichia coli (E. coli)	2002	L	2.77

Rush River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.77**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E05R-01-BEN** **Thornton River**

Cause Location: Begins at the Sperryville Main Street crossing and continues downstream until the confluence with the North Fork Thornton River.

City / County: Rappahannock Co.

Use(s): Aquatic Life

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

A total of six biological monitoring event in 2013, 2014, and 2016 at DEQ station 3-THO022.27 (above the confluence with NF Thornton River) 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-E05R_THO03A02 / Thornton River / Segment begins at the Sperryville Main Street crossing and continues downstream until the confluence with the North Fork Thornton River.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	0.86

Thornton River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**0.86**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E05R-02-BAC** **Thornton River**

Cause Location: Begins at the confluence with White Walnut Run, approximately 0.8 rivermile downstream of Route 621, and continues downstream to the confluence with the Rush River.

City / County: Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 32 samples - 15.6%) at DEQ station 3-THO014.37 at Route 626.

A new TMDL is not required for this impaired segment of Thornton River because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hazel River (2) watershed (Eq ID POL0517). A bacteria TMDL Implementation Plan for the Thornton River watershed (ID 205) was approved by the EPA on 08/02/2011

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E05R_THO01A02 / Thornton River / Segment begins at the confluence with White Walnut Run, approximately 0.8 rivermile downstream of Route 621, and continues downstream to the confluence with the Rush River.	4A	Escherichia coli (E. coli)	2006	L	3.45

Thornton River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.45**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E05R-03-BAC** **Big Branch**

Cause Location: Segment begins at the headwaters of Big Branch and continues downstream until the confluence with the Rush River.

City / County: Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 11 samples - 54.5%) at DEQ station 3-BIG001.15 at Route 211.

A new TMDL is not required for this impaired segment of Big Branch because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hazel River (2) watershed (Eq ID POL0517). A bacteria TMDL Implementation Plan for the Thornton River watershed (ID 205) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E05R_BIG01A08 / Big Branch / Segment begins at the headwaters of Big Branch and continues downstream until the confluence with the Rush River.	4A	Escherichia coli (E. coli)	2010	L	3.04

Big Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.04**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E05R-04-BAC** **Rush River**

Cause Location: Begins at the confluence with Big Branch and continues downstream until the confluence with the Covington River.

City / County: Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 6 samples - 33.3%) at DEQ station 3-RUS003.23 at Route 621.

A new TMDL is not required for this impaired segment of the Rush River because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hazel River (2) watershed (Eq ID POL0517). A bacteria TMDL Implementation Plan for the Thornton River watershed (ID 205) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E05R_RUS01B08 / Rush River / Segment begins at the confluence with Big Branch and continues downstream until the confluence with the Covington River.	4A	Escherichia coli (E. coli)	2014	L	3.35

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

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E06R-01-BAC** **Thornton River**

Cause Location: Begins at the confluence with Mill Run, at rivermile 8.65, and continues downstream until the confluence with an unnamed tributary to the Thornton River, at rivermile 3.25.

City / County: Culpeper Co. Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (11 of 32 samples - 34.4%) at DEQ station 3-THO006.50 at Route 729.

A new TMDL is not required for this impaired segment of the Thornton River because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hazel River (2) watershed (Eq ID POL0517). A bacteria TMDL Implementation Plan for the Thornton River watershed (ID 205) was approved by the EPA on 08/02/2011

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E06R_THO02A02 / Thornton River / Segment begins at the confluence with Mill Run and continues downstream until the confluence with unnamed tributary to Thornton River 3-XHH.	4A	Escherichia coli (E. coli)	2006	L	5.52

Thornton River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.52**

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E06R-02-BAC** **Battle Run**

Cause Location: Begins at the confluence with an unnamed tributary to Battle Run, at rivermile 2.27, and continues downstream until the confluence with the Thornton River.

City / County: Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (9 of 12 samples - 75.0%) at DEQ station 3-BTL000.94 at Route 729.

A new TMDL is not required for this impaired segment of Battle Run because the downstream Upper Rappahannock River Watershed TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hazel River (2) watershed (Eq ID POL0517). A bacteria TMDL Implementation Plan for the Thornton River watershed (ID 205) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E06R_BTL01A02 / Battle Run / Segment begins at the confluence with an unnamed tributary to Battle Run, at rivermile 2.27, and continues downstream until the confluence with the Thornton River.	4A	Escherichia coli (E. coli)	2008	L	2.23

Battle Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.23**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E06R-03-BAC** **Unnamed tributary to Thornton River**

Cause Location: Begins at the headwaters of the unnamed tributary, and continues downstream to the confluence with the Thornton River.

City / County: Culpeper Co. Rappahannock Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 3-XHH000.24 at Route 626.

A new TMDL is not required for this impaired segment of the unnamed tributary to Thornton River because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hazel River (2) watershed (Eq ID POL0517). A bacteria TMDL Implementation Plan for the Thornton River watershed (ID 205) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E06R_XHH01A12 / Unnamed tributary to Thornton River / Segment begins at the headwaters of the unnamed tributary, and continues downstream to the confluence with the Thornton River.	4A	Escherichia coli (E. coli)	2012	L	5.02

Unnamed tributary to Thornton River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.02**

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E06R-04-BAC** **Mill Run**

Cause Location: Begins at the perennial headwaters at Route 618/658 and continues downstream to the confluence with Thornton River.

City / County: Rappahannock Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 3-MLR001.11 at Route 618.

A new TMDL is not required for this impaired segment of Mill Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entire Hazel River (2) watershed (Eq ID POL0517). A bacteria TMDL Implementation Plan for the Thornton River watershed (ID 205) was approved by the EPA on 08/02/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E06R_MLR01A18 / Mill Run / Segment begins at the perennial headwaters at Route 618/658 and continues downstream to the confluence with Thornton River.	4A	Escherichia coli (E. coli)	2020	L	5.90

Mill Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.90**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E07R-01-BAC** **Muddy Run**

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

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 11 samples - 54.5%) at DEQ station 3-MUU000.82 at Route 625. E. coli bacteria criterion excursions (7 of 11 samples - 63.6%) at DEQ station 3-MUU008.52 at Route 632 (2018 Assessment).

The Muddy Run bacteria TMDL (Fed ID 23326) was approved by the EPA on 07/06/2004. The SWCB approved the TMDL on 12/02/2004. TMDL Eq IDs 1299 and POL0003.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E07R_MUU01A00 / Muddy Run / Segment begins at the confluence with an unnamed tributary to Muddy Run, approximately 0.2 rivermile upstream of Route 229, and continues downstream until the confluence with the Hazel River.	4A	Escherichia coli (E. coli)	1996	L	6.09
VAN-E07R_MUU02A02 / Muddy Run / Segment begins at the headwaters of Muddy Run and continues downstream until the confluence with an unnamed tributary to Muddy Run, approximately 0.2 rivermile upstream of Route 229.	4A	Escherichia coli (E. coli)	2002	L	8.25

Muddy Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**14.34**

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 2020

Rappahannock River Basin

Cause Group Code: **E07R-02-BAC** **Hazel River**

Cause Location: Begins at the confluence with Indian Run and continues downstream until the confluence with Muddy Run.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (10 of 32 samples - 31.3%) at DEQ station 3-HAZ005.98 at Route 625.

The Upper Rappahannock River Watershed bacteria TMDL for the Hazel River (2) watershed (Eq ID POL0517) was approved by the EPA on 01/23/2008 (Fed ID 33917). 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-E07R_HAZ01A04 / Hazel River / Segment begins at the confluence with Indian Run and continues downstream until the confluence with Muddy Run.	4A	Escherichia coli (E. coli)	2006	L	3.36

Hazel River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.36**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E07R-03-BAC** **Indian Run**

Cause Location: Begins at the confluence with an unnamed tributary to Indian Run, upstream from Route 626, and continues downstream until the confluence with the Hazel River.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at DEQ station 3-IND001.14 at Route 624.

A new TMDL is not required for this impaired segment of Indian Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entre Hazel River (2) watershed (Eq ID POL0517).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E07R_IND01A04 / Indian Run / Segment begins at the confluence with an unnamed tributary to Indian Run, upstream from Route 626, and continues downstream until the confluence with the Hazel River.	4A	Escherichia coli (E. coli)	2020	L	3.84

Indian Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.84**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E07R-04-BAC** **Waterford Run**

Cause Location: Begins at the headwaters of Waterford Run and continues downstream to the confluence with the Hazel River.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at DEQ station 3-WAF000.82 (upstream of private bridge off Route 611).

A new TMDL is not required for this impaired segment of Indian Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33917, 01/23/2008) included modeling, source identification, and reductions that covered the entre Hazel River (2) watershed (Eq ID POL0517).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E07R_WAF01A10 / Waterford Run / Segment begins at the headwaters of Waterford Run and continues downstream to the confluence with the Hazel River.	4A	Escherichia coli (E. coli)	2020	L	6.23

Waterford Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**6.23**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E08R-01-BAC** **Marsh Run**

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

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (10 of 21 samples - 47.6%) at DEQ station 3-MAH000.19 at Route 651. E. coli bacteria criterion excursions (7 of 15 samples - 46.7%) at DEQ station 3-MAH004.18 at Route 668. E. coli bacteria criterion excursions (6 of 9 samples - 66.7%) at DEQ station 3-MAH008.88 at Route 17.

The Upper Rappahannock River Watershed bacteria TMDL for the Marsh Run watershed (Eq ID POL0515) was approved by the EPA on 01/23/2008 (Fed ID 34088). The SWCB approved the TMDL on 07/31/2008. A bacteria TMDL Implementation Plan for the Marsh Run watershed (ID 18) was approved by the EPA on 05/24/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E08R_MAH01A00 / Marsh Run / Segment begins at the confluence with Harpers Run, at approximately rivermile 2.4, and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	1996	L	2.32
VAN-E08R_MAH02A02 / Marsh Run / Segment begins at the confluence with Craig Run and continues downstream until the confluence with Harpers Run, at approximately rivermile 2.4.	4A	Escherichia coli (E. coli)	2012	L	6.01
VAN-E08R_MAH03A02 / Marsh Run / Segment begins at the headwaters of Marsh Run and continues downstream until the confluence with Craig Run.	4A	Escherichia coli (E. coli)	2008	L	3.87

Marsh Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**12.20**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E08R-01-BEN** **Marsh Run**

Cause Location: Begins at the confluence with Craig Run and continues downstream until the confluence with Harpers Run, at approximately rivermile 2.4.

City / County: Fauquier Co.

Use(s): Aquatic Life

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

2016 Assessment: A total of two biological monitoring events in 2009 at DEQ station 3-MAH004.18 at Route 668 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-E08R_MAH02A02 / Marsh Run / Segment begins at the confluence with Craig Run and continues downstream until the confluence with Harpers Run, at approximately rivermile 2.4.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	6.01

Marsh Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**6.01**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E08R-02-BAC** **Browns Run**

Cause Location: Begins at the confluence with an unnamed tributary to Browns Run, near the Route 17 bridge, and continues downstream until the confluence with Marsh Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (17 of 21 samples - 81.0%) at DEQ station 3-BOS000.72 at Route 653 (Morganburg Road).

The Upper Rappahannock River Watershed bacteria TMDL for the Browns Run watershed (POL0510) was approved by the EPA on 01/23/2008 (Fed ID 33911). The SWCB approved the TMDL on 07/31/2008. A bacteria TMDL Implementation Plan for the Browns Run watershed (ID 17) was approved by the EPA on 05/24/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E08R_BOS01A02 / Browns Run / Segment begins at the confluence with an unnamed tributary to Browns Run, near the Route 17 bridge, and continues downstream until the confluence with Marsh Run.	4A	Escherichia coli (E. coli)	2002	L	2.54

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

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E08R-03-BAC** **Craig Run**

Cause Location: Begins at the headwaters of Craig Run and continues downstream until the confluence with Marsh Run.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 21 samples - 38.1%) at DEQ station 3-CRA000.46 at Luck Stone Road.

The Upper Rappahannock River Watershed bacteria TMDL for the Craig Run watershed (Eq ID POL0509) was approved by the EPA on 01/23/2008 (Fed ID 33912). The SWCB approved the TMDL on 07/31/2008. A bacteria TMDL Implementation Plan for the Craig Run watershed (ID 116) was approved by the EPA on 05/24/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E08R_CRA01A02 / Craig Run / Segment begins at the headwaters of Craig Run and continues downstream until the confluence with Marsh Run.	4A	Escherichia coli (E. coli)	2004	L	3.72

Craig Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.72**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E08R-04-BAC** **Rappahannock River**

Cause Location: Begins at the confluence with Ruffans Run and continues downstream until the confluence with Tinpot Run.

City / County: Culpeper Co. Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 65 samples - 10.8%) at DEQ/USGS station 3-RPP147.49 at Route 29.

The Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33951) for the Rappahannock River (2) watershed (Eq ID POL0508) was approved by the EPA on 01/23/2008. 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-E08R_RPP02A02 / Rappahannock River / Segment begins at the confluence with Ruffans Run and continues downstream until the confluence with Tinpot Run.	4A	Escherichia coli (E. coli)	2004	L	2.11

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

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E08R-05-BAC** **Rappahannock River**

Cause Location: Begins at the confluence with an unnamed tributary to the Rappahannock River, at approximately rivermile 142.5, and continues downstream until the confluence with Marsh Run.

City / County: Culpeper Co. Fauquier Co.

Use(s): Recreation

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

Five exceedances of the monthly geometric mean E. coli criterion at DEQ station 3-RPP142.36 at Route 620.

The Upper Rappahannock River Watershed bacteria TMDL for the Rappahannock River (3) watershed (Eq ID POL0511) was approved by the EPA on 01/23/2008 (Fed ID 33952). 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-E08R_RPP01A02 / Rappahannock River / Segment begins at the confluence with an unnamed tributary to the Rappahannock River, at approximately rivermile 142.5, and continues downstream until the confluence with Marsh Run.	4A	Escherichia coli (E. coli)	2006	L	2.85

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.85**

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E08R-06-BAC** **Tinpot Run**

Cause Location: Begins at the confluence with an unnamed tributary to Tinpot Run, at rivermile 1.27, and continues downstream until the confluence with the Rappahannock River.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 10 samples - 40.0%) at DEQ station 3-TIN000.36 at Route 651.

A new TMDL is not required for this impaired segment of Tinpot Run because the downstream Upper Rappahannock River Watershed bacteria TMDL (Fed ID 33952, 01/23/2008) included modeling, source identification, and reductions that covered the entire Rappahannock River (3) watershed (Eq ID POL0511).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E08R_TIN01A08 / Tinpot Run / Segment begins at the confluence with an unnamed tributary to Tinpot Run, at rivermile 1.27, and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2008	L	1.28

Tinpot Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.28**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09L-01-BAC** **Mountain Run Reservoir**

Cause Location: Segment includes all of Mountain Run Reservoir.

City / County: Culpeper Co.

Use(s): Recreation

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

Sufficient excursions above the maximum criterion for E.coli were recorded in the pooled data for DEQ monitoring stations 3-MTN028.68 and 3-MTN029.08 (2 of 14 samples, 14.3%). A new TMDL is not required for this impairment because its is located with the watershed addressed by the Mountain Run bacteria TMDL (Fed ID 24415, 04/27/2001) (Eq ID POL0116).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09L_MTN02A02 / Mountain Run Reservoir / Segment includes all of Mountain Run Reservoir.	4A	Escherichia coli (E. coli)	2020	L	72.75

Mountain Run Reservoir **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:		**72.75**	

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-01-BAC** **Mountain Run**

Cause Location: Begins at the confluence with Flat Run and continues downstream until the confluence with the Rappahannock River.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (10 of 42 samples - 23.8%) at DEQ station 3-MTN000.59 at Route 620 and sufficient excursions from the maximum E. coli bacteria criterion (4 of 9 samples - 44.4%) at DEQ station 3-MTN005.79 at Route 672.

A bacteria TMDL for the Mountain Run watershed (Eq ID POL0116) was approved by the EPA on 04/27/2001 (Fed ID 24415). The SWCB approved the TMDL on 06/17/2004.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_MTN01A00 / Mountain Run / Segment begins at the confluence with Flat Run and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	1996	L	7.58

Mountain Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**7.58**

Sources:

Grazing in Riparian or Shoreline Zones	Impervious Surface/Parking Lot Runoff	Livestock (Grazing or Feeding Operations)	Manure Runoff
Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas	Waterfowl	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-01-BEN** **Mountain Run**

Cause Location: Begins at the Route 15/29 bridge crossing and continues downstream until the confluence with the Rappahannock River.

City / County: Culpeper Co.

Use(s): Aquatic Life

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

Two biological monitoring events in 2018 at DEQ station 3-MTN005.79 at Route 672; two biological monitoring events in 2018 at DEQ station 3-MTN014.88 at Route 663; and two biological monitoring events in 2018 at DEQ station 3-MTN021.11 at Route 799 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-E09R_MTN01A00 / Mountain Run / Segment begins at the confluence with Flat Run and continues downstream until the confluence with the Rappahannock River.	5A	Benthic Macroinvertebrates Bioassessments	2008	M	7.58
VAN-E09R_MTN02A04 / Mountain Run / Segment begins at the confluence with Jonas Run and continues downstream until the confluence with Flat Run.	5A	Benthic Macroinvertebrates Bioassessments	2008	M	5.67
VAN-E09R_MTN03A00 / Mountain Run / Segment begins at the Route 15/29 bridge crossing and continues downstream until the confluence with Jonas Run.	5A	Benthic Macroinvertebrates Bioassessments	2008	M	6.65
VAN-E09R_MTN04A04 / Mountain Run / Segment begins at the outlet from Lake Pelham and continues downstream until the Route 15/29 bridge crossing.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	4.63

Mountain Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**24.53**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-01-PCB** **Mountain Run**

Cause Location: Begins at the Route 15/29 bridge crossing near Culpeper City and continues downstream until the confluence with the Rappahannock River.

City / County: Culpeper Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCBs in Fish Tissue / 5A Polychlorinated Biphenyls (PCBs) / 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. The affected stretch of Mountain Run extends roughly 19 miles, from the Route 15/29 bridge crossing near Culpeper City downstream until the confluence with the Rappahannock River.

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: three exceedances in one species of fish (American eel) collected in 2013 at DEQ station 3-MTN000.59; two exceedances in two species of fish (American eel and yellow bullhead catfish) collected in 2013 at DEQ station 3-MTN005.79; and four exceedances in three species of fish (American eel, yellow bullhead catfish, and sunfish) collected in 2013 at DEQ station 3-MTN014.33.

The following exceedances of the human health criterion of 640 picogram per liter (pg/l) for total PCBs in the water column were recorded: two exceedances at DEQ station 3-MTN005.79 at Route 672; two exceedances at DEQ station 3-MTN010.98 at Route 669; and three exceedances at DEQ station 3-MTN014.88 at Route 663.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_MTN01A00 / Mountain Run / Segment begins at the confluence with Flat Run and continues downstream until the confluence with the Rappahannock River.	5A	PCBs in Fish Tissue	2006	H	7.58
VAN-E09R_MTN02A04 / Mountain Run / Segment begins at the confluence with Jonas Run and continues downstream until the confluence with Flat Run.	5A	PCBs in Fish Tissue	2006	H	5.67
VAN-E09R_MTN03A00 / Mountain Run / Segment begins at the Route 15/29 bridge crossing and continues downstream until the confluence with Jonas Run.	5A	PCBs in Fish Tissue	2006	H	6.65

Mountain Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			**19.90**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_MTN01A00 / Mountain Run / Segment begins at the confluence with Flat Run and continues downstream until the confluence with the Rappahannock River.	5A	Polychlorinated Biphenyls (PCBs)	2020	L	7.58
VAN-E09R_MTN02A04 / Mountain Run / Segment begins at the confluence with Jonas Run and continues downstream until the confluence with Flat Run.	5A	Polychlorinated Biphenyls (PCBs)	2020	L	5.67
VAN-E09R_MTN03A00 / Mountain Run / Segment begins at the Route 15/29 bridge crossing and continues downstream until the confluence with Jonas Run.	5A	Polychlorinated Biphenyls (PCBs)	2018	H	6.65

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Mountain Run

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated Biphenyls (PCBs) - Total Impaired Size by Water Type:			**19.90**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-02-BAC** **Mountain Run**

Cause Location: Segment begins at the outlet from Lake Pelham and continues downstream until the confluence with Jonas Run.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 11 samples - 72.7%) at DEQ station 3-MTN014.88 at Route 663 (Stevensburg Road). E. coli bacteria criterion excursions (2 of 10 samples - 20%) at DEQ station 3-MTN021.11 at Route 799 (Keyser Road). E. coli bacteria criterion excursions (3 of 4 samples - 75.0%) at DEQ station 3-MTN022.01 at Old Brandy Road.

A new TMDL is not required for this impaired segment because the downstream Mountain Run bacteria TMDL (Fed ID 24415, 04/27/2001) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0116).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_MTN03A00 / Mountain Run / Segment begins at the Route 15/29 bridge crossing and continues downstream until the confluence with Jonas Run.	4A	Escherichia coli (E. coli)	2010	L	6.65
VAN-E09R_MTN04A04 / Mountain Run / Segment begins at the outlet from Lake Pelham and continues downstream until the Route 15/29 bridge crossing.	4A	Escherichia coli (E. coli)	2016	L	4.63

Mountain Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**11.28**

Sources:

Grazing in Riparian or Shoreline Zones	Impervious Surface/Parking Lot Runoff	Livestock (Grazing or Feeding Operations)	Manure Runoff
Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas	Waterfowl	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-02-BEN** **Jonas Run**

Cause Location: Begins at the confluence with an unnamed tributary to Jonas Run (XDZ), at approximately rivermile 3.74, and continues downstream until the confluence with Mountain Run.

City / County: Culpeper Co.

Use(s): Aquatic Life

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

2016 Assessment: A total of two biological monitoring events in 2009 at DEQ station 3-JOA001.60 at Route 684 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-E09R_JOA01A06 / Jonas Run / Segment begins at the confluence with an unnamed tributary to Jonas Run (XDZ), at approximately rivermile 3.74, and continues downstream until the confluence with Mountain Run.	5A	Benthic Macroinvertebrates Bioassessments	2012	M	3.78

Jonas Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**3.78**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-02-PCB** **Mountain Run**

Cause Location: Begins at the outlet from Lake Pelham and continues downstream until the Route 15/29 bridge crossing.

City / County: Culpeper Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCBs in Fish Tissue / 5A Polychlorinated Biphenyls (PCBs) / 5A

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 (white sucker, American eel, and yellow bullhead catfish) in four total samples collected in 2013 at DEQ station 3-MTN022.21.

Two exceedances of the human health criteria of 640 picogram per liter (pg/l) for total polychlorinated biphenyls (PCBs) in the water column were recorded in samples collected at DEQ station 3-MTN021.11 at Route 799.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_MTN04A04 / Mountain Run / Segment begins at the outlet from Lake Pelham and continues downstream until the Route 15/29 bridge crossing.	5A	PCBs in Fish Tissue	2016	L	4.63

Mountain Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			**4.63**

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_MTN04A04 / Mountain Run / Segment begins at the outlet from Lake Pelham and continues downstream until the Route 15/29 bridge crossing.	5A	Polychlorinated Biphenyls (PCBs)	2018	L	4.63

Mountain Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated Biphenyls (PCBs) - Total Impaired Size by Water Type:			**4.63**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-03-BAC** **Mountain Run**

Cause Location: Begins at the confluence with an unnamed tributary that flows from Caymore Lake and continues downstream until Lake Pelham.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 18 samples - 22.2%) at DEQ station 3-MTN027.08 at Route 641.

A new TMDL is not required for this impaired segment of Mountain Run because the downstream Mountain Run bacteria TMDL (Fed ID 24415, 04/27/2001) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0116).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_MTN05A04 / Mountain Run / Segment begins at the confluence with an unnamed tributary that flows from Caymore Lake and continues downstream until Lake Pelham.	4A	Escherichia coli (E. coli)	2006	L	1.63

Mountain Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.63**

Sources:

Grazing in Riparian or Shoreline Zones	Impervious Surface/Parking Lot Runoff	Livestock (Grazing or Feeding Operations)	Manure Runoff
Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas	Waterfowl	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-03-BEN** **Unnamed tributary to Jonas Run**

Cause Location: Begins at the confluence with an unnamed tributary (downstream from Swan Dam) and continues downstream to the confluence with Jonas Run.

City / County: Culpeper Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2018 at DEQ station 3-XMO000.41 (0.02 mile downstream from Route 685) 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-E09R_XMO01A20 / Unnamed tributary to Jonas Run / Segment begins at the confluence with an unnamed tributary (downstream from Swan Dam) and continues downstream to the confluence with Jonas Run.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	0.53

Unnamed tributary to Jonas Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**0.53**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-03-PCB** **Unnamed tributaries to Mountain Run**

Cause Location: Unnamed tributaries 3-XBE and 3-XIH, from their perennial headwaters downstream to their confluences with Mountain Run.

City / County: Culpeper Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Polychlorinated Biphenyls (PCBs) / 5A

Three exceedances of the human health criterion of 640 picogram per liter (pg/l) for total polychlorinated biphenyls (PCBs) in the water column were recorded in water quality samples collected at DEQ station 3-XBE000.19 at Yancey Street.

Three exceedances of the human health criterion of 640 picogram per liter (pg/l) for total polychlorinated biphenyls (PCBs) in the water column were recorded in water quality samples collected at DEQ station 3-XIH000.06 at the end of Spring Street.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_XBE01A18 / Unnamed tributary to Mountain Run / Segment begins at the perennial headwaters and continues downstream to the confluence with Mountain Run.	5A	Polychlorinated Biphenyls (PCBs)	2020	L	0.60
VAN-E09R_XIH01A18 / Unnamed tributary to Mountain Run / Segment begins at the perennial headwaters and continues downstream to the confluence with Mountain Run.	5A	Polychlorinated Biphenyls (PCBs)	2020	L	1.12

Unnamed tributaries to Mountain Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated Biphenyls (PCBs) - Total Impaired Size by Water Type:			**1.72**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-04-BAC** **Jonas Run**

Cause Location: Begins at the confluence with an unnamed tributary to Jonas Run (XDZ), at approximately rivermile 3.74, and continues downstream until the confluence with Mountain Run.

City / County: Culpeper Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (3 of 7 samples - 42.9%) at DEQ station 3-JOA000.80 at Route 663 (Stevensburg Road).

A new TMDL is not required for this impaired segment of Jonas Run because the downstream Mountain Run bacteria TMDL (Fed ID 24415, 04/27/2001) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0116).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_JOA01A06 / Jonas Run / Segment begins at the confluence with an unnamed tributary to Jonas Run (XDZ), at approximately rivermile 3.74, and continues downstream until the confluence with Mountain Run.	4A	Escherichia coli (E. coli)	2008	L	3.78

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

Sources:

Grazing in Riparian or Shoreline Zones	Impervious Surface/Parking Lot Runoff	Livestock (Grazing or Feeding Operations)	Manure Runoff
Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas	Waterfowl	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-05-BAC** **Flat Run**

Cause Location: Begins at the headwaters of Flat Run and continues downstream until the confluence with Mountain Run.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 7 samples - 42.9%) at DEQ station 3-FLA001.93 at Route 675.

A new TMDL is not required for this impaired segment of Flat Run because the downstream Mountain Run bacteria TMDL (Fed ID 24415, 04/27/2001) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0116).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_FLA01A08 / Flat Run / Segment begins at the headwaters of Flat Run and continues downstream until the confluence with Mountain Run.	4A	Escherichia coli (E. coli)	2014	L	6.23

Flat Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**6.23**

Sources:

Grazing in Riparian or Shoreline Zones	Impervious Surface/Parking Lot Runoff	Livestock (Grazing or Feeding Operations)	Manure Runoff
Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas	Waterfowl	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E09R-06-BAC** **Unnamed tributary to Jonas Run**

Cause Location: Begins at the confluence with an unnamed tributary (downstream from Swan Dam) and continues downstream to the confluence with Jonas Run.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at DEQ station 3-XMO000.44 at Route 685.

A new TMDL is not required for this impaired segment of an unnamed tributary to Jonas Run because the downstream Mountain Run bacteria TMDL (Fed ID 24415, 04/27/2001) included modeling, source identification, and reductions that covered the entre watershed (Eq ID POL0116).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E09R_XMO01A20 / Unnamed tributary to Jonas Run / Segment begins at the confluence with an unnamed tributary (downstream from Swan Dam) and continues downstream to the confluence with Jonas Run.	4A	Escherichia coli (E. coli)	2020	L	0.53

Unnamed tributary to Jonas Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**0.53**

Sources:

Grazing in Riparian or Shoreline Zones	Impervious Surface/Parking Lot Runoff	Livestock (Grazing or Feeding Operations)	Manure Runoff
Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas	Waterfowl	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E10R-01-BAC** **Deep Run**

Cause Location: Begins at the headwaters of Deep Run and continues downstream until the confluence with Pine Branch. Begins again at the confluence with Green Branch (at rivermile 4.75) and continues downstream until the confluence with the Rappahannock River.

City / County: Fauquier Co. Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (21 of 34 samples - 61.8%) at DEQ station 3-DPR001.70 at Route 17. E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ station 3-DPR008.98 at Route 634.

The Deep Run bacteria TMDL (Eq ID POL0115) was approved by the EPA on 05/26/2004 (Fed ID 24417). The SWCB approved the TMDL on 08/31/2004. A bacteria TMDL Implementation Plan for the Deep Run watershed (ID 58) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E10R_DPR01A00 / Deep Run / Segment begins at the confluence with Green Branch, at rivermile 4.75, and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	1996	L	4.93
VAN-E10R_DPR03A02 / Deep Run / Segment begins at the headwaters of Deep Run and continues downstream until the confluence with Pine Branch.	4A	Escherichia coli (E. coli)	2014	L	3.75

Deep Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**8.68**

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 2020

Rappahannock River Basin

***Cause Group Code:* E10R-01-BEN** **Sumerduck Run**

Cause Location: Begins at the confluence with an unnamed tributary to Sumerduck Run, approximately 0.55 rivermile upstream of Route 632, and continues downstream until the confluence with another unnamed tributary, at Route 631.

City / County: Fauquier Co.

Use(s): Aquatic Life

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

A total of four biological monitoring events in 2013 and 2014 at DEQ station 3-SMR004.81 at Route 632 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-E10R_SMR02A06 / Sumerduck Run / Segment begins at the confluence with an unnamed tributary to Sumerduck Run, approximately 0.55 rivermile upstream of Route 632, and continues downstream until the confluence with another unnamed tributary, at Route 631.	5A	Benthic Macroinvertebrates Bioassessments	2012	M	1.85

Sumerduck Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**1.85**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E10R-03-BAC** **Alcotti Run**

Cause Location: Begins at the headwaters of Alcotti Run and continues downstream until the confluence with Deep Run.

City / County: Stafford Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 3-ALC002.74 at Route 614.

A new TMDL is not required for this impaired segment of Alcotti Run because the downstream Deep Run bacteria TMDL (Fed ID 24417, 05/26/2004) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0115). A bacteria TMDL Implementation Plan for the Deep Run watershed (ID 58) was approved by the EPA on 05/22/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E10R_ALC01A00 / Alcotti Run / Segment begins at the headwaters of Alcotti Run and continues downstream until the confluence with Deep Run.	4A	Escherichia coli (E. coli)	2012	L	5.16

Alcotti Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.16**

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 2020

Rappahannock River Basin

***Cause Group Code:* E10R-04-BAC** **Sumerduck Run**

Cause Location: Begins at the confluence with an unnamed tributary to Sumerduck Run, approximately 0.55 rivermile upstream of Route 632, and continues downstream until the confluence with another unnamed tributary, at Route 631.

City / County: Fauquier Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 19 samples - 31.6%) at DEQ station 3-SMR004.81 at Route 632.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E10R_SMR02A06 / Sumerduck Run / Segment begins at the confluence with an unnamed tributary to Sumerduck Run, approximately 0.55 rivermile upstream of Route 632, and continues downstream until the confluence with another unnamed tributary, at Route 631.	5A	Escherichia coli (E. coli)	2016	L	1.85

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

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E11R-01-BAC** **Garth Run**

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

City / County: Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 11 samples - 54.5%) at DEQ station 3-GAR000.95 at Route 718 (2018 Assessment).
E. coli bacteria criterion excursions (8 of 10 samples - 80.0%) at DEQ station 3-GAR005.59 at Route 615.

A new TMDL is not required for this impaired segment of Garth Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan for the Garth Run watershed (ID 78) was approved by the EPA on 12/31/2015

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E11R_GAR01A02 / Garth Run / Segment begins at the Route 665 crossing, at approximately rivermile 1.9, and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2014	L	1.61
VAN-E11R_GAR02A06 / Garth Run / Segment begins at the headwaters of Garth Run and continues downstream until the Route 665 crossing, at approximately rivermile 1.9.	4A	Escherichia coli (E. coli)	2018	L	5.82

Garth Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**7.43**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E11R-01-BEN** **Conway River**

Cause Location: Segment begins at the confluence with an unnamed tributary to the Conway River, approximately 0.6 rivermile upstream from Route 230, and continues downstream until the confluence with the Rapidan River.

City / County: Greene Co. Madison Co.

Use(s): Aquatic Life

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

2014 Assessment: A total of three biological monitoring events in 2007 and 2008 at DEQ station 3-CON002.26 at Route 230 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-E11R_CON01A04 / Conway River / Segment begins at the beginning of the PWS designation, and continues downstream until the confluence with the Rapidan River.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	0.32
VAN-E11R_CON01B12 / Conway River / Segment begins at the confluence with an unnamed tributary to the Conway River, approximately 0.6 rivermile upstream from Route 230, and continues downstream until the start of the PWS designated area.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	2.67

Conway River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**2.99**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E11R-01-TEMP** **Garth Run**

Cause Location: Begins at the headwaters of Garth Run and continues downstream until the Route 665 crossing, at approximately rivermile 1.9.

City / County: Madison Co.

Use(s): Aquatic Life

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

Excursions greater than the maximum temperature criterion for natural trout waters (4 of 10 samples - 40.0%) at DEQ station 3-GAR005.59 at Route 615.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E11R_GAR02A06 / Garth Run / Segment begins at the headwaters of Garth Run and continues downstream until the Route 665 crossing, at approximately rivermile 1.9.	5A	Temperature	2018	L	5.82

Garth Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			**5.82**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E12R-01-BAC** **Rapidan River**

Cause Location: Begins at the confluence with the Conway River and continues downstream until the confluence with Rippin Run.

City / County: Greene Co. Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 66 samples - 12.1%) at DEQ station 3-RAP066.54 at Route 29.

A new TMDL is not required for this impaired segment of Rapidan River because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E12R_RAP01A00 / Rapidan River / Segment begins at the end of the public water supply designation area, approximately 0.43 rivermiles upstream from the Route 29 crossing, and continues downstream until the confluence with Rippin Run.	4A	Escherichia coli (E. coli)	2006	L	2.33
VAN-E12R_RAP01B06 / Rapidan River / Segment begins at the confluence with the Conway River and continues downstream until the end of the public water supply designation area, approximately 0.43 rivermiles upstream from the Route 29 crossing.	4A	Escherichia coli (E. coli)	2006	L	4.92

Rapidan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**7.25**

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E12R-01-BEN** **Rippin Run**

Cause Location: Begins at the confluence with White Run and continues downstream until the confluence with the Rapidan River.

City / County: Greene Co.

Use(s): Aquatic Life

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

2016 Assessment: A total of two biological monitoring events in 2010 at DEQ station 3-RIP000.22 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-E12R_RIP01A04 / Rippin Run / Segment begins at the confluence with White Run and continues downstream until the confluence with the Rapidan River.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	0.60

Rippin Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**0.60**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E12R-02-BAC** **Rippin Run**

Cause Location: Begins at the confluence with White Run and continues downstream until the confluence with the Rapidan River.

City / County: Greene Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 3-RIP000.22 at Route 609.

A new TMDL is not required for this impaired segment of Rippin Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan for the Rippin Run watershed (ID 72) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E12R_RIP01A04 / Rippin Run / Segment begins at the confluence with White Run and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2012	L	0.60

Rippin Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**0.60**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E12R-03-BAC** **South River**

Cause Location: Begins at the confluence with Henshaw Run and continues downstream until the confluence with the Rapidan River.

City / County: Greene Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25%) at DEQ station 3-SOT001.00 at Route 619.

A new TMDL is not required for this impaired segment of South River because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan for the Rapidan River #2 watershed (ID 73) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E12R_SOT01A04 / South River / Segment begins at the confluence with Henshaw Run and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2020	L	1.67

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

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E13R-01-BAC** **Blue Run**

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

City / County: Albemarle Co. Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 3-BLU000.80 at Route 641; E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at DEQ station 3-BLU002.60 at Route 20; and E. coli bacteria criterion excursions (7 of 11 samples - 63.6%) at DEQ station 3-BLU008.33 at Route 33.

The Rapidan River Basin bacteria TMDL for the Blue Run watershed (Eq ID POL0494) was approved by the EPA on 12/05/2007 (Fed ID 33865). The SWCB approved the TMDL on 07/31/2008. The Upper Rapidan River bacteria TMDL Implementation Plan for the Blue Run watershed (ID 77) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_BLU01A00 / Blue Run / Segment begins at the beginning of the PWS designation., and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2002	L	0.15
VAN-E13R_BLU01B12 / Blue Run / Segment begins at the confluence with Barbour Run, approximately 0.13 rivermile upstream of the Southern Rail Road bridge, and continues downstream until the start of the PWS designation.	4A	Escherichia coli (E. coli)	2002	L	4.19
VAN-E13R_BLU02A04 / Blue Run / Segment begins at the headwaters of Blue Run and continues downstream until the confluence with Barbour Run.	4A	Escherichia coli (E. coli)	2006	L	8.38

Blue Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**12.72**

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E13R-01-BEN** **Beautiful Run**

Cause Location: Begins at an unnamed tributary at rivermile 3.44, and continues downstream to another unnamed tributary, upstream of Route 620.

City / County: Madison Co.

Use(s): Aquatic Life

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

2018 Assessment: A total of two biological monitoring events in 2011 at DEQ station 3-BFL002.90 at Route 616 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-E13R_BFL02A12 / Beautiful Run / Segment begins at an unnamed tributary at rivermile 3.44, and continues downstream to another unnamed tributary, upstream of Route 620.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	2.50

Beautiful Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**2.50**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E13R-02-BAC** **Rapidan River**

Cause Location: Begins at the confluence with Poplar Run and continues downstream until the confluence with the Robinson River.

City / County: Madison Co. Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 34 samples - 20.6%) at DEQ station 3-RAP045.08 at Route 15.

The Rapidan River Basin bacteria TMDL for the Upper Rapidan River watershed (Eq ID POL0496) was approved by the EPA on 12/05/2007 (Fed ID 33867). The SWCB approved the TMDL on 07/31/2008. The Upper Rapidan River bacteria TMDL Implementation Plan for the Rapidan River #1 watershed (ID 70) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_RAP01A00 / Rapidan River / Segment begins at the confluence with Poplar Run and continues downstream until the confluence with the Robinson River.	4A	Escherichia coli (E. coli)	2002	L	7.63

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

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E13R-03-BAC** **Unnamed tributary to Beautiful Run**

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

City / County: Madison Co.

Use(s): Recreation

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

Excursions from the maximum E. coli bacteria criterion (3 of 5 samples - 60.0%) at DEQ station 3-XMM001.33 at Route 231.

A new TMDL is not required for this impaired segment of an unnamed tributary to Beautiful Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan for the Beautiful Run watershed (ID 69) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_XMM01A20 / Unnamed tributary to Beautiful Run / Segment begins at the perennial headwaters and continues downstream to the confluence with Beautiful Run.	4A	Escherichia coli (E. coli)	2020	L	2.02

Unnamed tributary to Beautiful Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.02**

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E13R-04-BAC** **Unnamed tributary to the Rapidan River**

Cause Location: Begins at the headwaters of the unnamed tributary and continues downstream until the confluence with the Rapidan River.

City / County: Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ station 3-XEZ000.12 at Route 634.

The Rapidan River Basin bacteria TMDL for this Unnamed Tributary to the Rapidan River watershed (Eq ID POL0497) was approved by the EPA on 12/05/2007 (Fed ID 33866). The SWCB approved the TMDL on 07/31/2008. The Upper Rapidan River bacteria TMDL Implementation Plan for the Rapidan River #1 watershed (ID 76) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_XEZ01A04 / Unnamed tributary to Rapidan River / Segment begins at the headwaters of the unnamed tributary and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2004	L	2.67

Unnamed tributary to the Rapidan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.67**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E13R-05-BAC** **Beautiful Run**

Cause Location: Begins at the headwaters and continues downstream until the confluence with the Rapidan River.

City / County: Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 3-BFL006.28 at Route 621; E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 3-BFL002.90 at Route 616; and E. coli bacteria criterion excursions (8 of 11 samples - 72.7%) at DEQ station 3-BFL000.90 at Route 620.

A new TMDL is not required for this impaired segment of Beautiful Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan for the Beautiful Run watershed (ID 69) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_BFL01A04 / Beautiful Run / Segment begins at the confluence of an unnamed tributary, upstream from Route 620, and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2006	L	1.18
VAN-E13R_BFL02A12 / Beautiful Run / Segment begins at an unnamed tributary at rivermile 3.44, and continues downstream to another unnamed tributary, upstream of Route 620.	4A	Escherichia coli (E. coli)	2012	L	2.50
VAN-E13R_BFL03A16 / Beautiful Run / Segment begins at the headwaters of Beautiful Run and continues downstream to an unnamed tributary at rivermile 3.44.	4A	Escherichia coli (E. coli)	2016	L	8.45

Beautiful Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**12.13**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E13R-06-BAC** **Rapidan River**

Cause Location: Begins at the confluence with Marsh Run and continues downstream until the confluence with Blue Run.

City / County: Madison Co. Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at DEQ station 3-RAP055.84 at Route 231.

A new TMDL is not required for this impaired segment of Rapidan River because the downstream Rapidan River Basin TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan for the Rapidan River #2 watershed (ID 73) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_RAP02A06 / Rapidan River / Segment begins at the beginning of the PWS designation. and continues downstream until the confluence with Blue Run.	4A	Escherichia coli (E. coli)	2006	L	0.15
VAN-E13R_RAP02B12 / Rapidan River / Segment begins at the confluence with Marsh Run and continues downstream until the start of the PWS designation.	4A	Escherichia coli (E. coli)	2006	L	4.19

Rapidan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.34**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E13R-07-BAC** **Unnamed tributary to Rapidan River**

Cause Location: Begins at the headwaters of the unnamed tributary and continues downstream until the confluence with the Rapidan River.

City / County: Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 12 samples - 66.7%) at DEQ station 3-XBO000.26 at Route 621.

A new TMDL is not required for this impaired segment of the unnamed tributary to the Rapidan River because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan for the UT to Rapidan River #2 watershed (ID 75) was approved by the EPA on 12/31/2015

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_XBO01A04 / Unnamed tributary to Rapidan River / Segment begins at the headwaters of the unnamed tributary and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2006	L	3.11

Unnamed tributary to Rapidan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.11**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E13R-08-BAC** **Marsh Run**

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

City / County: Greene Co. Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 11 samples - 45.5%) at DEQ station 3-MAS000.62 at Route 609.

The Rapidan River Basin bacteria TMDL for the Marsh Run watershed (Eq ID POL0495) was approved by the EPA on 12/05/2007 (Fed ID 33864). The SWCB approved the TMDL on 07/31/2008. The Upper Rapidan River bacteria TMDL Implementation Plan for the Marsh Run watershed (ID 74) was approved by the EPA on 12/31/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_MAS01A04 / Marsh Run / Segment begins at the headwaters of Marsh Run and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2014	L	5.64

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

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E13R-09-BAC** **Poplar Run**

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

City / County: Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at DEQ station 3-POL000.10 at Route 633 (Amicus Road).

A new TMDL is not required for this impaired segment of Poplar Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33867, 12/05/2007) included modeling, source identification, and reductions that covered the entire Upper Rapidan River watershed (Eq ID POL0496). The Upper Rapidan River bacteria TMDL Implementation Plan for the Poplar Run watershed (ID 71) was approved by the EPA on 12/31/2015

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E13R_POL01A04 / Poplar Run / Segment begins at the headwaters of Poplar Run and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2014	L	4.14

Poplar Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.14**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E14R-01-BEN** **White Oak Run**

Cause Location: Begins approximately 0.4 rivermile upstream from the Route 657 crossing, and continues downstream until the confluence with the Robinson River.

City / County: Madison Co.

Use(s): Aquatic Life

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

A total of one biological monitoring event in 2015 at DEQ station 3-WHO001.48 at Route 231 and a total of two biological monitoring events in 2016 at DEQ station 3-WHO001.51 (just upstream from Route 231) 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-E14R_WHO01A06 / White Oak Run / Segment begins approximately 0.4 rivermile upstream from the Route 657 crossing, and continues downstream until the confluence with the Robinson River.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	3.19

White Oak Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**3.19**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E14R-01-TEMP** **Robinson River**

Cause Location: Begins at the confluence with the Rose River, just downstream of Route 670, and continues downstream until the crossing of Route 231, rivermile 21.58.

City / County: Madison Co.

Use(s): Aquatic Life

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

2018 Assessment: Exceedances of the maximum temperature criterion for stockable trout waters (4 of 10 samples - 40.0%) at DEQ station 3-ROB024.06 at Route 649.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E14R_ROB01C00 / Robinson River / Segment begins at the confluence with the Rose River, just downstream of Route 670, and continues downstream until the old crossing of Route 231, rivermile 21.58.	5A	Temperature	2004	L	3.00

Robinson River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			**3.00**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E14R-02-BAC** **Finks Run**

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

City / County: Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 11 samples - 27.3%) at DEQ station 3-FIK001.08 at Route 650.

A new TMDL is not required for this impaired segment of Finks Run because the downstream Robinson River and Little Dark Run bacteria TMDL (Fed ID 40412, 12/12/2005) included modeling, source identification, and reductions that covered the entire Upper Robinson River watershed (Eq ID POL0245). The Little Dark Run and Robinson River bacteria TMDL Implementation Plan for the Upper Robinson River watershed (ID 14) was approved by the EPA on 05/31/2011

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E14R_FIK01A06 / Finks Run / Segment begins at the headwaters of Finks Run and continues downstream until the confluence with the Robinson River.	4A	Escherichia coli (E. coli)	2006	L	3.16

Finks Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.16**

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 2020

Rappahannock River Basin

Cause Group Code: **E14R-02-TEMP** **Rose River**

Cause Location: Begins at rivermile 2.6, approximately 0.36 rivermile downstream from the confluence with Strother Run, and continues downstream until the confluence with the Robinson River.

City / County: Madison Co.

Use(s): Aquatic Life

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

Exceedances of the maximum temperature criterion for stockable trout waters (2 of 13 samples - 15.4%) at DEQ station 3-ROE000.75 at a private road.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E14R_ROE01A02 / Rose River / Segment starts at rivermile 2.6, approximately 0.36 rivermile downstream from the confluence with Strother Run, and continues downstream until the confluence with the Robinson River.	5A	Temperature	2006	L	2.58

Rose River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature - Total Impaired Size by Water Type:			**2.58**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E14R-03-BAC** **White Oak Run**

Cause Location: Begins approximately 0.4 rivermile upstream from the Route 657 crossing, and continues downstream until the confluence with the Robinson River.

City / County: Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (9 of 12 samples - 75.0%) at DEQ station 3-WHO001.48 at Route 231.

A new TMDL is not required for this impaired segment of White Oak Run because the downstream Robinson River and Little Dark Run bacteria TMDL (Fed ID 24419, 12/12/2005) included modeling, source identification, and reductions that covered the entire Lower Robinson River watershed (Eq ID POL0243). A bacteria TMDL Implementation Plan for the Lower Robinson River watershed (ID 119) was approved by the EPA on 05/31/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E14R_WHO01A06 / White Oak Run / Segment begins approximately 0.4 rivermile upstream from the Route 657 crossing, and continues downstream until the confluence with the Robinson River.	4A	Escherichia coli (E. coli)	2006	L	3.19

White Oak Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.19**

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 2020

Rappahannock River Basin

***Cause Group Code:* E14R-04-BAC** **Leathers Run**

Cause Location: Begins at the confluence with an unnamed tributary to Leathers Run, approximately 0.65 rivermile downstream from the Route 641 crossing, and continues downstream until the confluence with the Robinson River.

City / County: Madison Co.

Use(s): Recreation

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

2016 Assessment: E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at DEQ station 3-LEA000.17 at Route 609.

A new TMDL is not required for this impaired segment of Leathers Run because the downstream Robinson River and Little Dark Run bacteria TMDL (Fed ID 24419, 12/12/2005) included modeling, source identification, and reductions that covered the entire Lower Robinson River watershed (Eq ID POL0243). A bacteria TMDL Implementation Plan for the Lower Robinson River watershed (ID 119) was approved by the EPA on 05/31/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E14R_LEA01A06 / Leathers Run / Segment begins at the confluence with an unnamed tributary to Leathers Run, approximately 0.65 rivermile downstream from the Route 641 crossing, and continues downstream until the confluence with the Robinson River.	4A	Escherichia coli (E. coli)	2006	L	2.17

Leathers Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.17**

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 2020

Rappahannock River Basin

***Cause Group Code:* E15R-01-BAC** **Little Dark Run**

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

City / County: Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 3-LDR000.70 at Route 680.

The Robinson River and Little Dark Run bacteria TMDL for the Little Dark Run watershed (Eq ID POL0244) was approved by the EPA on 12/12/2005 (Fed ID 24418). The SWCB approved the TMDL on 07/31/2008. A bacteria TMDL Implementation Plan for the Little Dark Run watershed (ID 15) was approved by the EPA on 05/31/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E15R_LDR01A00 / Little Dark Run / Segment begins at the confluence with an unnamed tributary to Little Dark Run, at rivermile 2.17, and continues downstream until the confluence with Dark Run.	4A	Escherichia coli (E. coli)	1998	L	2.11
VAN-E15R_LDR02A02 / Little Dark Run / Segment begins at the headwaters of Little Dark Run and continues downstream until the confluence with an unnamed tributary to Little Dark Run, at rivermile 2.17.	4A	Escherichia coli (E. coli)	2008	L	2.42

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

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 2020

Rappahannock River Basin

***Cause Group Code:* E15R-02-BAC** **Robinson River**

Cause Location: Begins at the confluence with Crooked Run, and continues downstream until the confluence with the Rapidan River.

City / County: Culpeper Co. Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (16 of 66 samples - 24.2%) at DEQ station 3-ROB001.90 at Route 614.

The Robinson River and Little Dark Run bacteria TMDL for the Lower Robinson River watershed (Eq ID POL0243) was approved by the EPA on 12/12/2005 (Fed ID 24419). The SWCB approved the TMDL on 07/31/2008. A bacteria TMDL Implementation Plan for the Lower Robinson River watershed (ID 119) was approved by the U.S. EPA on 05/31/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E15R_ROB01A00 / Robinson River / Segment begins at the confluence with Crooked Run, and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2004	L	5.31

Robinson River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.31**

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 2020

Rappahannock River Basin

Cause Group Code: **E15R-02-BEN** **Deep Run**

Cause Location: Begins at the confluence with Muddy Run and continues downstream until the confluence with the Robinson River.

City / County: Madison Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2016 at DEQ station 3-DRN001.81 at Route 638 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-E15R_DRN01A04 / Deep Run / Segment begins at the confluence with Muddy Run and continues downstream until the confluence with the Robinson River.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	2.47

Deep Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**2.47**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E15R-03-BAC** **Deep Run**

Cause Location: Begins at the confluence with Muddy Run and continues downstream until the confluence with the Robinson River.

City / County: Madison Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (4 of 6 samples - 66.7%) at DEQ station 3-DRN001.81 at Route 638.

A new TMDL is not required for this impaired segment of Deep Run because the downstream Robinson River and Little Dark Run bacteria TMDL (Fed ID 24419, 12/12/2005) included modeling, source identification, and reductions that covered the entire Lower Robinson River watershed (Eq ID POL0243). A bacteria TMDL Implementation Plan for the Lower Robinson River watershed (ID 119) was approved by the EPA on 05/31/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E15R_DRN01A04 / Deep Run / Segment begins at the confluence with Muddy Run and continues downstream until the confluence with the Robinson River.	4A	Escherichia coli (E. coli)	2008	L	2.47

Deep Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.47**

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 2020

Rappahannock River Basin

Cause Group Code: **E15R-03-BEN** **Great Run**

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

City / County: Madison Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2016 at DEQ station 3-GRA002.01 at Route 15 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-E15R_GRA01A04 / Great Run / Segment begins at the headwaters of Great Run and continues downstream until the confluence with the Robinson River.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	9.31

Great Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**9.31**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E15R-04-BAC** **Crooked Run**

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

City / County: Culpeper Co. Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 3-COO005.66 at Route 618.

A new TMDL is not required for this impaired segment of Crooked Run because the downstream Robinson River and Little Dark Run bacteria TMDL (Fed ID 24419, 12/12/2005) included modeling, source identification, and reductions that covered the entire Lower Robinson River watershed (Eq ID POL0243). A bacteria TMDL Implementation Plan for the Lower Robinson River watershed (ID 119) was approved by the EPA on 05/31/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E15R_COO01A04 / Crooked Run / Segment begins at the confluence with Little Crooked Run and continues downstream until the confluence with the Robinson River.	4A	Escherichia coli (E. coli)	2008	L	7.89

Crooked Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**7.89**

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 2020

Rappahannock River Basin

Cause Group Code: **E15R-04-BEN** **Little Dark Run**

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

City / County: Madison Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2017 at DEQ station 3-LDR000.70 at Route 680 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-E15R_LDR01A00 / Little Dark Run / Segment begins at the confluence with an unnamed tributary to Little Dark Run, at rivermile 2.17, and continues downstream until the confluence with Dark Run.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	2.11
VAN-E15R_LDR02A02 / Little Dark Run / Segment begins at the headwaters of Little Dark Run and continues downstream until the confluence with an unnamed tributary to Little Dark Run, at rivermile 2.17.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	2.42

Little Dark Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**4.53**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E15R-05-BAC** **Great Run**

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

City / County: Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at DEQ station 3-GRA002.01 at Route 15.

A new TMDL is not required for this impaired segment of Great Run because the downstream Robinson River and Little Dark Run bacteria TMDL (Fed ID 24419, 12/12/2005) included modeling, source identification, and reductions that covered the entire Lower Robinson River watershed (Eq ID POL0243). A bacteria TMDL Implementation Plan for the Lower Robinson River watershed (ID 119) was approved by the EPA on 05/31/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E15R_GRA01A04 / Great Run / Segment begins at the headwaters of Great Run and continues downstream until the confluence with the Robinson River.	4A	Escherichia coli (E. coli)	2008	L	9.31

Great Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**9.31**

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 2020

Rappahannock River Basin

***Cause Group Code:* E15R-06-BAC** **Dark Run**

Cause Location: Begins at the headwaters of Dark Run and continues to the confluence with the Robinson River.

City / County: Madison Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 3-DAK001.18 at Route 634.

A new TMDL is not required for this impaired segment of Dark Run because the downstream Robinson River and Little Dark Run bacteria TMDL (Fed ID 24419, 12/12/2005) included modeling, source identification, and reductions that covered the entire Lower Robinson River watershed (Eq ID POL0243). A bacteria TMDL Implementation Plan for the Lower Robinson River watershed (ID 119) was approved by the EPA on 05/31/2011.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E15R_DAK01A10 / Dark Run / Segment begins at the headwaters of Dark Run and continues to the confluence with the Robinson River.	4A	Escherichia coli (E. coli)	2010	L	8.59

Dark Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**8.59**

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 2020

Rappahannock River Basin

Cause Group Code: **E16R-01-BAC** **Cedar Run**

Cause Location: Begins at the confluence with Cabin Branch and continues downstream until the confluence with the Rapidan River.

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 3-CED000.59 at Route 522.

The Rapidan River Basin bacteria TMDL for the Cedar Run watershed (Eq ID POL0493) was approved by the EPA on 12/05/2007 (Fed ID 33868). 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-E16R_CED01A00 / Cedar Run / Segment begins at the confluence with Cabin Branch and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2018	L	2.25

Cedar Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.25**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E16R-01-BEN** **Cedar Run**

Cause Location: Begins at the confluence with Cabin Branch and continues downstream until the confluence with the Rapidan River.

City / County: Culpeper Co.

Use(s): Aquatic Life

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

A total of one biological monitoring event in 2016 at DEQ station 3-CED000.59 at Route 522 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-E16R_CED01A00 / Cedar Run / Segment begins at the confluence with Cabin Branch and continues downstream until the confluence with the Rapidan River.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	2.25

Cedar Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**2.25**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E16R-02-BAC** **Rapidan River**

Cause Location: Begins at the confluence with an unnamed tributary to the Rapidan River, at rivermile 34.5, approximately 0.6 rivermile downstream from Route 689, and continues downstream until the confluence with Cedar Run.

City / County: Culpeper Co. Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (18 of 74 samples - 24.3%) at DEQ/USGS station 3-RAP030.21 at Route 522.

A new TMDL is not required for this impaired segment of the Rapidan River because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33869, 12/05/2007) included modeling, source identification, and reductions that covered the entire Lower Rapidan River watershed (Eq ID POL0492).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E16R_RAP01A04 / Rapidan River / Segment begins at the confluence with an unnamed tributary to the Rapidan River, at rivermile 34.5, approximately 0.6 rivermile downstream from Route 689, and continues downstream until the confluence with Cedar Run.	4A	Escherichia coli (E. coli)	2006	L	4.66

Rapidan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.66**

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E16R-03-BAC** **Rapidan River**

Cause Location: Begins at the confluence with the Robinson River and continues downstream until the confluence with an unnamed tributary to the Rapidan River, at rivermile 36.6.

City / County: Culpeper Co. Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 3-RAP037.90 at Route 615.

A new TMDL is not required for this impaired segment of the Rapidan River because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33869, 12/05/2007) included modeling, source identification, and reductions that covered the entire Lower Rapidan River watershed (Eq ID POL0492).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E16R_RAP03A08 / Rapidan River / Segment begins at the confluence with the Robinson River and continues downstream until the confluence with an unnamed tributary to the Rapidan River, at rivermile 36.6.	4A	Escherichia coli (E. coli)	2008	L	3.39

Rapidan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.39**

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E17R-01-BAC** **Mine Run**

Cause Location: Begins at the confluence with Cormack Run, approximately 0.6 rivermile upstream of Route 20, and continues downstream until the confluence with the Rapidan River.

City / County: Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ station 3-MIR004.05 at Route 611.

The Mountain Run and Mine Run bacteria TMDL for the Mine Run watershed (Eq ID POL0242) was approved by the EPA on 11/15/2005 (Fed ID 24420). The SWCB approved the TMDL on 09/27/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E17R_MIR01A00 / Mine Run / Segment begins at the confluence with Cormack Run, approximately 0.6 rivermile upstream of Route 20, and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2002	L	10.50

Mine Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**10.50**

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 2020

Rappahannock River Basin

Cause Group Code: **E17R-01-BEN** **Brook Run**

Cause Location: Begins at the confluence with an unnamed tributary to Brook Run, at Route 647, and continues downstream until the confluence with the Rapidan River.

City / County: Culpeper Co.

Use(s): Aquatic Life

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

Two biological monitoring event in 2018 at DEQ station 3-BRK002.64 at Route 647 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-E17R_BRK01A04 / Brook Run / Segment begins at the confluence with an unnamed tributary to Brook Run. at Route 647, and continues downstream until the confluence with the Rapidan River.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	2.51

Brook Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**2.51**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E17R-02-BAC** **Mountain Run**

Cause Location: Begins at the headwaters of Mountain Run and continues downstream until the confluence with Mine Run.

City / County: Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (9 of 34 samples - 26.5%) at DEQ station 3-MTR003.51 at Route 611; E. coli bacteria criterion excursions (11 of 12 samples - 91.7%) at DEQ station 3-MTR008.31 at Route 621; and E. coli bacteria criterion excursions (9 of 16 samples - 56.3%) at DEQ station 3-MTR010.60 at Route 666.

The Mountain Run and Mine Run bacteria TMDL for the Mountain Run watershed (Eq ID POL0241) was approved by the EPA on 11/15/2005 (Fed ID 24421). The SWCB approved the TMDL on 09/27/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E17R_MTR01A00 / Mountain Run / Segment begins at the confluence with Mill Run, approximately 0.25 rivermile downstream of Route 617, and continues downstream until the confluence with Mine Run.	4A	Escherichia coli (E. coli)	2002	L	10.10
VAN-E17R_MTR02A02 / Mountain Run / Segment begins at the headwaters of Mountain Run and continues downstream until the confluence with Mill Run.	4A	Escherichia coli (E. coli)	2006	L	7.46

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

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 2020

Rappahannock River Basin

Cause Group Code: **E17R-02-BEN** **Mountain Run**

Cause Location: Begins at the confluence with Mill Run, approximately 0.25 rivermile downstream of Route 617, and continues downstream until the confluence with Mine Run.

City / County: Orange Co.

Use(s): Aquatic Life

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

A total of four biological monitoring events in 2016 and 2017 at DEQ station 3-MTR003.51 at 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-E17R_MTR01A00 / Mountain Run / Segment begins at the confluence with Mill Run, approximately 0.25 rivermile downstream of Route 617, and continues downstream until the confluence with Mine Run.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	10.10

Mountain Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**10.10**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E17R-03-BAC** **Black Walnut Run**

Cause Location: Begins at the Route 621 crossing and continues downstream until the confluence with Mine Run.

City / County: Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 11 samples - 54.5%) at DEQ station 3-BWR004.13 at Route 602.

A new TMDL is not required for this impaired segment of Black Walnut Run because the downstream Mountain Run and Mine Run bacteria TMDL (Fed ID 24420, 11/15/2005) included modeling, source identification, and reductions that covered the entire Mine Run watershed (Eq ID POL0242).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E17R_BWR01A06 / Black Walnut Run / Segment begins at the Route 621 crossing and continues downstream until the confluence with Mine Run.	4A	Escherichia coli (E. coli)	2006	L	6.48

Black Walnut Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**6.48**

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 2020

Rappahannock River Basin

***Cause Group Code:* E17R-04-BAC** **Sumerduck Run**

Cause Location: Begins at the confluence with Dry Run and continues downstream until the confluence with the Rapidan River.

City / County: Culpeper Co.

Use(s): Recreation

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

2018 Assessment: E. coli bacteria criterion excursions (7 of 10 samples - 70.0%) at DEQ station 3-SUM002.40 at Route 647 (Twin Mountain Road).

A new TMDL is not required for this impaired segment of Sumerduck Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33869, 12/05/2007) included modeling, source identification, and reductions that covered the entire Lower Rapidan River watershed (Eq ID POL0492).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E17R_SUM01A04 / Sumerduck Run / Segment begins at the confluence with Dry Run and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2014	L	6.20

Sumerduck Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**6.20**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E17R-05-BAC** **Potato Run**

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

City / County: Culpeper Co. Orange Co.

Use(s): Recreation

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

2018 Assessment: E. coli bacteria criterion excursions (4 of 8 samples - 50.0%) at DEQ station 3-POT001.06 at Route 647 (Twin Mountain Road).

A new TMDL is not required for this impaired segment of Potato Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33869, 12/05/2007) included modeling, source identification, and reductions that covered the entire Lower Rapidan River watershed (Eq ID POL0492).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E17R_POT01A14 / Potato Run / Segment begins at the headwaters of Potato Run and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2014	L	6.83

Potato Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**6.83**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E17R-06-BAC** **Brook Run**

Cause Location: Begins at the confluence with an unnamed tributary to Brook Run. at Route 647, and continues downstream until the confluence with the Rapidan River

City / County: Culpeper Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (14 of 23 samples - 60.9%) at DEQ station 3-BRK002.64 at Route 647.

A new TMDL is not required for this impaired segment of Brook Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33869, 12/05/2007) included modeling, source identification, and reductions that covered the entire Lower Rapidan River watershed (Eq ID POL0492).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E17R_BRK01A04 / Brook Run / Segment begins at the confluence with an unnamed tributary to Brook Run. at Route 647, and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2018	L	2.51

Brook Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.51**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E18R-01-BAC** **Rapidan River**

Cause Location: Begins at the confluence with Wilderness Run, rivermile 7.78, and continues downstream until the confluence with Middle Run.

City / County: Culpeper Co. Spotsylvania Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 34 samples - 11.8%) at DEQ station 3-RAP006.53 at Route 610.

The Rapidan River Basin bacteria TMDL (Fed ID 33869) for the Lower Rapidan River watershed (Eq ID POL0492) was approved by the EPA on 12/05/2007. 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-E18R_RAP03A02 / Rapidan River / Segment begins at the confluence with Wilderness Run, rivermile 7.78, and continues downstream until the confluence with Middle Run.	4A	Escherichia coli (E. coli)	2006	L	2.58

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

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E18R-01-HG** **Rapidan River**

Cause Location: Begins at the confluence with Flat Run and continues downstream to the confluence with the Rappahannock River.

City / County: Culpeper Co. Orange Co. Spotsylvania Co.

Use(s): Fish Consumption

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

Exceedances of the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded in three species of fish (American eel, rock bass, smallmouth bass) collected in 2006 and in one species of fish (largemouth bass) collected in 2018 at DEQ station 3-RAP006.53.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E18R_RAP01A02 / Rapidan River / Segment begins at the confluence with Hunting Run, at rivermile 1.35, and continues downstream until the confluence with the Rappahannock River.	5A	Mercury in Fish Tissue	2010	L	1.24
VAN-E18R_RAP02A02 / Rapidan River / Segment begins at the confluence with Middle Run, rivermile 5.10, and continues downstream until the confluence with Hunting Run.	5A	Mercury in Fish Tissue	2010	L	3.64
VAN-E18R_RAP03A02 / Rapidan River / Segment begins at the confluence with Wilderness Run, rivermile 7.78, and continues downstream until the confluence with Middle Run.	5A	Mercury in Fish Tissue	2010	L	2.58
VAN-E18R_RAP04A04 / Rapidan River / Segment begins at the confluence with Flat Run and continues downstream until the confluence with Wilderness Run.	5A	Mercury in Fish Tissue	2010	L	2.33

Rapidan River **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**9.79**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E18R-02-BAC** **Wilderness Run**

Cause Location: Begins at the confluence of North Wilderness Run and South Wilderness Run and continues downstream until the confluence with the Rapidan River.

City / County: Orange Co. Spotsylvania Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 11 samples - 63.6%) at DEQ station 3-WIL004.00 at Route 3.

A new TMDL is not required for this impaired segment of Wilderness Run because the downstream Rapidan River Basin bacteria TMDL (Fed ID 33869, 12/05/2007) included modeling, source identification, and reductions that covered the entire Lower Rapidan River watershed (Eq ID POL0492).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E18R_WIL01A08 / Wilderness Run / Segment begins at the confluence of North Wilderness Run and South Wilderness Run and continues downstream until the confluence with the Rapidan River.	4A	Escherichia coli (E. coli)	2008	L	5.56

Wilderness Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.56**

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E18R-03-BAC** **Rapidan River**

Cause Location: Begins at the boundary of the public water supply area, approximately 1.21 rivermiles upstream from the Route 3 crossing, and continues downstream until the confluence with Lick Branch.

City / County: Culpeper Co. Orange Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 24 samples - 33.3%) at DEQ station 3-RAP014.45 at Route 3.

A new TMDL is not required for this impaired segment of the Rapidan River because the downstream Rapidan River bacteria TMDL (Fed ID 33869, 12/05/2007) included modeling, source identification, and reductions that covered the entire Lower Rapidan River watershed (Eq ID POL0492).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E18R_RAP05A08 / Rapidan River / Segment begins at the boundary of the public water supply area, approximately 1.17 rivermiles upstream from the Route 3 crossing, and continues downstream to the confluence with Lick Branch.	4A	Escherichia coli (E. coli)	2008	L	3.40

Rapidan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.40**

Sources:

Livestock (Grazing or Feeding Operations)

On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

Wastes from Pets

Waterfowl

Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E19L-01-HG** **Motts Run Reservoir**

Cause Location: Includes the entirety of Motts Run Reservoir.

City / County: Spotsylvania Co.

Use(s): Fish Consumption

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

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, mercury (Hg) fish consumption advisory. The advisory, dated 8/31/07, limits consumption of largemouth bass to no more than two meals per month. The affected area includes the entirety of Motts Run Reservoir. There were also noted excursions above the risk-based tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue from two species (largemouth bass and bluegill sunfish) of fish sampled (5 total excursions) in 2017 at monitoring station 3-MOT000.39, and previously, in one species (largemouth bass) of fish sampled (6 total excursions) in 2006 at monitoring station 3-MOT000.39.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E19L_MOT01A02 / Motts Run Reservoir / Segment includes the lower half of Motts Run Reservoir; beginning at rivermile 0.8 and continuing downstream until the lake's discharge.	5A	Mercury in Fish Tissue	2008	L	62.88
VAN-E19L_MOT02A02 / Motts Run Reservoir / Segment includes the upper half of Motts Run Reservoir; beginning at the upper end of the reservoir and continuing downstream until rivermile 0.8.	5A	Mercury in Fish Tissue	2008	L	74.29

Motts Run Reservoir **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**137.17**	

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E19R-01-BAC** **Horsepen Run**

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

City / County: Stafford Co.

Use(s): Recreation

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

2018 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 3-HOR000.50 at Route 655 (Holly Corner Road).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E19R_HOR01A04 / Horsepen Run / Segment begins at headwaters of Horsepen Run and continues downstream to the confluence with the Rappahannock River.	5A	Escherichia coli (E. coli)	2014	L	5.70

Horsepen Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.70**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E19R-02-BAC** **Mine Run**

Cause Location: Begins at the headwaters of Mine Run and continues downstream to the upper end of the Motts Run Reservoir.

City / County: Fredericksburg City Spotsylvania Co. Stafford Co.

Use(s): Recreation

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

2018 Assessment: E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at DEQ station 3-MIN002.14 at Route 620 (Spotswood Furnace Road).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E19R_MIN02A14 / Mine Run / Segment begins at the headwaters of Mine Run and continues downstream to the upper end of the Motts Run Reservoir.	5A	Escherichia coli (E. coli)	2014	L	4.01

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

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20E-01-BAC** **Rappahannock River**

Cause Location: Begins at the fall line at Route 1 and continues downstream until the confluence with Massaponax Creek.

City / County: Caroline Co. Fredericksburg City King George Co. Spotsylvania Co. Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (8 of 65 samples - 12.3%) at DEQ station 3-RPP098.81 (near Hayfield Bar); E. coli bacteria criterion excursions (15 of 58 samples - 25.9%) at DEQ station 3-RPP106.01 (upstream from the Fredericksburg Country Club); Four exceedances of the monthly geometric mean E. coli criterion at DEQ station 3-RPP110.57 (at Route 1).

The Tidal Rappahannock River Watershed bacteria TMDL (Eq ID POL0569) was approved by the EPA on 05/05/2008 (Fed ID 34369). The SWCB approved the TMDL on 04/28/2009.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20E_RPP01A02 / Rappahannock River / Segment begins at the confluence with Massaponax Creek and continues downstream until the outlet of waterbody VAN-E20E. This segment represents the upper reach of VAN-E21E_RPP05A02. Portion of CBP segment RPPTF.	4A	Escherichia coli (E. coli)	2006	L	0.188
VAN-E20E_RPP02A02 / Rappahannock River / Segment begins at the confluence with Deep Run and continues downstream until the confluence with Massaponax Creek. Portion of CBP segment RPPTF.	4A	Escherichia coli (E. coli)	2002	L	0.231
VAN-E20E_RPP03A02 / Rappahannock River / Segment begins at the fall line at Route 1 and continues downstream until the confluence with Deep Run. Portion of CBP segment RPPTF.	4A	Escherichia coli (E. coli)	2002	L	0.195
VAN-E21E_RPP05A02 / Rappahannock River / Segment begins at the confluence with Massaponax Creek and continues downstream until the confluence with Ware Creek. The upper reach of this segment (approx. 0.3 sq mi) extends into waterbody VAN-E20E. Portion of CBP segment RPPTF.	4A	Escherichia coli (E. coli)	2006	L	0.579

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	**1.194**		

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20E-03-PCB** **Rappahannock River**

Cause Location: Extends from the I-95 bridge above Fredericksburg downstream to the mouth of the river near Stingray Point, including its tributaries Hazel Run up to the I-95 bridge crossing and Claiborne Run up to the Route 1 bridge crossing.

City / County: Caroline Co., Essex Co., Fredericksburg City, King George Co., Lancaster Co., Middlesex Co., Richmond Co., Spotsylvania Co., Stafford Co., Westmoreland Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCBs 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, blue catfish, carp, channel catfish, croaker, gizzard shad, and anadromous (coastal) striped bass consumption to no more than two meals per month.

Additionally, the following exceedances of the water quality criterion based tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded: two exceedances in two samples of American eel collected in 2016 at DEQ station 3-CLB000.50 on Claiborne Run; two exceedances in two samples of American eel collected in 2016 at DEQ station 3-HAL000.57 on Hazel Run; three exceedances in three species (blue catfish, carp, and gizzard shad) collected in 2016 and two exceedances in two species (blue catfish and gizzard shad) collected in 2018 at DEQ station 3-RPP080.19 on Rappahannock River; four exceedances in three species (largemouth bass, gizzard shad, and blue catfish) collected in 2018 at DEQ station 3-RPP091.55 on Rappahannock River; and four exceedances in three species (blue catfish, carp, and gizzard shad) collected in 2016 and three exceedances in three species (blue catfish, carp, and gizzard shad) collected in 2018 at DEQ station 3-RPP107.33 on Rappahannock River.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E19R_RPP01A18 / Rappahannock River / Segment begins at the I-95 bridge and continues downstream to the E19/E20 watershed boundary (at the downstream reach of the PWS designation).	5A	PCBs in Fish Tissue	2004	L	0.66
VAN-E20E_RPP01A02 / Rappahannock River / Segment begins at the confluence with Massaponax Creek and continues downstream until the outlet of waterbody VAN-E20E. This segment represents the upper reach of VAN-E21E_RPP05A02. Portion of CBP segment RPPTF.	5A	PCBs in Fish Tissue	2004	L	0.188
VAN-E20E_RPP02A02 / Rappahannock River / Segment begins at the confluence with Deep Run and continues downstream until the confluence with Massaponax Creek. Portion of CBP segment RPPTF.	5A	PCBs in Fish Tissue	2004	L	0.231
VAN-E20E_RPP03A02 / Rappahannock River / Segment begins at the fall line at Route 1 and continues downstream until the confluence with Deep Run. Portion of CBP segment RPPTF.	5A	PCBs in Fish Tissue	2004	L	0.195
VAN-E20R_CLB01A00 / Claiborne Run / Segment begins at the Route 1 crossing of Claiborne Run and continues downstream until the confluence with the Rappahannock River.	5A	PCBs in Fish Tissue	2006	L	4.52
VAN-E20R_HAL01A00 / Hazel Run / Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	5A	PCBs in Fish Tissue	2006	L	4.72
VAN-E20R_RPP01A10 / Rappahannock River / Segment begins at the E19/E20 watershed boundary, and extends downstream to the end of the free flowing waters of the Rappahannock River, at the Route 1 Alternate Bridge.	5A	PCBs in Fish Tissue	2004	L	2.65

Rappahannock River Basin

VAN-E21E_RPP01A02 / Rappahannock River / Segment begins at the confluence with Mill Creek, at rivermile 78.94, and continues downstream until immediately upstream of Devils Elbow, at rivermile 70.52. Portion of CBP segment RPPTF.	5A	PCBs in Fish Tissue	2006	L	4.547
VAN-E21E_RPP03A02 / Rappahannock River / Segment begins at the confluence with Mount Creek and continues downstream until the confluence with Mill Creek. Portion of CBP segment RPPTF.	5A	PCBs in Fish Tissue	2004	L	1.366
VAN-E21E_RPP04A02 / Rappahannock River / Segment begins at the confluence with Ware Creek and continues downstream until the confluence with Mount Creek. Portion of CBP segment RPPTF.	5A	PCBs in Fish Tissue	2004	L	1.206
VAN-E21E_RPP05A02 / Rappahannock River / Segment begins at the confluence with Massaponax Creek and continues downstream until the confluence with Ware Creek. The upper reach of this segment (approx. 0.3 sq mi) extends into waterbody VAN-E20E. Portion of CBP segment RPPTF.	5A	PCBs in Fish Tissue	2004	L	0.579
VAP-E22E_RPP01A02 / Rappahannock River / The Rappahannock River from Devils Elbow at Toby Point and Green Bay (river mile 70.52) downstream to the tidal freshwater/oligohaline boundary at river mile 57.85. RPPTF	5A	PCBs in Fish Tissue	2006	L	5.133
VAP-E22E_RPP02A02 / Rappahannock River / The Rappahannock River from the tidal freshwater/oligohaline boundary downstream to river mile 56.21. RPPOH	5A	PCBs in Fish Tissue	2006	L	1.344
VAP-E22E_RPP02B16 / Rappahannock River / The Rappahannock River from rivermile 56.21 downstream to river mile 51.04. RPPOH	5A	PCBs in Fish Tissue	2006	L	2.003
VAP-E22E_RPP03A02 / Rappahannock River / The Rappahannock River from river mile 51.04 to river mile 49.04. RPPOH	5A	PCBs in Fish Tissue	2006	L	2.012
VAP-E22E_RPP04A02 / Rappahannock River / The Rappahannock River from river mile 49.04 downstream to the oligohaline/mesohaline boundary at approximately river mile 48.51. RPPOH	5A	PCBs in Fish Tissue	2006	L	0.942
VAP-E22E_RPP05A02 / Rappahannock River / The oligohaline/mesohaline boundary at river mile 48.51 downstream to the upstream limit of VDH shellfish condemnation area 025A-068A, 3/24/2015. RPPMH	5A	PCBs in Fish Tissue	2006	L	6.958
VAP-E23E_RPP02A98 / Rappahannock River / Mainstem Rappahannock as described in VDH shellfish condemnation 025A-068A, 3/24/2015 excluding administratively condemned portion. RPPMH	5A	PCBs in Fish Tissue	2006	L	7.035

Rappahannock River Basin

VAP-E23E_RPP02B10 / Rappahannock River / Portion of mainstem Rappahannock River that is administratively condemned within condemnation 025A-068A, 3/24/2015. RPPMH	5A	PCBs in Fish Tissue	2006	L	0.158
VAP-E23E_RPP02C12 / Rappahannock River / Portion of VDH shellfish condemnation 025A-068A, 11/14/2005 not included in 025A-068A, 3/24/2015. RPPMH	5A	PCBs in Fish Tissue	2006	L	1.474
VAP-E24E_RPP01B14 / Garrett's Marina / As delineated in VDH shellfish condemnation 026-181A, 3/25/2015. RPPMH	5A	PCBs in Fish Tissue	2008	L	0.003
VAP-E24E_RPP01B98 / Rappahannock River: Garrett's Marina / As delineated in VDH shellfish condemnation 026-181M1, 3/25/2015. RPPMH	5A	PCBs in Fish Tissue	2008	L	0.025
VAP-E24E_RPP01C06 / Rappahannock River / The Rappahannock River mainstem within VDH shellfish condemnation 025-071A, 3/16/2007 (non-admin) that is currently open RPPMH	5A	PCBs in Fish Tissue	2006	L	0.644
VAP-E24E_RPP01D10 / Rappahannock River / The portion of the Rappahannock River within VDH shellfish condemnation 025-071A, 3/25/2015(administratively condemned) RPPMH	5A	PCBs in Fish Tissue	2006	L	0.137
VAP-E24E_RPP01E18 / Rappahannock River / The Rappahannock River mainstem within VDH shellfish condemnation 025-071A, 3/25/2015 (non-admin) RPPMH	5A	PCBs in Fish Tissue	2006	L	0.061
VAP-E24E_RPP03A00 / Rappahannock River / The Rappahannock River from the limit of VDH shellfish condemnation 068A, 11/14/2005 downstream to end of MSN (Sharps/0.7 mi DS of Mark Haven Beach) unless otherwise segmented RPPMH	5A	PCBs in Fish Tissue	2006	L	10.919
VAP-E25E_RPP01A02 / Rappahannock River / The mainstem of the Rappahannock River from end of MSN (Sharps/0.7 mi DS of Mark Haven Beach) to the start of deep channel. Segment adjusted in the 2020 cycle. RPPMH	5A	PCBs in Fish Tissue	2006	L	12.455
VAP-E25E_RPP01C10 / Rappahannock River: Mark Haven Beach Basin / The portion of VDH shellfish condemnation 026-181B, 1/20/2006 not administratively closed. RPPMH	5A	PCBs in Fish Tissue	2008	L	0.010
VAP-E25E_RPP01C98 / Mark Haven Beach Basin / As delineated	5A	PCBs in Fish Tissue	2008	L	0.004

Rappahannock River Basin

in VDH shellfish condemnation 026-181A, 4/3/2012.

RPPMH

VAP-E25E_RPP02A02 / Rappahannock River / The mainstem of the Rappahannock River from the start of deep channel downstream to the mouth, excluding area in SFC 051A.	5A	PCBs in Fish Tissue	2006	L	68.829

Segment adjusted in the 2020 cycle.

RPPMH

VAP-E25E_RPP03A06 / Rappahannock River / Described in VDH SFC 024-070B, 1/7/2019.	5A	PCBs in Fish Tissue	2006	L	0.008

RPPMH

VAP-E25E_RPP03B16 / Rappahannock River / As described in VDH shellfish condemnation 026-181M2, 4/13/2018.	5A	PCBs in Fish Tissue	2006	L	0.003

RPPMH

VAP-E26E_RPP02A00 / Rappahannock River / The Rappahannock River in the area delineated in VDH shellfish condemnation 030-051A, 10/3/2005.	5A	PCBs in Fish Tissue	2006	L	0.127

RPPMH

VAP-E26E_RPP03A00 / Rappahannock River / The Rappahannock River in the area delineated in VDH shellfish condemnation 030-051D, 10/3/2005.	5A	PCBs in Fish Tissue	2006	L	0.031

RPPMH

VAP-E26E_RPP04A00 / Rappahannock River / Described in VDH Shellfish Condemnation 030-051B, 9/1/2015.	5A	PCBs in Fish Tissue	2006	L	0.131

RPPMH

VAP-E26E_RPP05A00 / Rappahannock River / Delineated in VDH-DSS condemnation 030-051C, 9/1/2015.	5A	PCBs in Fish Tissue	2006	L	0.031

RPPMH

VAP-E26E_RPP07A02 / Rappahannock River / As delineated in VDH-DSS SFC 018-053A, 7/23/2018	5A	PCBs in Fish Tissue	2002	L	0.139

RPPMH

Rappahannock River **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	**128.928**		**12.55**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E20R-01-BAC** **Claiborne Run**

Cause Location: Begins at the Route 1 crossing of Claiborne Run and continues downstream until the confluence with the Rappahannock River.

City / County: Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 3-CLB000.50 at Naomi Road.

A new TMDL is not required for this impaired segment of Claiborne Run because the downstream bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire tidal freshwater Rappahannock River watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_CLB01A00 / Claiborne Run / Segment begins at the Route 1 crossing of Claiborne Run and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2004	L	4.52

Claiborne Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.52**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E20R-01-BEN** **Falls Run**

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

City / County: Stafford Co.

Use(s): Aquatic Life

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

2016 Assessment: A total of two biological monitoring events in 2009 at DEQ station 3-FAL000.13 at Washington Street 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-E20R_FAL01A04 / Falls Run / Segment begins at the headwaters of Falls Run and continues downstream until the confluence with the Rappahannock River.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	7.35

Falls Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**7.35**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-02-BAC** **Hazel Run**

Cause Location: Begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.

City / County: Fredericksburg City Spotsylvania Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-HAL001.44 at Route 1 Business (Lafayette Boulevard).

A new TMDL is not required for this impaired segment of Hazel Run because the downstream Tidal freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_HAL01A00 / Hazel Run / Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2004	L	4.72

Hazel Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.72**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E20R-02-BEN** **Hazel Run**

Cause Location: Begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.

City / County: Fredericksburg City Spotsylvania Co.

Use(s): Aquatic Life

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

2016 Assessment: A total of two biological monitoring events in 2009 at DEQ station 3-HAL002.72 (upstream of Route 1) 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-E20R_HAL01A00 / Hazel Run / Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	4.72

Hazel Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**4.72**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-03-BAC** **Massaponax Creek**

Cause Location: Segment begins at the confluence with an unnamed tributary to Massaponax Creek, approximately 0.25 rivermile upstream from the Route 639 bridge, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream of Ruffins Pond.

City / County: Spotsylvania Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (6 of 35 samples - 17.1%) at DEQ station 3-MAP002.61 at Route 609. E. coli bacteria criterion excursions (10 of 23 samples - 43.5%) at DEQ station 3-MAP007.97 at Route 1. E. coli bacteria criterion excursions (5 of 24 samples - 20.8%) at DEQ station 3-MAP009.42 at Route 639.

A new TMDL is not required for this impaired segment of Massaponax Creek because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_MAP02A02 / Massaponax Creek / Segment begins at the confluence with an unnamed tributary to Massaponax Creek, at rivermile 2.68, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream of Ruffins Pond.	4A	Escherichia coli (E. coli)	2006	L	1.20
VAN-E20R_MAP02B12 / Massaponax Creek / Segment begins at the confluence with an unnamed tributary to Massaponax Creek, just upstream of Route 1, and continues downstream until the confluence with another unnamed tributary, at rivermile 2.68.	4A	Escherichia coli (E. coli)	2004	L	5.19
VAN-E20R_MAP03A02 / Massaponax Creek / Segment begins at the confluence with an unnamed tributary to Massaponax Creek, approximately 0.25 rivermile upstream from the Route 639 bridge, and continues downstream until the confluence with another unnamed tributary, just upstream from Route 1.	4A	Escherichia coli (E. coli)	2010	L	1.67

Massaponax Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**8.06**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E20R-03-BEN** **Little Falls Run**

Cause Location: Begins at the headwaters of Little Falls Run and continues downstream until the confluence with the Rappahannock River.

City / County: Stafford Co.

Use(s): Aquatic Life

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

A total of two biological monitoring events in 2013 at DEQ station 3-LIA003.14 (0.02 miles downstream from Route 606) resulted in a VCPMI 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-E20R_LIA01A04 / Little Falls Run / Segment begins at the headwaters of Little Falls Run and continues downstream until the confluence with the Rappahannock River.	5A	Benthic Macroinvertebrates Bioassessments	2016	L	4.92

Little Falls Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**4.92**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-04-BAC** **Massaponax Creek**

Cause Location: Begins at the confluence with an unnamed tributary, approximately 1.1 rivermiles downstream from Route 673, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream from Route 639.

City / County: Spotsylvania Co.

Use(s): Recreation

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

2014 Assessment: E. coli bacteria criterion excursions (7 of 7 samples - 100.0%) at DEQ station 3-MAP010.37 at Route 208 (Courthouse Road).

A new TMDL is not required for this impaired segment of Massaponax Creek because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_MAP04A02 / Massaponax Creek / Segment begins at the confluence with an unnamed tributary, approximately 1.1 rivermiles downstream from Route 673, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream from Route 639.	4A	Escherichia coli (E. coli)	2008	L	2.17

Massaponax Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.17**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-04-PH** **Deep Run**

Cause Location: Begins at the headwaters of Deep Run, and continues downstream to the confluence with an unnamed tributary at rivermile 2.19, downstream of Route 638.

City / County: Spotsylvania Co.

Use(s): Aquatic Life

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

Excursions less than the lower limit of the pH criterion range (14 of 49 samples - 28.6%) at station 3DEP-06-NPS at Lee Drive.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_DEP03A12 / Deep Run / Segment begins at the headwaters of Deep Run and continues downstream to the confluence with an unnamed tributary at Route 638.	5C	pH	2012	L	1.56

Deep Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.56**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-05-BAC** **Unnamed Tributary to Hazel Run**

Cause Location: Segment begins at the headwaters of the unnamed tributary, and continues downstream to the confluence with Hazel Run.

City / County: Fredericksburg City Spotsylvania Co.

Use(s): Recreation

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

2018 Assessment: E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at citizen monitoring station 3XHN-7-ALL.

A new TMDL is not required for this impaired segment of Hazel Run because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_XHN01A10 / Unnamed Tributary to Hazel Run / Segment begins at the headwaters of the unnamed tributary, and continues downstream to the confluence with Hazel Run.	4A	Escherichia coli (E. coli)	2014	L	1.53

Unnamed Tributary to Hazel Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.53**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-05-PH** **Unnamed tributary to Massaponax Creek**

Cause Location: Begins where XEN joins XFE and continues downstream until the confluence with Massaponax Creek at rivermile 8.06

City / County: Spotsylvania Co.

Use(s): Aquatic Life

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

Excursions less than the lower limit of the pH criterion range (2 of 11 samples - 18.2%) at DEQ station 3-XFE001.05 at Spotsylvania County Parkway.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_XFE01A02 / Unnamed tributary to Massaponax Creek / Segment begins where XEN joins XFE and continues downstream until the confluence with Massaponax Creek at rivermile 8.06	5A	pH	2016	L	1.27

Unnamed tributary to Massaponax Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.27**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-06-BAC** **Unnamed tributary to Hazel Run**

Cause Location: Segment begins at the headwaters of the unnamed tributary, and continues downstream to the confluence with Hazel Run.

City / County: Fredericksburg City

Use(s): Recreation

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

2018 Assessment: E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at citizen monitoring station 3XIA-9-ALL.

A new TMDL is not required for this impaired segment of Hazel Run because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_XIA01A12 / Unnamed tributary to Hazel Run / Segment begins at the headwaters of the unnamed tributary, and continues downstream to the confluence with Hazel Run.	4A	Escherichia coli (E. coli)	2014	L	2.23

Unnamed tributary to Hazel Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.23**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-07-BAC** **Little Falls Run**

Cause Location: Begins at the headwaters of Little Falls Run and continues downstream until the confluence with the Rappahannock River.

City / County: Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 3-LIA002.27 at Route 682 (Colebrooke Road).

A new TMDL is not required for this impaired segment of Little Falls Run because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_LIA01A04 / Little Falls Run / Segment begins at the headwaters of Little Falls Run and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2016	L	4.92

Little Falls Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.92**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-08-BAC** **Deep Run**

Cause Location: Begins at the confluence with an unnamed tributary at Route 638 and continues downstream to the confluence with another unnamed tributary downstream of Route 756 at rivermile 0.74.

City / County: Spotsylvania Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (12 of 24 samples 50.0%) at DEQ station 3-DEP000.92 at Route 17 and E. coli bacteria criterion excursions (5 of 13 samples 38.5%) at DEQ station 3-DEP001.59 at Latimers Knoll Court.

A new TMDL is not required for this impaired segment of Deep Run because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_DEP02A18 / Deep Run / Segment begins at the confluence with an unnamed tributary at Route 638 and continues downstream to the confluence with another unnamed tributary downstream of Route 756 at rivermile 0.74.	4A	Escherichia coli (E. coli)	2018	L	1.66

Deep Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.66**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E20R-09-BAC** **Rappahannock River**

Cause Location: Begins at the E19/E20 watershed boundary, and extends downstream to the end of the free flowing waters of the Rappahannock River, at the Route 1 Alternate Bridge.

City / County: Fredericksburg City Stafford Co.

Use(s): Recreation

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

Four exceedances of the monthly geometric mean E. coli criterion at DEQ station 3-RPP110.57 at Route 1.

A new TMDL is not required for this impaired segment of Rappahannock River because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entre watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20R_RPP01A10 / Rappahannock River / Segment begins at the E19/E20 watershed boundary, and extends downstream to the end of the free flowing waters of the Rappahannock River, at the Route 1 Alternate Bridge.	4A	Escherichia coli (E. coli)	2018	L	2.65

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.65**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-01-BAC** **Muddy Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Muddy Creek, approximately 0.7 rivermile downstream from Route 218, and continues downstream until the confluence with the Rappahannock River.

City / County: King George Co. Stafford Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 3-MUY001.43 at Route 3.

A new TMDL is not required for this impaired segment of Muddy Creek because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_MUY01A00 / Muddy Creek / Segment begins at the confluence with White Oak Run and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2008	L	1.37
VAN-E21R_MUY01B20 / Muddy Creek / Segment begins at the confluence with an unnamed tributary to Muddy Creek, approximately 0.7 rivermile downstream from Route 218, and continues downstream until the confluence with White Oak Run.	4A	Escherichia coli (E. coli)	2008	L	2.21

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

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-01-PH** **Portobago Creek**

Cause Location: Begins at the confluence of two intermittent tributaries around rivermile 6.66 and extends downstream to the end of the free-flowing waters.

City / County: Caroline Co.

Use(s): Aquatic Life

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

Excursions less than the lower limit of the pH criterion range (2 of 12 samples - 16.7%) at DEQ station 3-PBC003.09 at Route 17.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_PBC01A10 / Portobago Creek / Segment begins at the confluence of two intermittent tributaries around rivermile 6.66 and extends downstream to the end of the free-flowing waters.	5C	pH	2020	L	7.00

Portobago Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**7.00**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-02-BAC** **Ware Creek**

Cause Location: Segment begins at the confluence with an unnamed tributary to Ware Creek, just downstream from Burma Road, and continues downstream until the confluence with the Rappahannock River.

City / County: Caroline Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-WAE000.72 at Route 17.

A new TMDL is not required for this impaired segment of Ware Creek because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_WAE01A08 / Ware Creek / Segment begins at the confluence with an unnamed tributary to Ware Creek, just downstream from Burma Road, and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2010	L	4.50

Ware Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.50**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E21R-02-BEN** **Ware Creek**

Cause Location: Begins at the headwaters of Ware Creek and continues downstream until the confluence with an unnamed tributary to Ware Creek, just downstream from Burma Road.

City / County: Caroline Co.

Use(s): Aquatic Life

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

2008 Assessment: One biological monitoring event in 2002 at DEQ station 3-WAE005.95 (Fort A.P. Hill) resulted in a VCPMI 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-E21R_WAE02A04 / Ware Creek / Segment begins at the headwaters of Ware Creek and continues downstream until the confluence with an unnamed tributary to Ware Creek, just downstream from Burma Road.	5A	Benthic Macroinvertebrates Bioassessments	2008	L	3.06

Ware Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**3.06**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-02-PH** **Ware Creek**

Cause Location: Begins at the headwaters of Ware Creek and continues downstream until the confluence with the Rappahannock River.

City / County: Caroline Co.

Use(s): Aquatic Life

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

2008 Assessment: Excursions less than the lower limit of the pH criterion range (2 of 2 samples - 100%) at DEQ station 3-WAE005.95 at the Fort A.P. Hill property.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_WAE02A04 / Ware Creek / Segment begins at the headwaters of Ware Creek and continues downstream until the confluence with an unnamed tributary to Ware Creek, just downstream from Burma Road.	5C	pH	2004	L	3.06

Ware Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.06**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-03-BAC** **Gingoteague Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Gingoteague Creek, at rivermile 2.99, and continues downstream until tidal waters, near the confluence with the Rappahannock River.

City / County: King George Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 3-GIN002.64 at Route 625.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_GIN01A08 / Gingoteague Creek / Segment begins at the confluence with an unnamed tributary to Gingoteague Creek, at rivermile 2.99, and continues downstream until tidal waters, near the confluence with the Rappahannock River.	5A	Escherichia coli (E. coli)	2008	L	1.49

Gingoteague Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.49**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-03-BEN** **Gingoteague Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Gingoteague Creek, at rivermile 2.99, and continues downstream until tidal waters, near the confluence with the Rappahannock River.

City / County: King George Co.

Use(s): Aquatic Life

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

2016 Assessment: Two biological monitoring events in 2010 at DEQ station 3-GIN002.64 at Route 625 resulted in a VCPMI 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-E21R_GIN01A08 / Gingoteague Creek / Segment begins at the confluence with an unnamed tributary to Gingoteague Creek, at rivermile 2.99, and continues downstream until tidal waters, near the confluence with the Rappahannock River.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	1.49

Gingoteague Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**1.49**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-04-BAC** **Goldenvale Creek**

Cause Location: Begins at the confluence with Doctor Branch and continues downstream until tidal waters, near the confluence with the Rappahannock River.

City / County: Caroline Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-GLL001.98 at Route 17.

A new TMDL is not required for this impaired segment of Rappahannock River because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entre watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_GLL01A08 / Goldenvale Creek / Segment begins at the confluence with Doctor Branch and continues downstream until tidal waters, near the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2020	L	5.31

Goldenvale Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.31**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-04-BEN** **Mill Creek**

Cause Location: Begins at the confluence with an unnamed tributary, at rivermile 9.5, and continues downstream until the confluence with Peumansend Creek, at rivermile 6.06.

City / County: Caroline Co.

Use(s): Aquatic Life

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

2010 Assessment: Two biological monitoring events in 2004 at DEQ station 3-MIC008.55 (on Fort A.P. Hill property) resulted in a VCPMI 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-E21R_MIC02A06 / Mill Creek / Segment begins at the confluence with an unnamed tributary, at rivermile 9.5, and continues downstream until the confluence with Peumansend Creek, at rivermile 6.06.	5A	Benthic Macroinvertebrates Bioassessments	2008	L	3.59

Mill Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**3.59**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-05-BAC** **Mount Creek**

Cause Location: Begins at the confluence with West Branch and continues downstream until the confluence with the Rappahannock River.

City / County: Caroline Co.

Use(s): Recreation

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

2012 Assessment: E. coli bacteria criterion excursions (3 of 18 samples - 16.7%) at DEQ station 3-MTC001.94 at Route 17.

A new TMDL is not required for this impaired segment of Mount Creek because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_MTC01A08 / Mount Creek / Segment begins at the confluence with West Branch and continues downstream until the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2008	L	4.46

Mount Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.46**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-05-BEN** **White Oak Run**

Cause Location: Begins just downstream from the Route 604 crossing and continues downstream until the confluence with Muddy Creek.

City / County: Stafford Co.

Use(s): Aquatic Life

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

2014 Assessment: A total of two biological monitoring events in 2007 at DEQ station 3-WHT003.73 at Route 601 (upstream crossing) resulted in a VCPMI 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-E21R_WHT01A06 / White Oak Run / Segment begins just downstream from the Route 604 crossing and continues downstream until the confluence with Muddy Creek.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	6.51

White Oak Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**6.51**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-05-PH** **Mount Creek**

Cause Location: Begins at the confluence with West Branch and continues downstream until the confluence with the Rappahannock River.

City / County: Caroline Co.

Use(s): Aquatic Life

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

2014 Assessment: Excursions less than the lower limit of the pH criterion range (9 of 11 samples - 81.8%) at DEQ station 3-MTC001.94 at Route 17.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_MTC01A08 / Mount Creek / Segment begins at the confluence with West Branch and continues downstream until the confluence with the Rappahannock River.	5C	pH	2008	L	4.46

Mount Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.46**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-06-BAC** **Lambs Creek**

Cause Location: Begins at the confluence with Popcastle Creek and continues downstream until tidal waters, near the confluence with the Rappahannock River.

City / County: King George Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (7 of 12 samples - 58.3%) at DEQ station 3-LAM000.57 at Route 3.

A new TMDL is not required for this impaired segment of Lambs Creek because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_LAM01A08 / Lambs Creek / Segment begins at the confluence with Popcastle Creek and continues downstream until tidal waters, near the confluence with the Rappahannock River.	4A	Escherichia coli (E. coli)	2008	L	0.54

Lambs Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**0.54**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-07-BAC** **Mill Creek**

Cause Location: Begins at the confluence with Peumansend Creek, at rivermile 6.06, and continues downstream until the tidal waters of Mill Creek.

City / County: Caroline Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-MIC0001.66 at Route 17.

The Rappahannock River and Tributaries bacteria TMDL for the Mill Creek watershed (Eq ID 2539) was approved by the EPA on 07/10/2019 (Fed ID 11483) . The SWCB approved the TMDL on 06/27/2019.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_MIC01A08 / Mill Creek / Segment begins at the confluence with Peumansend Creek, at rivermile 6.06, and continues downstream until the tidal waters of Mill Creek.	4A	Escherichia coli (E. coli)	2008	L	4.58

Mill Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.58**

Sources:

- Livestock (Grazing or Feeding Operations)
- On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)
- Wastes from Pets
- Waterfowl
- Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-08-PH** **Goldenvale Creek**

Cause Location: Begins at the confluence with Doctor Branch and continues downstream until tidal waters, near the confluence with the Rappahannock River.

City / County: Caroline Co.

Use(s): Aquatic Life

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

Excursions less than the lower limit of the pH criterion range (2 of 13 samples - 15.4%) at DEQ station 3-GLL001.98 at Route 17.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_GLL01A08 / Goldenvale Creek / Segment begins at the confluence with Doctor Branch and continues downstream until tidal waters, near the confluence with the Rappahannock River.	5C	pH	2008	L	5.31

Goldenvale Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.31**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-10-BAC** **Jetts Creek**

Cause Location: Segment begins at the confluence of Boom Swamp with Jetts Creek, and continues downstream to the end of the free flowing waters.

City / County: King George Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 3-JET003.49 at Route 625.

The Rappahannock River and Tributaries bacteria TMDL for the Jetts Creek watershed (Eq ID 2561) was approved by the EPA on 07/10/2019 (Fed ID 11483) . The SWCB approved the TMDL on 06/27/2019.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_JET01A10 / Jetts Creek / Segment begins at the confluence of Boom Swamp with Jetts Creek, and continues downstream to the end of the free flowing waters.	4A	Escherichia coli (E. coli)	2010	L	1.85

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

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-10-PH** **White Oak Run**

Cause Location: Begins just downstream from the Route 604 crossing and continues downstream until the confluence with Muddy Creek.

City / County: Stafford Co.

Use(s): Aquatic Life

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

2018 Assessment: Excursions less than the lower limit of the pH criterion range (2 of 12 samples - 16.7%) at DEQ station 3-WHT000.35 at Route 601 (downstream crossing).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_WHT01A06 / White Oak Run / Segment begins just downstream from the Route 604 crossing and continues downstream until the confluence with Muddy Creek.	5C	pH	2014	L	6.51

White Oak Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**6.51**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-11-BAC** **Portobago Creek**

Cause Location: Segment begins at the confluence of two intermittent tributaries around rivermile 6.66 and extends downstream to the end of the free-flowing waters.

City / County: Caroline Co.

Use(s): Recreation

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

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-PBC003.09 at Route 17.

The Rappahannock River and Tributaries bacteria TMDL for the Portobago Creek watershed (Eq ID 2563) was approved by the EPA on 07/10/2019 (Fed ID 11483) . The SWCB approved the TMDL on 06/27/2019.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_PBC01A10 / Portobago Creek / Segment begins at the confluence of two intermittent tributaries around rivermile 6.66 and extends downstream to the end of the free-flowing waters.	4A	Escherichia coli (E. coli)	2010	L	7.00

Portobago Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**7.00**

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Wastes from Pets	Waterfowl
Wildlife Other than Waterfowl			

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E21R-12-BAC** **White Oak Run**

Cause Location: Begins just downstream from the Route 604 crossing and continues downstream until the confluence with Muddy Creek.

City / County: Stafford Co.

Use(s): Recreation

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

2018 Assessment: E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-WHT000.35 at Route 601 (downstream crossing).

A new TMDL is not required for this impaired segment of White Oak Run because the downstream Tidal Freshwater Rappahannock River bacteria TMDL (Fed ID 34369, 05/05/2008) included modeling, source identification, and reductions that covered the entire watershed (Eq ID POL0569).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E21R_WHT01A06 / White Oak Run / Segment begins just downstream from the Route 604 crossing and continues downstream until the confluence with Muddy Creek.	4A	Escherichia coli (E. coli)	2014	L	6.51

White Oak Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**6.51**

Sources:

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

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E22E-01-EBEN** **Rappahannock River**

Cause Location: The oligohaline mainstem of the Rappahannock River

City / County: Essex Co. Richmond Co. Westmoreland Co.

Use(s): Aquatic Life

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

During the 2010 cycle, the oligohaline portion of the mainstem Rappahannock indicated benthic impairment based on the Chesapeake Bay Benthic Index of Biological Integrity.

There was insufficient information to assess the B-IBI in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_RPP02A02 / Rappahannock River / The Rappahannock River from the tidal freshwater/oligohaline boundary downstream to river mile 56.21. RPPOH	5A	Estuarine Bioassessments	2010	L	1.344
VAP-E22E_RPP02B16 / Rappahannock River / The Rappahannock River from rivermile 56.21 downstream to river mile 51.04. RPPOH	5A	Estuarine Bioassessments	2010	L	2.003
VAP-E22E_RPP03A02 / Rappahannock River / The Rappahannock River from river mile 51.04 to river mile 49.04. RPPOH	5A	Estuarine Bioassessments	2010	L	2.012
VAP-E22E_RPP04A02 / Rappahannock River / The Rappahannock River from river mile 49.04 downstream to the oligohaline/mesohaline boundary at approximately river mile 48.51. RPPOH	5A	Estuarine Bioassessments	2010	L	0.942

Rappahannock River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**6.302**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E22E-02-EBEN** **Rappahannock River**

Cause Location: The mesohaline mainstem of the Rappahannock River

City / County: Essex Co. Lancaster Co. Middlesex Co. Richmond Co.

Use(s): Aquatic Life

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

In 2004 the mesohaline portion of the mainstem Rappahannock indicated benthic impairment based on the Chesapeake Bay Benthic Index of Biological Integrity. The impairment was attributed to low oxygen and the benthic impairment was treated as a confirmation of the impairment. The mainstem remained impaired in the 2006 cycle; however, due to guidance changes the segment was 303(d) listed for estuarine bioassessments.

The segment remains impaired in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_RPP05A02 / Rappahannock River / The oligohaline/mesohaline boundary at river mile 48.51 downstream to the upstream limit of VDH shellfish condemnation area 025A-068A, 3/24/2015. RPPMH	5A	Estuarine Bioassessments	2006	L	6.958
VAP-E23E_RPP02A98 / Rappahannock River / Mainstem Rappahannock as described in VDH shellfish condemnation 025A-068A, 3/24/2015 excluding administratively condemned portion. RPPMH	5A	Estuarine Bioassessments	2006	L	7.035
VAP-E23E_RPP02B10 / Rappahannock River / Portion of mainstem Rappahannock River that is administratively condemned within condemnation 025A-068A, 3/24/2015. RPPMH	5A	Estuarine Bioassessments	2006	L	0.158
VAP-E23E_RPP02C12 / Rappahannock River / Portion of VDH shellfish condemnation 025A-068A, 11/14/2005 not included in 025A-068A, 3/24/2015. RPPMH	5A	Estuarine Bioassessments	2006	L	1.474
VAP-E24E_RPP01B14 / Garrett's Marina / As delineated in VDH shellfish condemnation 026-181A, 3/25/2015. RPPMH	5A	Estuarine Bioassessments	2008	L	0.003
VAP-E24E_RPP01B98 / Rappahannock River: Garrett's Marina / As delineated in VDH shellfish condemnation 026-181M1, 3/25/2015. RPPMH	5A	Estuarine Bioassessments	2008	L	0.025
VAP-E24E_RPP01C06 / Rappahannock River / The Rappahannock River mainstem within VDH shellfish condemnation 025-071A, 3/16/2007 (non-admin) that is currently open RPPMH	5A	Estuarine Bioassessments	2006	L	0.644
VAP-E24E_RPP01D10 / Rappahannock River / The portion of the Rappahannock River within VDH shellfish condemnation 025-071A,	5A	Estuarine Bioassessments	2006	L	0.137

Rappahannock River Basin

3/25/2015(administratively condemned)

RPPMH

VAP-E24E_RPP01E18 / Rappahannock River / The Rappahannock River mainstem within VDH shellfish condemnation 025-071A, 3/25/2015 (non-admin)	5A	Estuarine Bioassessments	2006	L	0.061

RPPMH

VAP-E24E_RPP03A00 / Rappahannock River / The Rappahannock River from the limit of VDH shellfish condemnation 068A, 11/14/2005 downstream to end of MSN (Sharps/0.7 mi DS of Mark Haven Beach) unless otherwise segmented	5A	Estuarine Bioassessments	2006	L	10.919

RPPMH

VAP-E25E_RPP01A02 / Rappahannock River / The mainstem of the Rappahannock River from end of MSN (Sharps/0.7 mi DS of Mark Haven Beach) to the start of deep channel.	5A	Estuarine Bioassessments	2006	L	12.455

Segment adjusted in the 2020 cycle.

RPPMH

VAP-E25E_RPP01C10 / Rappahannock River: Mark Haven Beach Basin / The portion of VDH shellfish condemnation 026-181B, 1/20/2006 not administratively closed.	5A	Estuarine Bioassessments	2008	L	0.010

RPPMH

VAP-E25E_RPP01C98 / Mark Haven Beach Basin / As delineated in VDH shellfish condemnation 026-181A, 4/3/2012.	5A	Estuarine Bioassessments	2008	L	0.004

RPPMH

VAP-E25E_RPP02A02 / Rappahannock River / The mainstem of the Rappahannock River from the start of deep channel downstream to the mouth, excluding area in SFC 051A.	5A	Estuarine Bioassessments	2006	L	68.829

Segment adjusted in the 2020 cycle.

RPPMH

VAP-E25E_RPP03A06 / Rappahannock River / Described in VDH SFC 024-070B, 1/7/2019.	5A	Estuarine Bioassessments	2006	L	0.008

RPPMH

VAP-E25E_RPP03B16 / Rappahannock River / As described in VDH shellfish condemnation 026-181M2, 4/13/2018.	5A	Estuarine Bioassessments	2006	L	0.003

RPPMH

VAP-E26E_CRR02A08 / Corrotoman River / The portion of the Corrotoman River that is within CB segment RPPMH.	5A	Estuarine Bioassessments	2006	L	1.039
VAP-E26E_RPP02A00 / Rappahannock River / The Rappahannock River in the area delineated in VDH shellfish condemnation 030-051A, 10/3/2005.	5A	Estuarine Bioassessments	2006	L	0.127

RPPMH

VAP-E26E_RPP03A00 / Rappahannock River / The	5A	Estuarine Bioassessments	2006	L	0.031

Rappahannock River Basin

Rappahannock River in the area delineated in VDH shellfish condemnation 030-051D, 10/3/2005.

RPPMH

VAP-E26E_RPP04A00 / Rappahannock River / Described in VDH Shellfish Condemnation 030-051B, 9/1/2015.	5A	Estuarine Bioassessments	2006	L	0.131

RPPMH

VAP-E26E_RPP05A00 / Rappahannock River / Delineated in VDH-DSS condemnation 030-051C, 9/1/2015.	5A	Estuarine Bioassessments	2006	L	0.031

RPPMH

VAP-E26E_RPP07A02 / Rappahannock River / As delineated in VDH-DSS SFC 018-053A, 7/23/2018	5A	Estuarine Bioassessments	2006	L	0.139

RPPMH

Rappahannock River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**110.219**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22E-03-BAC** **Peedee Creek**

Cause Location: Tidal Peedee Creek

City / County: Essex Co. Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2014 cycle, tidal Peedee Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 6/13 at 3-PEE003.97.

Tidal Peedee Creek was addressed in the Rappahannock River and Tributaries Bacterial TMDL, which was approved by the SWCB on 6/27/2019 and by the EPA on 7/10/2019. The impairment is Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_PEE01A14 / Peedee Creek / Tidal portion of Peedee Creek.	4A	Enterococcus	2014	L	0.150

RPPOH

Peedee Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.150**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22E-04-BAC** **Occupacia Creek**

Cause Location: Tidal Occupacia Creek

City / County: Essex Co. Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2014 cycle, tidal Occupacia Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 9/11 at 3-OCC005.62.

It is nested in the bacterial TMDL for Occupacia and Farmers Hall Creeks, which was developed and was approved by the EPA on 7/30/2007; therefore, the segment is considered Category 4A. The TMDL addresses the nontidal watersheds feeding into the tidal portion and the upstream bacterial reductions should improve water quality downstream.

During the 2020 cycle, monitoring at 3-OCC001.85 had an exceedance rate of 3/9.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_OCC01A08 / Occupacia Creek / The tidal portion of Occupacia Creek	4A	Enterococcus	2014	L	0.668

RPPOH

Occupacia Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.668**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E22E-05-BAC** **Rappahannock River**

Cause Location: The Rappahannock River from the tidal freshwater/oligohaline boundary downstream to river mile 56.21.

City / County: Essex Co. Richmond Co. Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2014 cycle, the Rappahannock River from the tidal freshwater oligohaline boundary downstream to rivermile 51.04 was impaired of the Recreation Use due to an enterococci exceedance rate of 2/12 at 3-RPP056.20.

The impairment was nested within the Upper Rappahannock River Shellfish TMDL, which was approved by the EPA on 8/10/2010 and was considered Category 4A.

However, during the 2016 cycle, the upper portion of the impairment, which was not located within the actual TMDL study area boundary, was split off and considered Category 5A.

The impairment was addressed in the Rappahannock River and Tributaries Bacterial TMDL, which was approved by the SWCB on 6/27/2019 and by the EPA on 7/20/2019, and will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_RPP02A02 / Rappahannock River / The Rappahannock River from the tidal freshwater/oligohaline boundary downstream to river mile 56.21.	4A	Enterococcus	2014	L	1.344

RPPOH

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**1.344**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22E-06-BAC** **Rappahannock River**

Cause Location: The oligohaline/mesohaline boundary at river mile 48.51 downstream to the upstream limit of VDH shellfish condemnation area 025A-068A, 4/3/2012.

City / County: Essex Co. Richmond Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2014 cycle, the segment was impaired of the Recreation Use due to an enterococci exceedance rate of 4/12 at 3-RPP046.26.

It is located within the study area for the Upper Rappahannock River Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010. The enterococci impairment is considered nested within the TMDL; therefore, the segment is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_RPP05A02 / Rappahannock River / The oligohaline/mesohaline boundary at river mile 48.51 downstream to the upstream limit of VDH shellfish condemnation area 025A-068A, 3/24/2015.	4A	Enterococcus	2014	L	6.958

RPPMH

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**6.958**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E22E-07-BAC** **Rappahannock River**

Cause Location: The Rappahannock River from rivermile 56.21 downstream to river mile 51.04.

City / County: Essex Co. Richmond Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2014 cycle, the Rappahannock River from the tidal freshwater oligohaline boundary downstream to rivermile 51.04 was impaired of the Recreation Use due to an enterococci exceedance rate of 2/12 at 3-RPP056.20.

The impairment was nested within the Upper Rappahannock River Shellfish TMDL, which was approved by the EPA on 8/10/2010 and was considered Category 4A.

However, during the 2016 cycle, the upper portion of the impairment, which was not located within the actual TMDL study area boundary, was split off and was considered Category 5A (the TMDL was later completed in 2019). This nested segment remains Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_RPP02B16 / Rappahannock River / The Rappahannock River from rivermile 56.21 downstream to river mile 51.04.	4A	Enterococcus	2014	L	2.003

RPPOH

Rappahannock River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**2.003**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E22E-08-CHLR** **Rappahannock River**

Cause Location: The lower tidal freshwater Rappahannock River downstream of Devils Elbow.

City / County: Essex Co. King George Co. Westmoreland Co.

Use(s): Aquatic Life Wildlife

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

During the 2004 cycle, the lower tidal freshwater area downstream of Devils Elbow at Toby Point and Green Bay (rivermile 70.52) and the transitional area of the Rappahannock River were assessed as not supporting the Aquatic Life and Wildlife Uses based on chloride exceedances at multiple stations, including 3-RPP064.40.

During the 2010 cycle, the Water Quality Standards were revised during Triennial Review. The freshwater-transitional zone boundary was moved upstream to rivermile 57.85. In addition, the chloride standard was removed in transitional waters. The standard still applies in freshwater areas and station 3-RPP064.40 remains in the freshwater area; therefore, this impairment has been shortened to extend from Devils Elbow at Toby Point and Green Bay to the transitional zone boundary. The Rappahannock River below the new transitional boundary was delisted.

No additional monitoring has been conducted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_RPP01A02 / Rappahannock River / The Rappahannock River from Devils Elbow at Toby Point and Green Bay (river mile 70.52) downstream to the tidal freshwater/oligohaline boundary at river mile 57.85.	5C	Chloride	2004	L	5.133

RPPTF

Rappahannock River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chloride - Total Impaired Size by Water Type:	**5.133**		

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22E-09-BAC** **Waterview Creek**

Cause Location: The tidal portion of Waterview Creek.

City / County: Richmond Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2018 cycle, tidal Waterview Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 10/12 at 3-WAR001.81.

It is located within the study area for the Upper Rappahannock River Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/31/2010. The enterococci impairment is considered nested within the TMDL; therefore, the segment is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_WAR01A18 / Waterview Creek / Tidal portion of Waterview Creek	4A	Enterococcus	2018	L	0.038

RPPMH

Waterview Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.038**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22E-10-BAC** **Bridge Creek**

Cause Location: The tidal portion of Bridge Creek to its mouth at Occupacia Creek.

City / County: Essex Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2020 cycle, tidal Bridge Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 4/9 at 3-BDG000.10.

The creek is located within the study area for the Upper Rappahannock River Watershed Bacterial TMDL (growing areas 25 and 26.) The TMDL was approved by the SWCB on 8/10/2010 and by the EPA on 12/13/2010. The impairment will be addressed during implementation and is proposed for nesting (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_BDG01A20 / Bridge Creek / Tidal Bridge Creek to its mouth at Occupacia Creek	4A	Enterococcus	2020	L	0.123

RPPOH

Bridge Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.123**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-01-BAC** **Occupacia Creek**

Cause Location: Occupacia Creek from the Hunters Millpond Dam to the extent of tidal influence.

City / County: Essex Co.

Use(s): Recreation

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

Occupacia Creek was initially assessed as impaired of the Recreation Use during the 2002 cycle based on fecal coliform violations at the Route 17 bridge (3-OCC010.47). In 2006 the segment was also impaired for E. coli. During the 2008 cycle, the impairment converted to E. coli with a violation rate of 3/21.

The bacterial TMDL for Occupacia and Farmers Hall Creeks was developed and was approved by the EPA on 7/30/2007; therefore, the segment is considered Category 4A.

Occupacia Creek remained impaired in the 2014 cycle due to an E.coli exceedance rate of 3/12.

The exceedance rate was 3/12 in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_OCC01A98 / Occupacia Creek / Occupacia Creek from Hunters Millpond downstream to the tidal limit.	4A	Escherichia coli (E. coli)	2006	L	2.34

Occupacia Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.34**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-02-BAC** **Farmers Hall Creek**

Cause Location: Farmers Hall Creek from its headwaters to its tidal limit

City / County: Essex Co.

Use(s): Recreation

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

Farmers Hall Creek was assessed as not supporting the Recreation Use support goal based on a fecal coliform exceedance rate of 3/13 at the Route 631 bridge (3-FAR002.88).

No additional data has been collected since the 2006 cycle.

The bacterial TMDL for Occupacia and Farmers Hall Creeks was approved by the EPA on 7/30/2007; therefore, the segment is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_FAR01A04 / Farmers Hall Creek / Headwaters to tidal limit	4A	Fecal Coliform	2004	L	4.00

Farmers Hall Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**4.00**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-02-DO** **Farmers Hall Creek**

Cause Location: Farmers Hall Creek from its headwaters to its tidal limit

City / County: Essex Co.

Use(s): Aquatic Life

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

Farmers Hall Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 3-FAR002.88. The exceedance rate at 3-FAR004.38 was acceptable (0/11).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_FAR01A04 / Farmers Hall Creek / Headwaters to tidal limit	5C	Dissolved Oxygen	2012	L	4.00

Farmers Hall Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**4.00**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E22R-02-PH** **Farmers Hall Creek**

Cause Location: Farmers Hall Creek from its headwaters to its tidal limit

City / County: Essex Co.

Use(s): Aquatic Life

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

In 2006, Farmers Hall Creek was assessed as not supporting of the Aquatic Life Use support goal based on pH violations at the Route 631 bridge (3-FAR002.88).

Additional monitoring was conducted during the 2012 cycle. The impairment was confirmed due to the following exceedance rates:
6/11 at 3-FAR002.88
4/11 at 3-FAR004.38

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_FAR01A04 / Farmers Hall Creek / Headwaters to tidal limit	5C	pH	2006	L	4.00

Farmers Hall Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.00**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-04-BAC** **Elmwood Creek and Tributary XHY**

Cause Location: The nontidal portion of Elmwood Creek and its tributary XHY in its entirety.

City / County: Essex Co.

Use(s): Recreation

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

Elmwood Creek and its tributary were assessed as not supporting of the Recreation Use in the 2014 cycle based on multiple E. coli exceedances.

The exceedance rates were as follows in the 2016 cycle:
5/23 at 3-ELM002.23
5/13 at 3-ELM002.92
1/13 (FS) at 3-ELM004.27
4/13 at 3-XHY000.06
1/12 (FS) at 3-XHY002.50

During the 2020 cycle, the exceedance rates were 5/24 at 3-ELM002.23, 1/12 (FS) at 3-ELM002.92, and 2/13 at 3-XHY000.06.

The Rappahannock River and Tributaries Bacteria TMDL was approved by the SWCB on 6/27/2019 and by the EPA on 7/10/2019. The impairment was addressed in the TMDL and will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_ELM01A06 / Elmwood Creek and tributary XHY / Headwaters to tidal limit, including tributary XHY.	4A	Escherichia coli (E. coli)	2014	L	9.07

Elmwood Creek and Tributary XHY **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**9.07**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-04-PH** **Elmwood Creek and Tributary XHY**

Cause Location: The nontidal portion of Elmwood Creek and its tributary XHY in its entirety.

City / County: Essex Co.

Use(s): Aquatic Life

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

Elmwood Creek was assessed as not supporting of the Aquatic Life Use in the 2006 cycle based on a pH exceedance rate of 4/10 at 3-ELM002.23, which is located at the Route 17 bridge.

Additional data was collected during the 2014 and 2016 cycles. The impairment was expanded to incorporate tributary XHY. The exceedance rates were as follows:
5/24 at 3-ELM002.23
5/26 at 3-ELM002.92
4/26 at 3-ELM004.27
6/26 at 3-XHY000.06
2/25 (FS) at 3-XHY002.50

During the 2020 cycle, the exceedance rates were 2/24 (FS) at 3-ELM002.23, 2/12 at 3-ELM002.92, and 3/13 at 3-XHY000.06.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_ELM01A06 / Elmwood Creek and tributary XHY / Headwaters to tidal limit, including tributary XHY.	5C	pH	2006	L	9.07

Elmwood Creek and Tributary XHY **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**9.07**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-05-BAC** **Baylors Creek**

Cause Location: Baylors Creek from its headwaters to the extent of backwater of Baylors Pond.

City / County: Essex Co.

Use(s): Recreation

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

During the 2008 cycle, Baylors Creek was assessed as impaired of the Recreation Use due to an E.coli exceedance rate of 2/16 at the Route 17 bridge (3-BAY002.62).

Additional data was collected in the 2014 cycle. The impairment was confirmed with the following exceedance rates:
3/12 at 3-BAY002.62
3/11 at 3-BAY004.39
1/12 (FS) at 3-BAY006.66

During the 2020 cycle, the E.coli exceedance rates were 7/13 at 3-BAY002.62 and 3/13 at 3-BAY006.66.

The Rappahannock River and Tributaries Bacteria TMDL was approved by the SWCB on 6/27/2019 and by the EPA on 7/10/2019. Baylors Creek was addressed and will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_BAY01A08 / Baylors Creek / Headwaters to extent of backwater at Baylors Pond.	4A	Escherichia coli (E. coli)	2008	L	5.89

Baylors Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**5.89**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-05-PH** **Baylors Creek**

Cause Location: Baylors Creek from its headwaters to the extent of backwater of Baylors Pond.

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2008 cycle, Baylors Creek was assessed as impaired of the Aquatic Life Use due to a pH exceedance rate of 6/16 at the Route 17 bridge (3-BAY002.62).

Additional monitoring was conducted during the 2014 cycle. The impairment was confirmed with the following exceedance rates:
2/13 at 3-BAY002.62
2/12 at 3-BAY004.39
11/13 at 3-BAY006.66

In the 2020 cycle, the pH exceedance rates were 2/13 at 3-BAY002.62 and 6/13 at 3-BAY006.66.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_BAY01A08 / Baylors Creek / Headwaters to extent of backwater at Baylors Pond.	5C	pH	2008	L	5.89

Baylors Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.89**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-06-BAC** **Peedee Creek**

Cause Location: The mainstem of Peedee Creek from its headwaters to the extent of tide.

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2020 cycle, Peedee Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 10/49 at the Route 640 bridge (3-PEE004.46).

Due to a previous impairment, Peedee Creek was addressed in the Rappahannock River and Tributaries Bacterial TMDL, which was approved by the SWCB on 6/27/2019 and by the EPA on 7/10/2019. The impairment will be Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_PEE01A08 / Peedee Creek / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2020	L	3.29

Peedee Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.29**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-06-DO** **Peedee Creek**

Cause Location: The mainstem of Peedee Creek from its headwaters to the extent of tide.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2010 cycle, Peedee Creek was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at the Route 640 bridge (3-PEE004.46).

Additional monitoring was conducted along the creek in the 2014 and 2018 cycles.
7/12 at 3-PEE004.11
24/48 at 3-PEE004.46
7/12 at 3-PEE004.96
0/12 (FS) at 3-PEE006.57

The exceedance rate was 10/49 at 3-PEE004.46 during the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_PEE01A08 / Peedee Creek / Headwaters to tidal limit	5C	Dissolved Oxygen	2010	L	3.29

Peedee Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**3.29**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E22R-06-PH** **Peedee Creek**

Cause Location: The mainstem of Peedee Creek from its headwaters to the extent of tide.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2008 cycle, Peedee Creek was assessed as not supporting of the Aquatic Life Use due to pH exceedances at the Route 640 bridge (3-PEE004.46).

Additional monitoring was conducted along the creek in the 2014 and 2018 cycles.
1/12 (FS) at 3-PEE004.11
2/48 (FS) at 3-PEE004.46
3/12 at 3-PEE004.96
3/12 at 3-PEE006.57

Station 3-PEE004.46 remained fully supporting during the 2020 cycle (3/49), however the segment will remain impaired due to the previous upstream exceedances. Continued monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_PEE01A08 / Peedee Creek / Headwaters to tidal limit	5C	pH	2008	L	3.29

Peedee Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.29**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-07-DO** **XGI - Occupacia Creek, UT**

Cause Location: The unnamed tributary XGI in its entirety.

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2008 cycle, tributary XGI was mistakenly included within the nontidal Occupacia Creek segment. The segment failed for dissolved oxygen with an exceedance rate of 7/22 at station 3-XGI000.44.

However, this stream actually enters below the fall line on Occupacia Creek and therefore was not reclassified as Class VII waters. The TMDL is due in 2020. As the station was addressed in the Occupacia Natural Conditions Assessment (4/4/2005), it is considered Category 4C.

Additional monitoring in the 2016 cycle confirmed the impairment (2/5 for dissolved oxygen).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_XGI01A10 / XGI - Occupacia Creek, UT / Headwaters to mouth at tidal Occupacia Creek	4C	Dissolved Oxygen			1.96

XGI - Occupacia Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**1.96**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-07-PH** **XGI - Occupacia Creek, UT**

Cause Location: The unnamed tributary XGI in its entirety.

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2008 cycle, tributary XGI was mistakenly included within the nontidal Occupacia Creek segment. The segment failed for pH with an exceedance rate of 22/22 at station 3-XGI000.44.

However, this stream actually enters below the fall line on Occupacia Creek and therefore was not reclassified as Class VII waters. The TMDL is due in 2020. As the station was addressed in the Occupacia Natural Conditions Assessment (4/4/2005), it is considered Category 4C.

Additional monitoring in the 2016 cycle confirmed the impairment (3/5 for pH).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_XGI01A10 / XGI - Occupacia Creek, UT / Headwaters to mouth at tidal Occupacia Creek	4C	pH			1.96

XGI - Occupacia Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.96**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-08-BAC** **Stillwater Creek**

Cause Location: Stillwater Creek from its headwaters at Cockerel Creek downstream to its tidal limit

City / County: Essex Co.

Use(s): Recreation

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

Stillwater Creek was assessed as not supporting of the Recreation Use in the 2014 cycle based on an E. coli exceedance rate of 3/12 at 3-STL003.35 (Route 17 South). Monitoring at 3-STL001.54, which is located at the Route 674 bridge, was acceptable (0/12).

During the 2020 cycle, the exceedance rates were 4/13 at 3-STL003.35 and 0/13 (S) at 3-STL001.54.

The Rappahannock River and Tributaries Bacteria TMDL was approved by the SWCB on 6/27/2019 and by the EPA on 7/10/2019. The Stillwater Creek impairment was addressed and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_STL01A14 / Stillwater Creek / Headwaters at Cockerel Creek to tidal limit	4A	Escherichia coli (E. coli)	2014	L	3.52

Stillwater Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.52**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-08-DO** **Stillwater Creek**

Cause Location: Stillwater Creek from its headwaters at Cockerel Creek downstream to its tidal limit

City / County: Essex Co.

Use(s): Aquatic Life

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

Stillwater Creek was assessed as not supporting of the Aquatic Life Use in the 2014 cycle based on a dissolved oxygen exceedance rate of 4/13 at 3-STL003.35 (Route 17 South). Monitoring at 3-STL001.54, which is located at the Route 674 bridge, was acceptable (1/13).

During the 2020 cycle, the exceedance rates were 3/13 at 3-STL003.35 and 0/13 (S) at 3-STL001.54.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_STL01A14 / Stillwater Creek / Headwaters at Cockerel Creek to tidal limit	5C	Dissolved Oxygen	2014	L	3.52

Stillwater Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**3.52**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-08-PH** **Stillwater Creek**

Cause Location: Stillwater Creek from its headwaters at Cockerel Creek downstream to its tidal limit

City / County: Essex Co.

Use(s): Aquatic Life

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

Stillwater Creek was assessed as not supporting of the Aquatic Life Use in the 2014 cycle based on pH exceedance rates of 12/13 at 3-STL003.35 (Route 17 South) and 4/13 at 3-STL001.54 (Route 674).

During the 2020 cycle, the exceedance rates were 11/13 at 3-STL003.35 and 2/13 at 3-STL001.54.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_STL01A14 / Stillwater Creek / Headwaters at Cockerel Creek to tidal limit	5C	pH	2014	L	3.52

Stillwater Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.52**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-10-PH** **Mill Swamp**

Cause Location: Nontidal Mill Swamp below Horners Pond

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Mill Swamp was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 3-MSW000.85, which is located at Route 625 below Horners Pond.

The exceedance rate was 4/24 during the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_MSW01A14 / Mill Swamp / Horners Pond dam to tidal limit	5C	pH	2014	L	0.72

Mill Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**0.72**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-11-BAC** **Smoots Mill Run, UT**

Cause Location: From its headwaters to its mouth at Smoots Mill Run.

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2020 cycle, the tributary was impaired of the Recreation Use due to an E. coli exceedance rate of 5/11 at 3-SMO001.58, which is located at Route 697.

The Rappahannock River and Tributaries Bacteria TMDL was approved by the SWCB on 6/27/2019 and by the EPA on 7/10/2019. The creek is located within the study area and will be addressed during implementation; therefore, the impairment is proposed for nesting (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_SMO01A14 / Smoots Mill Run, UT / Headwaters to mouth at Smoots Mill Run	4A	Escherichia coli (E. coli)	2020	L	1.67

Smoots Mill Run, UT **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.67**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-11-PH** **Smoots Mill Run, UT**

Cause Location: From its headwaters to its mouth at Smoots Mill Run.

City / County: Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, the tributary was impaired of the Aquatic Life Use due to a pH exceedance rate of 7/12 at 3-SMO001.58, which is located at Route 697.

The exceedance rate was also 7/24 during the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_SMO01A14 / Smoots Mill Run, UT / Headwaters to mouth at Smoots Mill Run	5C	pH	2014	L	1.67

Smoots Mill Run, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.67**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E22R-12-BAC** **Troy Creek**

Cause Location: The nontidal portion of Troy Creek.

City / County: Westmoreland Co.

Use(s): Recreation

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

During the 2020 cycle, Troy Cree2k was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at 3-TRY002.08, which is located at Route 637.

The Rappahannock River and Tributaries Bacteria TMDL was approved by the SWCB on 6/27/2019 and by the EPA on 7/10/2019. Troy Creek is located within the study area and will be addressed during implementation; therefore, the impairment is proposed for nesting (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22R_TRY01A06 / Troy Creek / The nontidal portion of Troy Creek	4A	Escherichia coli (E. coli)	2020	L	4.29

Troy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.29**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23E-01-SF** **Upper Rappahannock River, Little Carter Creek, Jugs Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 025-068A, 3/24/2015

City / County: Essex Co. Richmond Co.

Use(s): Shellfishing

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

Portion of VDH Shellfish Condemnation 025-068A, 3/24/2015

The Upper Rappahannock River Watershed Shellfish TMDL was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010; therefore, the impaired area is considered Category 4A. The condemnation has since shortened; the area currently open for harvest is considered Cat. 2C.

Note: a previous Little Carter Creek/Jugs Creek VDH-DSS Shellfish Condemnation (068B, 3/6/2002) remains closed but is now incorporated into this shellfish condemnation.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23E_LIE01A98 / Little Carter Creek, Jugs Creek / Tidal limit to mouth at the Rappahannock River.	4A	Fecal Coliform	1998	L	0.419
RPPMH					
VAP-E23E_PIS02A00 / Piscataway Creek / The estuarine portion of Piscataway Creek.	4A	Fecal Coliform	1998	L	0.589
RPPMH					
VAP-E23E_RPP02A98 / Rappahannock River / Mainstem Rappahannock as described in VDH shellfish condemnation 025A-068A, 3/24/2015 excluding administratively condemned portion.	4A	Fecal Coliform	1998	L	7.035
RPPMH					
VAP-E23E_ZZZ02A06 / Unsegmented estuaries in E23 / Unsegmented portion within SFC 025A-068A, 3/24/2015.	4A	Fecal Coliform	2006	L	0.046
RPPMH					

Upper Rappahannock River, Little Carter Creek, Jugs Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**8.088**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23E-02-BAC** **Cat Point Creek**

Cause Location: The tidal portion of Cat Point Creek.

City / County: Richmond Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Tidal Cat Point Creek was impaired of the Recreation Use in the 2010 cycle due to enterococci violations at 3-CAT006.58, which is located below Rt. 624.

During the 2014 cycle, enterococci exceedance rates were 9/23 at 3-CAT006.58, as well as 3/12 at 3-CAT000.46.

Additional monitoring occurred at 3-CAT006.58 in the 2020 cycle; the exceedance rate was 5/8.

Cat Point Creek is located within the study area for the downstream Upper Rappahannock Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010; 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-E23E_CAT01A02 / Cat Point Creek / The tidal portion of Cat Point Creek.	4A	Enterococcus	2010	L	1.280

RPPMH

Cat Point Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**1.280**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23E-03-BAC** **Hoskins Creek**

Cause Location: The tidal portion of Hoskins Creek from the Tappahannock STP to its mouth at the Rappahannock River.

City / County: Essex Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Tidal Hoskins Creek was initially included on the 1994 303(d) list based on excessive fecal coliform standard exceedances recorded at the Rt. 360 bridge (3-HOK000.74). The upstream limit was extended to the Town of Tappahannock STP in the 1998 cycle in recognition that the STP may be a contributing source. During the 2006 cycle, the segment remained impaired and enterococci was added as an impairing cause. TMDL monitoring was initiated in the 2008 cycle; the impairment was confirmed, extended upstream to the tidal limit, and switched to enterococci based on exceedances at multiple stations.

The entire segment remained impaired in the 2010 cycle due to the following enterococci exceedance rates:
5/13 at 3-CRC000.15
10/13 at 3-HOK000.15
24/36 at 3-HOK000.74
7/13 at 3-HOK002.74
7/13 at 3-HOK003.61

The bacterial TMDL, which was approved by the EPA on 3/27/2008 and by the SWCB on 4/28/2009 only addressed the area from the Tappahannock STP to its mouth. The extension was split off and is addressed in fact sheet E23E-03-BAC2; it is considered to be nested. Both areas are Category 4A.

During the 2020 cycle, the exceedance rates were 7/9 at 3-HOK002.74 and 4/8 at 3-HOK003.61 (in E23E-03-BAC2).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23E_HOK01A98 / Hoskins Creek / Hoskins Creek from the Tappahannock STP downstream to the mouth at the Rappahannock River.	4A	Enterococcus	2006	L	0.084

RPPMH

Hoskins Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.084**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23E-03-BAC2** **Hoskins Creek, Church Swamp**

Cause Location: The tidal portion of Hoskins Creek and Church Swamp downstream to the Tappahannock STP.

City / County: Essex Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Tidal Hoskins Creek was initially included on the 1994 303(d) list based on excessive fecal coliform standard exceedances recorded at the Rt. 360 bridge (3-HOK000.74). The upstream limit was extended to the Town of Tappahannock STP in the 1998 cycle in recognition that the STP may be a contributing source. During the 2006 cycle, the segment remained impaired and enterococci was added as an impairing cause. TMDL monitoring was initiated in the 2008 cycle; the impairment was confirmed, extended upstream to the tidal limit, and switched to enterococci based on exceedances at multiple stations.

The entire segment remained impaired in the 2010 cycle due to the following enterococci exceedance rates:
5/13 at 3-CRC000.15
10/13 at 3-HOK000.15
24/36 at 3-HOK000.74
7/13 at 3-HOK002.74
7/13 at 3-HOK003.61

The bacterial TMDL, which was approved by the EPA on 3/27/2008 and by the SWCB on 4/28/2009 only addressed the area from the Tappahannock STP to its mouth. The extension was split off. It is considered to be nested. Both areas are Category 4A.

During the 2020 cycle, the exceedance rates were 4/8 at 3-HOK003.61 and 7/9 at 3-HOK002.74 (in E23E-03-BAC).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23E_CRC01A08 / Church Swamp / Tidal limit to mouth at Hoskins Creek	4A	Enterococcus	2008	L	0.002
RPPMH					
VAP-E23E_HOK02A08 / Hoskins Creek / Hoskins Creek from its tidal limit to the confluence with Church Swamp.	4A	Enterococcus	2008	L	0.052
RPPMH					
VAP-E23E_HOK02A10 / Hoskins Creek / Hoskins Creek from the confluence with Church Swamp downstream to the Tappahannock STP.	4A	Enterococcus	2006	L	0.016
RPPMH					

Hoskins Creek, Church Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.069**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23E-03-PH** **Hoskins Creek**

Cause Location: Hoskins Creek from its tidal limit to the confluence with Church Swamp.

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2006 cycle, pH was added as an impairment because of exceedances at 3-HOK003.61, which is located at the Route 659 bridge. The violation rate was 13/36 in the 2010 cycle.

The upstream segment extent was corrected in the 2008 cycle due to acceptable pH values at three downstream stations.

A Natural Conditions Assessment was completed for Hoskins Creek during the 2012 cycle. The report recommends that tidal Hoskins Creek from its tidal limit downstream to the confluence with Church Swamp be reclassified as Class VII swampwaters. The stream is considered Category 4C.

In the 2020 cycle, pH remains impaired (2/11 at 3-HOK003.61).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23E_HOK02A08 / Hoskins Creek / Hoskins Creek from its tidal limit to the confluence with Church Swamp.	4C	pH			0.052

RPPMH

Hoskins Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	**0.052**		

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23E-05-BAC** **Little Carter Creek & Jugs Creek**

Cause Location: Tidal Little Carter Creek and Jugs Creek downstream it their mouths at the Rappahannock River.

City / County: Richmond Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, Little Carter Creek and Jugs Creek were impaired of the Recreation Use due to an enterococci exceedance rate of 5/11 at 3-LIE003.62.

The area is within the study area for the Upper Rappahannock Watershed Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010. Implementation of the TMDL is expected to lower bacterial levels; therefore, 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-E23E_LIE01A98 / Little Carter Creek, Jugs Creek / Tidal limit to mouth at the Rappahannock River.	4A	Enterococcus	2012	L	0.419

RPPMH

Little Carter Creek & Jugs Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.419**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23E-06-BAC** **Piscataway Creek**

Cause Location: Tidal Piscataway Creek

City / County: Essex Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2016 cycle, the tidal Piscataway Creek was assessed not supporting of the Recreation Use based on an enterococci exceedance rate of 2/10 at the Route 17 bridge (3-PIS004.67).

The exceedance rate was 7/18 during the 2020 cycle.

The area is within the study area for the Upper Rappahannock Watershed Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010. Implementation of the TMDL is expected to lower bacterial levels; therefore, 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-E23E_PIS02A00 / Piscataway Creek / The estuarine portion of Piscataway Creek.	4A	Enterococcus	2016	L	0.589

RPPMH

Piscataway Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.589**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23E-07-BAC** **Mount Landing Creek**

Cause Location: Tidal Mount Landing Creek

City / County: Essex Co. Richmond Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2020 cycle, tidal Mount Landing Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 4/9 at 3-MTL000.12.

The area is within the study area for the Upper Rappahannock Watershed Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010. Implementation of the TMDL is expected to lower bacterial levels; therefore, the impairment is proposed for nesting (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23E_MTL01A10 / Mount Landing Creek / Tidal limit to mouth at the Rappahannock River.	4A	Enterococcus	2020	L	0.172

RPPMH

Mount Landing Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.172**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23L-01-HG** **Chandlers Millpond**

Cause Location: Chandlers Millpond in its entirety

City / County: Westmoreland Co.

Use(s): Fish Consumption

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

On 8/31/2007, the Virginia Department of Health issued a fish consumption advisory for Chandlers Millpond based upon DEQ fish tissue monitoring at station 3-CMR001.00 in 2006. The advisory recommends consuming no more than two meals/month of largemouth bass due to the presence of mercury.

The DEQ monitoring showed mercury exceedances in both largemouth bass and black crappie.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23L_CMR01A08 / Chandlers Millpond / Chandlers Millpond in its entirety	5A	Mercury in Fish Tissue	2008	M	47.99

Chandlers Millpond **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**47.99**	

Sources:

Atmospheric Deposition - Toxics	Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-03-PH** **Mill Creek and Mussell Swamp**

Cause Location: Piscataway Creek from Sturgeon Swamp to tidal limit, Mill Creek and Mussell Swamp.

City / County: Essex Co.

Use(s): Aquatic Life

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

Piscataway Creek from Sturgeon Swamp downstream to the tidal limit was initially assessed not supporting of the Aquatic Life use support goal in 1998 based on pH standard exceedances recorded at monitoring station 3-PIS009.24, located at the Route 691 bridge. The TMDL was due in 2010.

During the 2004 cycle, UT XFL was also considered impaired for pH (2004 fact sheet VAP-E23R-08). The TMDL was due by 2014.

During the 2006 cycle, additional watershed monitoring was performed and all of Piscataway Creek was impaired for pH, as well as XFL, XFM, XFN, Mussell Swamp, Sturgeon Swamp, and Mill Creek; therefore, the segment was expanded with TMDL due dates of 2018. The "Natural Conditions Assessment for low pH, Piscataway Creek, Essex, Virginia" was completed; it recommends that Piscataway Creek and its tributaries from its headwaters to its mouth at the Rappahannock River be reclassified as Class VII swampwaters. However, only the Piscataway Creek watershed upstream of Sturgeon Swamp was reclassified as Class VII swampwaters; the reclassified portion was delisted for pH based upon acceptable exceedance rates at the following stations:

3-PIS014.13
3-STU000.92
3-XFL001.04
3-XFM000.82
3-XFN000.01

The portion of nontidal Piscataway Creek below Sturgeon Swamp was determined to meet Class III limits and was removed from the Class VII reclassification. Although no additional data was collected during the 2010 cycle, the segment was delisted based upon the acceptable 2008 exceedance rate.

The remainder includes Mill Creek and Mussell Swamp. Until the remainder of the watershed is reclassified, they are considered Cat. 4C for pH.

In addition, the original lower portion of Piscataway Creek (Sturgeon Swamp to tidal limit) was relisted during the 2014 cycle. During the 2020 cycle, the pH exceedance rates were 1/36 at 3-PIS009.24 and 0/4 at 3-PIS008.15; therefore, Piscataway Creek will be partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_MLC01A04 / Mill Creek / Headwaters to tidal limit	4C	pH			5.26
VAP-E23R_MUS01A04 / Mussell Swamp / Headwaters to tidal limit.	4C	pH			5.13

Mill Creek and Mussell Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**10.39**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-04-BAC** **Hoskins Creek**

Cause Location: Headwaters to tidal limit

City / County: Essex Co.

Use(s): Recreation

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

Hoskins Creek was assessed as impaired of the Recreation Use during the 2014 cycle due to E. coli exceedances at 3-HOK011.45.

The exceedance rate is 9/36 during the 2020 cycle.

The impairment is nested within the tidal Hoskins Creek TMDL, which was approved by the EPA on 3/27/2008 and by the SWCB on 4/28/2009; therefore, it is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_HOK01A04 / Hoskins Creek / Headwaters to the tidal limit	4A	Escherichia coli (E. coli)	2014	L	13.16

Hoskins Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**13.16**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-06-BAC** **Cat Point Creek and Tributaries**

Cause Location: Nontidal Cat Point Creek and all tributaries draining to that segment.

City / County: Richmond Co. Westmoreland Co.

Use(s): Recreation

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

During the 2010 cycle, Cat Point Creek from Ruin Branch (river mile 14.1) downstream to the tidal limit near Canal Swamp (river mile 10.54) was assessed as not supporting of the Recreation Use due to E. coli violations at 3-CAT011.62, which is located at the Route 637 bridge.

During the 2012 cycle, Nanny Sanford Swamp above Chandlers Millpond was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/12 at 3-NSS000.77, which is located at the Route 622 bridge. It was addressed in 2012 fact sheet E23R-01-BAC.

Additional monitoring was conducted during the 2014 cycle. The E. coli exceedances were widespread (see below); therefore, the impairments were combined and expanded to include all tributaries to nontidal Cat Point Creek.

6/30 at 3-CAT011.62 (2018 cycle)
3/12 at 3-NSS000.77
2/12 at 3-BLA002.31
4/12 at 3-CAT015.44
4/12 at 3-BRL000.15
3/12 at 3-CMR000.50
2/12 at 3-PAN003.00
5/12 at 3-RUN000.13
3/12 at 2-SYN000.42
2/12 at 3-TBS001.08
3/12 at 3-TBS003.39

In the 2020 cycle, the E. coli exceedance rate was 8/30 at 3-CAT011.62 and 4/9 at 3-TBS003.39.

The watershed is located within the study area for the downstream Upper Rappahannock Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010; 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-E23R_BLA01A06 / Black Swamp / Black Swamp from its headwaters downstream to Chandlers Millpond	4A	Escherichia coli (E. coli)	2014	L	4.18
VAP-E23R_CAT01A98 / Cat Point Creek / Cat Point Creek from Ruin Branch downstream to tidal limit near Canal Swamp (river mile 10.54)	4A	Escherichia coli (E. coli)	2010	L	5.33
VAP-E23R_CAT02A02 / Cat Point Creek / Cat Point Creek from The Big Swamp to Ruin Branch.	4A	Escherichia coli (E. coli)	2014	L	1.19
VAP-E23R_CAT03A04 / Cat Point Creek tributaries / Cat Point Creek tributaries above the tidal limit, excluding Black Swamp, The Big Swamp, Ruin Branch, and Nanny Sanford Swamp above Chandlers Millpond	4A	Escherichia coli (E. coli)	2014	L	94.76
VAP-E23R_NSS01A12 / Nanny Sanford Swamp / Mainstem above Chandlers Millpond	4A	Escherichia coli (E. coli)	2012	L	3.58
VAP-E23R_RUN01A14 / Ruin Branch / Headwaters to mouth at Cat Point Creek	4A	Escherichia coli (E. coli)	2014	L	2.53
VAP-E23R_TBS01A06 / The Big Swamp / Headwaters to mouth at Cat Point Creek	4A	Escherichia coli (E. coli)	2014	L	6.74

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cat Point Creek and Tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**118.31**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-07-BEN** **Ruin Branch**

Cause Location: Ruin Branch in its entirety

City / County: Richmond Co. Westmoreland Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Ruin Branch was assessed as not supporting the Aquatic Life Use due to impairment of the benthic community at 3-RUN000.13.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_RUN01A14 / Ruin Branch / Headwaters to mouth at Cat Point Creek	5A	Benthic Macroinvertebrates Bioassessments	2014	L	2.53

Ruin Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**2.53**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-08-BAC** **Muddy Run**

Cause Location: Nontidal Muddy Run

City / County: Richmond Co. Westmoreland Co.

Use(s): Recreation

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

During the 2014 cycle, Muddy Run was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/12 at 3-MUR001.19, which is located at the Route 690 bridge.

The impairment is nested within the downstream Upper Rappahannock Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010; therefore, it is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_MUR01A04 / Muddy Run / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2014	L	4.65

Muddy Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**4.65**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-12-DO** **Mussell Swamp**

Cause Location: Headwaters to mouth at Piscataway Creek

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2006 cycle, Mussell Swamp was assessed as impaired of the Aquatic Life Use based on dissolved oxygen exceedances at 3-MUS001.23, located at the Route 615 bridge.

Natural conditions are suspected; therefore, the segment is assessed as Cat. 5C until the natural conditions assessment can be performed.

During the 2008 cycle, the exceedance rate was 3/26. No additional monitoring has been conducted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_MUS01A04 / Mussell Swamp / Headwaters to tidal limit.	5C	Dissolved Oxygen	2006	L	5.13

Mussell Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**5.13**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-16-BEN** **Church Swamp**

Cause Location: Church Swamp from its headwaters to its tidal limit at Hoskins Creek

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2008 cycle, Church Swamp was assessed as not supporting the Aquatic Life Use due to impairment of the benthic community at freshwater probabilistic monitoring station 3-CRC001.38.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_CRC01A06 / Church Swamp / Headwaters to tidal limit	5A	Benthic Macroinvertebrates Bioassessments	2008	L	3.24

Church Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			**3.24**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-19-BAC** **Clarks Run**

Cause Location: Nontidal Clarks Run

City / County: Richmond Co.

Use(s): Recreation

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

During the 2014 cycle, Clarks Run was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/12 at 3-CLK000.27, which is located at the Route 621 bridge.

The impairment is considered nested within the downstream Upper Rappahannock Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010; therefore, it is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_CLK01A14 / Clarks Run / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2014	L	3.82

Clarks Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.82**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-20-DO** **Scates Millstream**

Cause Location: Nontidal Scates Millstream

City / County: Richmond Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Scates Millstream was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/12 at station 3-SMS000.77, which is located at Route 635.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_SMS01A14 / Scates Millstream / Headwaters to tidal limit	5C	Dissolved Oxygen	2014	L	2.89

Scates Millstream **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**2.89**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-20-PH** **Scates Millstream**

Cause Location: Nontidal Scates Millstream

City / County: Richmond Co.

Use(s): Aquatic Life

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

During the 2014 cycle, Scates Millstream was impaired of the Aquatic Life Use due to a pH exceedance rate of 6/12 at station 3-SMS000.77, which is located at Route 635.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_SMS01A14 / Scates Millstream / Headwaters to tidal limit	5C	pH	2014	L	2.89

Scates Millstream **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.89**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E23R-22-BAC** **Mount Landing Creek**

Cause Location: Mount Landing Creek from the first tributary upstream of the Route 716 bridge downstream to the tidal limit at approximately river mile 4.44.

City / County: Essex Co.

Use(s): Recreation

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

During the 2020 cycle, Mount Landing Creek from the first tributary upstream of the Route 716 bridge downstream to the tidal limit was impaired of the Recreation Use due to an E. coli exceedance rate of 5/23 at 3-MTL004.82, which is located at the Route 716 bridge.

The stream is located within the study area for the Upper Rappahannock River Watershed (growing areas 25 and 26) Bacterial TMDL, which was approved by the EPA on 8/10/2010 and by the SWCB on 12/13/2010. The impairment is proposed for nesting (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_MTL01A98 / Mount Landing Creek / Mount Landing Creek from the first tributary upstream of the Route 716 bridge downstream to the tidal limit at approximately river mile 4.44.	4A	Escherichia coli (E. coli)	2020	L	1.15

Mount Landing Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.15**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E23R-22-PCB** **Mount Landing Creek**

Cause Location: Mount Landing Creek from the first tributary upstream of the Route 716 bridge downstream to the tidal limit at approximately river mile 4.44.

City / County: Essex Co.

Use(s): Fish Consumption

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

During the 2020 cycle, Mount Landing Creek from the first tributary upstream of the Route 716 bridge downstream to the tidal limit was impaired of the Fish Consumption Use due to PCBs over the fish tissue level in gizzard shad and blue catfish at 3-MTL004.82, which is located at the Route 716 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E23R_MTL01A98 / Mount Landing Creek / Mount Landing Creek from the first tributary upstream of the Route 716 bridge downstream to the tidal limit at approximately river mile 4.44.	5A	PCBs in Fish Tissue	2020	L	1.15

Mount Landing Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			**1.15**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24E-01-SF** **Richardson Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 025-071A, 3/25/2015

City / County: Richmond Co.

Use(s): Shellfishing

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

Portion of VDH Shellfish Condemnation 025-071A, 3/25/2015

Previous shellfish condemnations have included Totuskey and Richardson Creeks (separately or combined). The streams have been impaired since the 1998 cycle. However, in 2006 the segments were recombined and extended into the Rappahannock mainstem. The condemnation was further extended in the 2008 cycle.

However, during the 2010 cycle the condemnation was shortened and it was determined that the entire portion of the condemnation located within Totuskey Creek and portions of the Rappahannock River and Richardson Creek were considered administrative (VDH-DSS SFC 025-071A, 4/2/2008.) Those areas were partially delisted. The condemned portion remained Cat. 5B.

The upstream portion of Richardson Creek remains listed.

The Totuskey and Richardson Creeks Bacterial TMDL was approved by the EPA on 2/19/2010. The TMDL was based on the maximum extent of the condemnation, which occurred in condemnation 025-071A, 3/16/2007.

The condemnation was shortened and split in the 2012 cycle and the Rappahannock River and the mouth of Richardson Creek were now open for harvest; those portions were partially delisted. The closed portion is considered Category 4A.

Condemnations expanded and merged again in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24E_RIC01A04 / Richardson Creek / Richardson Creek within SFC 025-071A, 3/25/2015 (non-administrative.) RPPMH	4A	Fecal Coliform	1998	L	0.277
VAP-E24E_RPP01E18 / Rappahannock River / The Rappahannock River mainstem within VDH shellfish condemnation 025-071A, 3/25/2015 (non-admin) RPPMH	4A	Fecal Coliform	2018	L	0.061

Richardson Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.338**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24E-02-BAC** **Totuskey Creek**

Cause Location: The tidal portions of Totuskey Creek.

City / County: Richmond Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Totuskey Creek was previously assessed as not supporting of the Recreation Use because of fecal coliform exceedances at the Route 3 bridge (3-TOT005.11). During the 2006 cycle, the segment remained impaired for fecal coliform and enterococci was added as an impairment. During the 2008 cycle, the impairment converted solely to enterococci. The bacteria TMDL was due in 2014.

The bacterial TMDL was approved by the EPA on 2/19/2010 and by the SWCB on 9/30/2010. Totuskey Creek is considered a Category 4A water.

Additional monitoring has been conducted. During the 2016 cycle, the enterococci exceedance rates were as follows:

17/37 at 3-TOT005.11 (2020 cycle)
6/12 at 3-TOT006.34
6/12 at 3-LIK000.15
2/11 at 2-MAY000.12
1/6 (IN) at 3-LIK002.12

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24E_LIK01A12 / Little Totuskey Creek / Tidal limit to mouth at Totuskey Creek	4A	Enterococcus	2006	L	0.055
RPPMH					
VAP-E24E_TOT01A00 / Totuskey Creek / The segment boundary is delineated in VDH condemnation 025-071B, 3/25/2015 excluding Little Totuskey Creek.	4A	Enterococcus	2006	L	0.302
RPPMH					
VAP-E24E_TOT02A00 / Totuskey Creek / Portion of VDH shellfish condemnation 025-071A, 3/25/2015 within Totuskey Creek.	4A	Enterococcus	2006	L	0.647
RPPMH					
VAP-E24E_TOT02B10 / Totuskey Creek / Downstream of VDH shellfish condemnation 025-071A, 3/25/2015.	4A	Enterococcus	2006	L	0.064
RPPMH					

Totuskey Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**1.068**		

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24E-02-EBTOX** **Totuskey Creek**

Cause Location: The tidal portions of Totuskey Creek.

City / County: Richmond Co.

Use(s): Aquatic Life

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

During the 2006 cycle, estuarine probabilistic monitoring was conducted through the Coastal 2000 program at 3-TOT007.84 and 3-TOT004.92. The data was assessed by DEQ-CO through the Weight of Evidence approach. The alteration at station 3-TOT007.84 was assessed as Category 5A.

Note: The impairment cause was changed from toxics to estuarine bioassessments in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24E_LIK01A12 / Little Totuskey Creek / Tidal limit to mouth at Totuskey Creek	5A	Estuarine Bioassessments	2006	L	0.055
RPPMH					
VAP-E24E_TOT01A00 / Totuskey Creek / The segment boundary is delineated in VDH condemnation 025-071B, 3/25/2015 excluding Little Totuskey Creek.	5A	Estuarine Bioassessments	2006	L	0.302
RPPMH					
VAP-E24E_TOT02A00 / Totuskey Creek / Portion of VDH shellfish condemnation 025-071A, 3/25/2015 within Totuskey Creek.	5A	Estuarine Bioassessments	2006	L	0.647
RPPMH					
VAP-E24E_TOT02B10 / Totuskey Creek / Downstream of VDH shellfish condemnation 025-071A, 3/25/2015.	5A	Estuarine Bioassessments	2006	L	0.064
RPPMH					

Totuskey Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**1.068**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E24R-01-BAC** **Bookers Mill Stream**

Cause Location: Bookers Mill Stream from its headwaters to its mouth at the confluence with Totuskey Creek.

City / County: Richmond Co.

Use(s): Recreation

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

Bookers Mill Stream was assessed not supporting of the Recreation Use support goal in 2002 based on fecal coliform exceedances recorded at the Route 612 bridge (3-BMS002.00). Monitoring was discontinued in 2001; therefore, the previous assessment was carried over.

The bacterial TMDL for the tidal Recreation Use and Shellfish Use impairments on Totuskey Creek was approved by the EPA on 2/19/2010 and by the SWCB on 9/30/2010. The impairment is considered to be nested (Category 4A).

Additional monitoring was conducted during the 2012 cycle; the E. coli exceedance rates were as follows:
3/12 at 3-BMS000.37
2/12 at 3-BMS002.00
5/12 at 3-BMS004.42

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_BMS01A98 / Bookers Mill Stream / Bookers Mill Stream in its entirety.	4A	Escherichia coli (E. coli)	2012	L	6.53

Bookers Mill Stream **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**6.53**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-01-DO** **Bookers Mill Stream**

Cause Location: Bookers Mill Stream from its headwaters to its mouth at the confluence with Totuskey Creek.

City / County: Richmond Co.

Use(s): Aquatic Life

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

During the 2012 cycle, Bookers Mill Stream was impaired of the Aquatic Life Use due to the following dissolved oxygen exceedance rates:

2/12 at 3-BMS000.37
0/14 at 3-BMS002.00 (FS)
3/12 at 3-BMS004.42

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_BMS01A98 / Bookers Mill Stream / Bookers Mill Stream in its entirety.	5C	Dissolved Oxygen	2012	L	6.53

Bookers Mill Stream **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**6.53**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E24R-02-BAC** **Totuskey Creek**

Cause Location: The free flowing portion of Totuskey Creek.

City / County: Richmond Co.

Use(s): Recreation

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

During the 2006 cycle, the nontidal portion of Totuskey Creek was assessed as not supporting the Recreation Use due to E. coli exceedances at 3-TOT009.95, which is located at the Route 619 bridge.

The bacterial TMDL for the tidal Recreation Use and Shellfish Use impairments was completed during the 2010 cycle. It was approved by the EPA on 2/19/2010 and by the SWCB on 9/30/2010. The nontidal Recreation Use impairment is considered to be nested (Category 4A).

During the 2012 cycle, the exceedance rates were as follows:
5/25 at 3-TOT009.95
3/12 at 3-TOT012.53
4/12 at 3-TOT014.49

The exceedance rate was 3/11 at 3-TOT009.95 in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_TOT01A06 / Totuskey Creek / The nontidal portion of Totuskey Creek	4A	Escherichia coli (E. coli)	2006	L	8.04

Totuskey Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**8.04**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-03-BAC** **Muddy Gut**

Cause Location: Headwaters to mouth at Rappahannock River.

City / County: Essex Co.

Use(s): Recreation

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

During the 2008 cycle, Muddy Gut was assessed as impaired of the Recreation Use based on an E. coli violation rate of 5/10 at the Route 607 bridge (3-MUG000.96).

Muddy Gut is located within the study area for the Upper Rappahannock Shellfish TMDL, which was approved by the EPA on 2/10/2010 and by the SWCB on 9/30/2010. Muddy Gut is considered nested (Category 4A).

No additional data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_MUG01A08 / Muddy Gut / Headwaters to mouth at the Rappahannock River.	4A	Escherichia coli (E. coli)	2008	L	2.63

Muddy Gut **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**2.63**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E24R-03-PH** **Muddy Gut**

Cause Location: Headwaters to mouth at Rappahannock River.

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2008 cycle, Muddy Gut was assessed as impaired of the Aquatic Life Use based on a pH exceedance rate of 4/10 at the Route 607 bridge (3-MUG000.96).

No additional data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_MUG01A08 / Muddy Gut / Headwaters to mouth at the Rappahannock River.	5C	pH	2008	L	2.63

Muddy Gut **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.63**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-04-BAC** **Little Totuskey Creek**

Cause Location: Headwaters to the tidal limit

City / County: Richmond Co.

Use(s): Recreation

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

During the 2012 cycle, Little Totuskey Creek was assessed as not supporting the Recreation Use due to an E. coli exceedance rate of 2/12 at LIK002.21, which is located at the Route 360 bridge.

The bacterial TMDL for the tidal Totuskey Creek Recreation Use and Shellfish Use impairments was approved by the EPA on 2/19/2010 and by the SWCB on 9/30/2010. The Recreation Use impairment is considered to be nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_LIK01A08 / Little Totuskey Creek / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2012	L	1.90

Little Totuskey Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**1.90**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-05-PH** **Branham Mill Swamp**

Cause Location: Branham Mill Swamp from its headwaters to its mouth at Marshy Swamp

City / County: Richmond Co.

Use(s): Aquatic Life

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

During the 2012 cycle, Branham Mill Swamp was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 3-BRA000.85.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_BRA01A08 / Branham Mill Swamp / Headwaters to mouth at Marshy Swamp	5C	pH	2012	L	3.66

Branham Mill Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.66**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E24R-06-BAC** **Richardson Creek and Tributaries**

Cause Location: Headwaters to the tidal limit

City / County: Richmond Co.

Use(s): Recreation

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

During the 2012 cycle, the streams were assessed as impaired of the Recreation Use due to E. coli exceedances.

4/23 at 2-RIC003.85
4/12 at 3-RIC005.00
5/12 at 3-RIC006.43
3/12 at 3-RNF002.04
1/12 at 3-XHJ000.04 (FS)

The exceedance rate was 3/11 in the 2020 cycle at 3-RIC003.85.

The bacterial TMDL for the tidal Totuskey and Richardson Creeks Recreation Use and Shellfish Use impairments was approved by the EPA on 2/19/2010 and by the SWCB on 9/30/2010. The Recreation Use impairment is considered to be nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_RIC01A12 / Richardson Creek and Tributaries / The nontidal streams in the Richardson Creek watershed.	4A	Escherichia coli (E. coli)	2012	L	17.21

Richardson Creek and Tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**17.21**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-06-DO** **Richardson Creek and Tributaries**

Cause Location: Headwaters to the tidal limit

City / County: Richmond Co.

Use(s): Aquatic Life

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

During the 2012 cycle, Richardson Creek and its tributaries were impaired of the Aquatic Life Use due to dissolved oxygen exceedances.

During the 2016 cycle, the exceedance rates were as follows:

11/24 at 3-RIC003.85
0/12 (FS) at 3-RIC005.00
4/12 at 3-RIC006.43
1/12 (FS) at 3-RNF002.04
7/12 at 3-XHJ000.04

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_RIC01A12 / Richardson Creek and Tributaries / The nontidal streams in the Richardson Creek watershed.	5C	Dissolved Oxygen	2012	L	17.21

Richardson Creek and Tributaries **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**17.21**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-06-PH** **Richardson Creek and Tributaries**

Cause Location: Headwaters to the tidal limit

City / County: Richmond Co.

Use(s): Aquatic Life

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

During the 2012 cycle, Richardson Creek and its tributaries were impaired of the Aquatic Life Use due to pH exceedances.

The pH exceedance rates were as follows in the 2016 cycle:

16/24 at 3-RIC003.85
3/12 at 3-RIC005.00
11/12 at 3-RIC006.43
2/12 at 3-RNF002.04
7/12 at 3-XHJ000.04

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_RIC01A12 / Richardson Creek and Tributaries / The nontidal streams in the Richardson Creek watershed.	5C	pH	2012	L	17.21

Richardson Creek and Tributaries **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**17.21**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-07-BAC** **Totuskey Creek Tributaries**

Cause Location: The tributaries of Totuskey Creek above the confluence with Little Totuskey Creek, excluding Bookers Mill Swamp

City / County: Richmond Co.

Use(s): Recreation

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

During the 2012 cycle, the tributaries were impaired of the Recreation Use due to widespread E. coli exceedances.

3/11 at 3-MIL000.15
4/12 at 3-DRK001.35
4/12 at 3-XHK000.65
4/11 at 3-XHL000.96
6/11 at 3-XHM000.27

The bacterial TMDL for the tidal Totuskey and Richardson Creeks Recreation Use and Shellfish Use impairments was approved by the EPA on 2/19/2010 and by the SWCB on 9/30/2010. The Recreation Use impairment is considered to be nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_TOT02B12 / Totuskey Creek Tributaries / The nontidal tributaries of Totuskey Creek above the confluence with Little Totuskey, unless otherwise segmented.	4A	Escherichia coli (E. coli)	2012	L	73.26
VAP-E24R_XHL01A12 / XHL - Bookers Mill Stream, UT / Headwaters to mouth at Bookers Mill Stream	4A	Escherichia coli (E. coli)	2012	L	2.01

Totuskey Creek Tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**75.27**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E24R-08-PH** **XHL - Bookers Mill Stream, UT**

Cause Location: Headwaters to mouth at Bookers Mill Stream

City / County: Richmond Co.

Use(s): Aquatic Life

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

During the 2012 cycle, tributary XHL was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/11 at 3-XHL000.96, which is located at the Route 603 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_XHL01A12 / XHL - Bookers Mill Stream, UT / Headwaters to mouth at Bookers Mill Stream	5C	pH	2012	L	2.01

XHL - Bookers Mill Stream, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.01**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-09-DO** **Marshy Swamp**

Cause Location: Headwaters to tidal limit

City / County: Northumberland Co. Richmond Co. Westmoreland Co.

Use(s): Aquatic Life

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

During the 2012 cycle, nontidal Marshy Swamp was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/12 at 3-MAY008.43, which is located at Route 618.

Other stations in the stream were acceptable. In addition, the exceedance rate fell to 4/24 during the 2016 cycle; therefore, further monitoring is recommended.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_MAY01A12 / Marshy Swamp / Headwaters to tidal limit	5C	Dissolved Oxygen	2012	L	9.53

Marshy Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**9.53**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-10-BAC** **Bellview Creek**

Cause Location: Bellview Creek from its headwaters to its mouth at the Rappahannock River.

City / County: Essex Co.

Use(s): Recreation

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

During the 2020 cycle, Bellview Creek was impaired of the Recreation Use due to an E.coli exceedance rate of 4/10 at 3-BLV002.94, which is located at Route 611.

The stream is located within the study area for the Upper Rappahannock Shellfish TMDL, which was approved by the EPA on 8/10/2010 and by the EPA on 12/13/2010. The impairment is proposed for nesting (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_BLV01A20 / Bellview Creek / Headwaters to mouth at the Rappahannock River	4A	Escherichia coli (E. coli)	2020	L	3.30

Bellview Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**3.30**

Sources:

Municipal Point Source Discharges

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-10-DO** **Bellview Creek**

Cause Location: Bellview Creek from its headwaters to its mouth at the Rappahannock River.

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2020 cycle, Bellview Creek was impaired of the Aquatic Life Use to a dissolved oxygen exceedance rate of 2/10 at 3-BLV002.94, which is located at Route 611.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_BLV01A20 / Bellview Creek / Headwaters to mouth at the Rappahannock River	5C	Dissolved Oxygen	2020	L	3.30

Bellview Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**3.30**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E24R-10-PH** **Bellview Creek**

Cause Location: Bellview Creek from its headwaters to its mouth at the Rappahannock River.

City / County: Essex Co.

Use(s): Aquatic Life

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

During the 2020 cycle, Bellview Creek was impaired of the Aquatic Life Use to a pH exceedance rate of 10/10 at 3-BLV002.94, which is located at Route 611.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E24R_BLV01A20 / Bellview Creek / Headwaters to mouth at the Rappahannock River	5C	pH	2020	L	3.30

Bellview Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.30**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-01-BAC** **Lagrange Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 028-127A, 1/23/2018

City / County: Middlesex Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, Lagrange Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 2/12 at 3-LGG001.92, which is located at the end of Route 656.

The Lagrange Creek Shellfish Bacterial TMDL was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006. Implementation of that TMDL is expected to bring the stream into compliance with the Recreation WQS; therefore, the impairment is considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_LGG01A98 / Lagrange Creek / As described in VDH SFC 028-127A, 1/12/2018.	4A	Enterococcus	2012	L	0.470
Segment shrank in 2020 cycle.					
RPPMH					
VAP-E25E_LGG01B18 / Lagrange Creek / Portion of VDH SFC 127, 6/11/1996 open on 028-127, 1/23/2018.	4A	Enterococcus	2012	L	0.120
Expanded in 2020 cycle.					
RPPMH					

Lagrange Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.590**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-01-SF** **Lagrange Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 028-127A, 1/23/2018

City / County: Middlesex Co.

Use(s): Shellfishing

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

VDH Shellfish Condemnation 028-127A,1/23/2018

A portion of Lagrange Creek was assessed in 1998 as not supporting the Shellfish Consumption Use based on VDH-DSS Condemnation 127, 6/11/1996. The TMDL for this portion was approved by the EPA on 11/15/2005 and by the SWCB on 11/15/2005. The segment is classified as Cat. 4A.

The condemnation has expanded and contracted several times. The condemnation expanded during the 2016 cycle and became larger than the TMDL area. The expansion was nested in the upstream TMDL and was addressed in fact sheet E25E-06-SF.

The condemnation shrank in the 2018 cycle and is now smaller than the 1998 impairment. The expansion was delisted. The condemned area is Category 4A. The now-open area which was addressed in the TMDL was partially delisted (Category 2C.)

It shrank further in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_LGG01A98 / Lagrange Creek / As described in VDH SFC 028-127A, 1/12/2018.	4A	Fecal Coliform	1998	L	0.470

Segment shrank in 2020 cycle.

RPPMH

Lagrange Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.470**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-02-BAC** **Robinson Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 177, 5/28/1997

City / County: Middlesex Co.

Use(s): Recreation

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

In 2002, the segment was assessed as not supporting the Recreation Use due to fecal coliform exceedances at the end of Route 680 (3-ROS001.35). The violation rate in the 2004 cycle was 4/20. There has been no additional monitoring since 2001.

The area was addressed in the "Rappahannock River: Lagrange and Robinson Creeks TMDL Report for Shellfish Condemnation Areas Listed due to Bacteria Contamination" which was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006. Because the bacteria standard for the Shellfish Use is more stringent than the standard for the Recreation Use, the area was considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_ROS01A00 / Robinson Creek / Described in VDH shellfish condemnation 028-177A, -E, and -F, 1/23/2018	4A	Fecal Coliform	1998	L	0.126

Split in the 2020 cycle.

RPPMH

Robinson Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.126**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-02-SF** **Robinson Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 177, 5/28/1997

City / County: Middlesex Co.

Use(s): Shellfishing

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

VDH Shellfish Condemnation 028-177A, -E, and -F, 1/23/2018

The upstream portion of Robinson Creek was assessed in 1998 as not supporting the Shellfish Consumption Use based on VDH-DSS Condemnation 177, 5/28/1997.

The TMDL was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006. The impairment is classified as Category 4A.

In the 2020 cycle, the condemnation shrank and split. The open and seasonally condemned areas will be partially delisted (Category 2C/2B.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_ROS01A00 / Robinson Creek / Described in VDH shellfish condemnation 028-177A, -E, and -F, 1/23/2018	4A	Fecal Coliform	1998	L	0.126

Split in the 2020 cycle.

RPPMH

Robinson Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.126**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-05-BAC** **Farnham Creek**

Cause Location: Farnham Creek from its tidal limit to its mouth at the Rappahannock River.

City / County: Richmond Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

In 2002, Farnham Creek was assessed as not supporting of the Recreation Use due to fecal coliform exceedances at 3-FAM002.62, which is located at the Route 608 bridge.

The bacteria TMDL for shellfish condemnations in Farnham Creek was completed was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2008. The Recreation Use impairment is considered to be nested.

The impairment converted to enterococci in the 2010 cycle.

During the 2016 cycle, the exceedance rate was 8/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_FAM01A98 / Farnham Creek / As delineated in VDH shellfish condemnation VDH shellfish condemnation 070, 10/22/1996.	4A	Enterococcus	2010	L	0.431

Segment merged in the 2020 cycle.

RPPMH

Farnham Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.431**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-05-SF** **Farnham Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 024-070A, 1/7/2019.

City / County: Richmond Co.

Use(s): Shellfishing

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

VDH-DSS Condemnation 024-070A, 1/7/2019

Farnham Creek has been assessed as not supporting the Shellfish Use since 1998. The TMDL was due in 2010.

The bacteria TMDL for shellfish condemnations in Farnham Creek was approved by the EPA on 8/2/2006. The TMDL was based on the extent of the 1998 condemnation, which extended to the mouth of Farnham Creek (070, 10/22/1996).

During the 2010 cycle, the condemnation size was reduced; the lower portion now open for harvest was partially delisted (Category 2C). The condemned area is considered a Category 4A water for the Shellfish Consumption Use.

The condemnation expanded in the 2020 cycle and now matches the extent of the completed TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_FAM01A98 / Farnham Creek / As delineated in VDH shellfish condemnation VDH shellfish condemnation 070, 10/22/1996.	4A	Fecal Coliform	1998	L	0.431

Segment merged in the 2020 cycle.

RPPMH

Farnham Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.431**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-07-SF** **Parrotts Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 090, 4/27/1989

City / County: Middlesex Co.

Use(s): Shellfishing

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

Portion of VDH shellfish condemnation 027-090A, 1/27/2015

The Shellfish TMDL report for "Rappahannock River: Mud and Parrotts Creeks" was approved by the EPA on 11/15/2005 and by the SWCB on9/27/2006. The TMDL addressed the 1998 portion of the current condemnation; therefore, the impairment is considered Cat. 4A. The downstream portion of the Parrotts Creek condemnation is addressed in fact sheet E25E-27-SF.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_PRR01A02 / Parrotts Creek / The segment boundaries are delineated in VDH shellfish condemnation 090, 4/27/1989.	4A	Fecal Coliform	1998	L	0.153

RPPMH

Parrotts Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.153**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-10-SF** **Deep Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 121, 11/16/1994

City / County: Lancaster Co.

Use(s): Shellfishing

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

Portion of VDH-DSS Shellfish Condemnation 023-121B, 1/7/2019

A 0.0491 sq. mi. portion of Deep Creek was assessed as impaired of the Shellfish Consumption Use on the 1998 303(d) list due to VDH condemnation 121, 11/16/1994.

The condemnation began expanding in the 2002 cycle. However, the shellfish TMDL, which was approved by the EPA on 8/2/2006, only addressed the 1998 impairment. The original area is considered a Category 4A water; the TMDL for the downstream portion is addressed in fact sheet E25E-10-SF2.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_DEE01A04 / Deep Creek / Described in VDH shellfish condemnation 121, 11/16/1994.	4A	Fecal Coliform	1998	L	0.049

RPPMH

Deep 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 2020

Rappahannock River Basin

***Cause Group Code:* E25E-10-SF2** **Deep Creek**

Cause Location: Portions of VDH Notice and Description of Shellfish Condemnation 023-121B and VDH-DSS condemnations 023-121D, -E, and -F, 1/7/2019 not included in the 11/16/1994 condemnation

City / County: Lancaster Co.

Use(s): Shellfishing

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

Portions of VDH-DSS condemnations 023-121B and VDH-DSS condemnations 023-121D, -E, and -F, 1/7/2019 not included in the 11/16/1994 condemnation

A 0.0491 sq. mi. portion of Deep Creek was assessed as impaired of the Shellfish Consumption Use on the 1998 303(d) list due to VDH condemnation 121, 11/16/1994. The condemnation began expanding in the 2002 cycle; however, the TMDL was completed only for the original impairment (see fact sheet E25E-10-SF). The TMDL for this downstream portion was due in 2014.

The expanded portion is nested within the upstream Deep Creek Shellfish TMDL, which was approved by the EPA on 8/2/2006.

The condemnations shrank slightly in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_DEE01B08 / Deep Creek / Portions of VDH-DSS condemnations 023-121B, -D, -E, and -F, 1/7/2019 not included in the 11/16/1994 condemnation.	4A	Fecal Coliform	2002	L	0.064

Size decreased in the 2020 cycle.

RPPMH

Deep Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.064**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-11-SF** **Lancaster Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 023-120A, 8/14/1995

City / County: Lancaster Co. Richmond Co.

Use(s): Shellfishing

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

Portion of VDH shellfish condemnation 020-120A, 1/7/2019

A portion of Lancaster Creek was assessed as impaired of the Shellfish Use in the 1998 cycle due to VDH Shellfish Condemnation 120A, 8/14/1995.

The TMDL Report for Shellfish Areas Listed due to Bacterial Contamination for Lancaster Creek was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007. Although the condemnation on Lancaster Creek has extended downstream since the 1998 cycle, only the original impairment was included in the TMDL. The expansion is addressed in fact sheet E25E-11-SF2. This 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-E25E_LAN01A98 / Lancaster Creek / As delineated in VDH SFC 023-120A, 8/14/1995.	4A	Fecal Coliform	1998	L	0.270

RPPMH

Lancaster Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.270**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-11-SF2** **Lancaster Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 023-120A, 12/19/2016 not included in condemnation 023-120A, 8/14/1995

City / County: Lancaster Co. Richmond Co.

Use(s): Shellfishing

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

Portion of VDH shellfish condemnation 020-120A, 1/7/2019
VDH-DSS shellfish condemnation 020-120S118, 1/7/2019

A portion of Lancaster Creek was assessed as impaired of the Shellfish Use in the 1998 cycle due to VDH Shellfish Condemnation 120A, 8/14/1995. Although the condemnation on Lancaster Creek has extended downstream since the 1998 cycle, only the original impairment was included when the TMDL was developed. Since the segment was first expanded downstream in the 2002 cycle, the TMDL for this downstream segment was due in 2014.

It is considered nested in the upstream "TMDL Report for Shellfish Areas Listed due to Bacterial Contamination for Lancaster Creek," which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007.

The condemnation expanded slightly in the 2018 cycle (portion of VDH shellfish condemnation 020-120A, 12/19/2016).

The condemned area shrank in the 2020 cycle and the downstream portion is now seasonally condemned and will be partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_LAN01B08 / Lancaster Creek / The portion of VDH SFC 023-120A, 1/7/2019 not included in 120A, 8/14/1995.	4A	Fecal Coliform	2002	L	0.082

Segment split in the 2020 cycle.

RPPMH

Lancaster Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.082**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-12-SF** **Morattico Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 023-120B, 1/7/2019

City / County: Richmond Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 023-120B, 1/7/2019

The Morattico Creek shellfish impairment is nested in the neighboring "TMDL Report for Shellfish Areas Listed due to Bacterial Contamination for Lancaster Creek," which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_MTT01A00 / Morattico Creek / Delineated in VDH SFC 023-120B, 1/7/2019.	4A	Fecal Coliform	2002	L	0.138

RPPMH

Morattico 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 2020

Rappahannock River Basin

Cause Group Code: **E25E-13-SF** **Mulberry Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 0123-121A, 1/7/2019

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 023-121A,1/7/2019

A portion of Mulberry Creek was included on the 1998 303(d) list due to VDH Shellfish condemnation 120B, 8/14/1995. The TMDL for Shellfish Areas Listed due to Bacterial Contamination for Mulberry Creek was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007.

The TMDL only addressed the fecal coliform impairment within the 1998 portion of Mulberry Creek. The segment has shrunk and extended several times. During the 2014 cycle, the condemnation expanded again and was larger than the TMDL area; the expansion was addressed in fact sheet E25E-03-SF. It shrank again during the 2016 cycle and the condemnation is smaller than the original impairment. The closed area remains Category 4A and the opened area was partially delisted (Category 2C).

The closure shrank further in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_MUB01A02 / Mulberry Creek / Described in VDH shellfish condemnation 023-121A, 1/7/2019.	4A	Fecal Coliform	1998	L	0.094

Segment shrank in the 2020 cycle.

RPPMH

Mulberry Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.094**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-15-BAC** **Greenvale Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 094, 11/7/1994

City / County: Lancaster Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, Greenvale Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 4/5 at 3-GEE001.44, which is located at Route 624.

As the area is within the Greenvale Creek Shellfish TMDL which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007, the impairment is considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_GEE01A98 / Greenvale Creek / The segment boundaries are delineated in VDH shellfish condemnation 094, 11/7/1994.	4A	Enterococcus	2012	L	0.087

RPPMH

Greenvale Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.087**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-15-SF** **Greenvale Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 094, 11/7/1994

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH-DSS condemnation 022-094A,11/7/2018

A portion of Greenvale Creek was included on the 1998 303(d) list due to VDH condemnation 94, 11/7/1994.

The bacteria TMDL for the Shellfish Impairment on Greenvale Creek was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007.

The impairment has subsequently expanded (022-094A, 9/24/2009); however, the TMDL only addressed the 1998 portion, which is considered Category 4A. The expansion is addressed in E25E-29-SF.

The condemnation shrank in the 2020 cycle and is now co-incident with the TMDL segment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_GEE01A98 / Greenvale Creek / The segment boundaries are delineated in VDH shellfish condemnation 094, 11/7/1994.	4A	Fecal Coliform	1998	L	0.087

RPPMH

Greenvale Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.087**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-22-SF** **Robinson Creek / Perkins Creek**

Cause Location: As described in VDH Shellfish Condemnation 028-177B and -C, 1/23/2018

City / County: Middlesex Co.

Use(s): Shellfishing

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

Described in VDH Shellfish Condemnation 028-177B and -C, 1/23/2018

The upstream portion of Robinson Creek was assessed in 1998 as not supporting the Shellfish Consumption Use based on VDH-DSS Condemnation 177, 5/28/1997. The TMDL for this original portion has been completed.

During the 2006 cycle, however, the condemnation extended downstream. It is considered nested in the upstream Robinson Creek Shellfish TMDL, which was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_ROS02A04 / Robinson Creek / Perkins Creek / Described in VDH Shellfish Condemnation 028-177B and -C, 1/23/2018.	4A	Fecal Coliform	2006	L	0.039

RPPMH

Robinson Creek / Perkins Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.039**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-23-SF** **Robinson Creek**

Cause Location: As described in VDH Shellfish Condemnation 028-177D, 1/23/2018

City / County: Middlesex Co.

Use(s): Shellfishing

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

Described in VDH Shellfish Condemnation 028-177D, 1/23/2018

The upstream portion of Robinson Creek was assessed in 1998 as not supporting the Shellfish Consumption Use based on VDH-DSS Condemnation 177, 5/28/1997. The TMDL for this original portion has been completed.

During the 2006 cycle, however, the condemnation extended downstream. It was considered nested in the upstream Robinson Creek Shellfish TMDL, which was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006.

During the 2016 cycle, a tributary (028-177D) was converted to seasonally condemned (028-177M2, 1/24/2014. Therefore, it was partially delisted.

It was relisted in the 2018 cycle and is still considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_ROS02C16 / Robinson Creek / Described in VDH Shellfish Condemnation 028-177D, 1/23/2018.	4A	Fecal Coliform	2018	L	0.016

RPPMH

Robinson Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.016**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-25-SF** **Mulberry Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 023-121C, 1/7/2019

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH Shellfish Condemnation 023-121C, 1/7/2019

It is considered nested within the TMDL for Shellfish Areas Listed due to Bacterial Contamination for Mulberry Creek, which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_MUB03A08 / Mulberry Creek / Described in VDH shellfish condemnation 023-021C, 1/7/2019.	4A	Fecal Coliform	2018	L	0.008

RPPMH

Mulberry 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 2020

Rappahannock River Basin

***Cause Group Code:* E25E-27-SF** **Parrotts Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 027-090A, 1/27/2015 not included in 90, 4/27/1989

City / County: Middlesex Co.

Use(s): Shellfishing

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

Portion of VDH shellfish condemnation 027-090A, 1/27/2015

A portion of Parrotts Creek was listed in the 1998 cycle due to VDH condemnation 027-090A, 8/18/2009. The Shellfish TMDL report for "Rappahannock River: Mud and Parrotts Creeks" was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006.

The condemnation subsequently expanded. The expanded area is considered nested in the upstream Parrotts Creek TMDL.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_PRR02A08 / Parrotts Creek / Condemnation 027-090A, 1/27/2015 downstream of VDH Condemnation 090, 4/27/1989.	4A	Fecal Coliform	2008	L	0.011

RPPMH

Parrotts Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.011**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25E-28-SF** **Paynes Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 022-094B,11/7/2018

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH-DSS Shellfish Condemnation 022-094B,11/7/2018

On older summaries Paynes Creek was shown to be non-productive. However, during the 2008 cycle, the area was determined to be condemned.

It is considered nested in the nearby Greenvale Creek Shellfish TMDL, which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_PAY01A02 / Paynes Creek / As delineated in VDH-DSS SFC 022-094B, 9/24/2009.	4A	Fecal Coliform	2008	L	0.049

RPPMH

Paynes 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 2020

Rappahannock River Basin

***Cause Group Code:* E25E-30-BAC** **Town Bridge Swamp**

Cause Location: Town Bridge Swamp from its tidal limit to its mouth at tidal Urbanna Creek

City / County: Middlesex Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, sampling on Town Bridge Swamp at 3-TWN000.35 upstream of Urbanna Creek indicated that a portion of the creek is tidally influenced. Town Bridge Swamp is impaired of the Recreation Use due to an enterococci exceedance rate of 5/11.

The impairment is considered nested due to the downstream Urbanna Creek Shellfish TMDL, which was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_TWN01A12 / Town Bridge Swamp / Tidal limit to mouth at Urbanna Creek	4A	Enterococcus	2012	L	0.002

RPPMH

Town Bridge Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.002**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25E-31-PCB** **Urbanna Creek**

Cause Location: Urbanna Creek from its tidal limit to its mouth at the Rappahannock River.

City / County: Middlesex Co.

Use(s): Fish Consumption

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

During the 2020 cycle, tidal Urbanna Creek was impaired of the Fish Consumption Use due to exceedance of the fish tissue level in croaker and gizzard shad during monitoring in 2018 at station 2-URB000.00.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_URB01A00 / Urbanna Creek / As described in VDH-DSS SFC 029-042B, 2/14/2006.	5A	PCBs in Fish Tissue	2020	L	0.215
RPPMH					
VAP-E25E_URB02A00 / Urbanna Creek / As delineated in VDH shellfish condemnation 029-042A, 2/14/2006.	5A	PCBs in Fish Tissue	2020	L	0.238
RPPMH					

Urbanna Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	**0.452**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25R-01-BAC** **Laton Swamp**

Cause Location: Laton Swamp from its headwaters to its mouth at Farnham Creek

City / County: Richmond Co.

Use(s): Recreation

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

During the 2014 cycle, Laton Swamp was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 3-LAT002.34, which is located at Route 3.

The impairment is nested in the downstream Farnham Creek Shellfish TMDL, which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25R_LAT01A14 / Laton Swamp / Headwaters to mouth at Farnham Creek.	4A	Escherichia coli (E. coli)	2014	L	4.86

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

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25R-01-PH** **Mud Creek**

Cause Location: The tidal portion of Mud Creek.

City / County: Middlesex Co.

Use(s): Aquatic Life

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

Mud Creek was initially assessed as not supporting the Aquatic Life Use support goal in 2004 based on pH exceedances at 3-MUC002.31, located at the Route 648 bridge.

During the 2006 cycle, it was thought that the station's classification as tidal during the 2004 cycle was a mistake. The impairments were transferred to nontidal Mud Creek.

However, during the 2012 cycle, it was determined that the station is actually tidally influenced. The pH impairment was transferred to the tidal portion of Mud Creek.

A Natural Conditions Assessment was completed during the 2014 cycle; the report recommends that the pH impairment be considered "...Category 4C, Impairment Caused by Pollution."

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25E_MUC01A04 / Mud Creek / Described in VDH SFC 027-090B, 8/26/2008	4C	pH			0.204

RPPMH

Mud Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	**0.204**		

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E25R-02-DO** **Lagrange Creek**

Cause Location: Lagrange Creek from the headwaters to the extent of tide at approximately river mile 3.75.

City / County: Middlesex Co.

Use(s): Aquatic Life

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

Lagrange Creek was assessed in 2010 as not supporting of the Aquatic Life Use support goal based on dissolved oxygen exceedances recorded at the Route 610 bridge (3-LGG004.54).

The exceedance rate was 7/24 during the 2012 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25R_LGG01A98 / Lagrange Creek / Lagrange Creek from its headwaters to the limit of tidal influence.	5C	Dissolved Oxygen	2010	L	2.49

Lagrange Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**2.49**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25R-03-BAC** **Nickleberry Swamp**

Cause Location: Nickleberry Swamp from its headwaters to its mouth at Hilliard Pond

City / County: Middlesex Co.

Use(s): Recreation

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

During the 2012 cycle, Nickleberry Swamp was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 3-NIC000.38, which is located at Route 17.

The stream is located within the Lagrange Creek watershed, which has a completed shellfish TMDL. The TMDL was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006. The impairment is considered nested (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25R_NIC01A12 / Nickleberry Swamp / Headwaters to mouth at Hilliard Pond	4A	Escherichia coli (E. coli)	2012	L	1.86

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

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25R-04-BAC** **South Branch Lagrange Creek**

Cause Location: The nontidal portion of South Branch Lagrange Creek.

City / County: Middlesex Co.

Use(s): Recreation

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

During the 2012 cycle, the nontidal portion of South Branch Lagrange Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 3-LSB002.17, which is located at Route 602.

The stream is located within the Lagrange Creek watershed, which has a completed shellfish TMDL. The TMDL was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006. The impairment is considered nested (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25R_LSB01A12 / South Branch Lagrange Creek / Start at Hilliard Pond dam to tidal limit	4A	Escherichia coli (E. coli)	2012	L	0.40

South Branch Lagrange Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**0.40**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25R-04-DO** **South Branch Lagrange Creek**

Cause Location: The nontidal portion of South Branch Lagrange Creek.

City / County: Middlesex Co.

Use(s): Aquatic Life

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

South Branch Lagrange Creek was impaired of the Aquatic Life Use during the 2012 cycle due to a dissolved oxygen exceedance rate of 2/12 at 3-LSB002.17. The low dissolved oxygen (~2 mg/L) occurred during the summer months.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25R_LSB01A12 / South Branch Lagrange Creek / Start at Hilliard Pond dam to tidal limit	5A	Dissolved Oxygen	2012	L	0.40

South Branch Lagrange Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**0.40**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E25R-17-DO** **Masons Mill Swamp**

Cause Location: Masons Mill Swamp from its headwaters downstream to its tidal limit.

City / County: Middlesex Co.

Use(s): Aquatic Life

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

During older cycles, Masons Mill Swamp was mistakenly assessed as a tidal water. The creek was assessed as not supporting of the Aquatic Life Use for dissolved oxygen since the 2006 cycle because it was thought to be a part of the mesohaline portion of the Rappahannock; the TMDL had a 2010 due date because of the Bay Overlist.

However, during the 2008 cycle, it was determined that station 3-MAO000.62 is on the free flowing section of Masons Mill Swamp. The stream remained impaired for dissolved oxygen due to an exceedance rate of 4/13. The dissolved oxygen TMDL due date was changed to 2018.

Additional monitoring during the 2012 cycle confirmed the dissolved oxygen impairment (6/14).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E25R_MAO01A00 / Masons Mill Swamp / Masons Mill Swamp from its headwaters to its tidal limit near Route 604.	5C	Dissolved Oxygen	2008	L	3.37

Masons Mill Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**3.37**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E26E-01-SF** **Meachim Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 179A, 12/9/1996 closed on 030-179A, 9/13/2017

City / County: Middlesex Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 030-179A and -C, 9/13/2017

Two portions of Meachim Creek were included on the 1998 303(d) list due to 179A and 179B, 12/9/1996. The Shellfish TMDL was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006.

The condemnations have expanded and shrunk several times. In the 2018 cycle, the condemnations are currently smaller than the TMDL study areas.

The closed area shrank further in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_MEA01A00 / Meachim Creek / Described in VDH shellfish condemnation 030-179A and -*C, 9/13/2017.	4A	Fecal Coliform	1998	L	0.058

Segment shrank in the 2020 cycle.

RPPMH

Meachim Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.058**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E26E-02-SF** **Meachim Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 179B, 12/9/1996 closed in 030-179B,9/13/2017.

City / County: Middlesex Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 030-179B, 9/13/2017

This area was included on the 1998 303(d) list due to VDH condemnation 179B, 12/9/1996. The impairment was addressed in the Meachim and Whiting Creek Shellfish TMDL, which was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006. The impairment has subsequently expanded and contracted in multiple cycles.

During the 2012 cycle, the condemnation shrank considerably and is now smaller than the TMDL study area. The open area within the TMDL study area was partially delisted (Category 2C.) The condemnation remains Category 4A.

The condemnation shrank again in the 2018 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_MEA01B00 / Meachim Creek / Described in VDH shellfish condemnation 030-179B, 9/13/2017.	4A	Fecal Coliform	1998	L	0.012

RPPMH

Meachim Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.012**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-04-EBEN** **Corrotoman River**

Cause Location: The mainstem Corrotoman River and its large branches within segment CRRMH.

City / County: Lancaster Co.

Use(s): Aquatic Life

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

During the 2014 cycle, the mainstem Corrotoman River and its large tributaries were impaired of the Aquatic Life Use due to an insufficient Chesapeake Bay Index of Biological Integrity (B-IBI).

The impairment continued in the 2020 cycle. In addition, an impaired benthic community was noted at estuarine probabilistic monitoring station 3-CTM000.38 during monitoring in 2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_CRR01A00 / Corrotoman River / The mainstem of the Corrotoman River within segment CRRMH.	5A	Estuarine Bioassessments	2014	L	3.769
VAP-E26E_CTM01A00 / Eastern Branch Corrotoman River / The boundaries are described in VDH shellfish condemnations 021-058B, 10/31/2018. Size decreased in the 2020 cycle. CRRMH	5A	Estuarine Bioassessments	2014	L	0.369
VAP-E26E_CTM01B10 / Eastern Branch Corrotoman River / Portion of VDH shellfish condemnation 058C, 4/28/1997 open on 11/16/2016. Segment split in the 2020 cycle. CRRMH	5A	Estuarine Bioassessments	2014	L	0.046
VAP-E26E_CTM01C20 / Eastern Branch Corrotoman River / Described in VDH shellfish condemnation 021-058S61, 10/31/2018. Segment split in the 2020 cycle. CRRMH	5A	Estuarine Bioassessments	2014	L	0.206
VAP-E26E_CTM03A08 / Eastern Branch Corrotoman River / Downstream boundary of VDH condemnation 021-058C, 4/28/1997 to mouth. CRRMH	5A	Estuarine Bioassessments	2014	L	0.758
VAP-E26E_CTO01A02 / Western Branch Corrotoman River / The boundaries are described in VDH shellfish condemnation 021-132A and -C, 10/31/2018, not otherwise segmented. Segment shrank in the 2020 cycle. CRRMH	5A	Estuarine Bioassessments	2014	L	0.296
VAP-E26E_CTO01B12 / Western Branch Corrotoman River / Portion of SFC 132, 4/28/1997 included in 021-132S64, 10/31/2018. Segment expanded and merged in the 2020 cycle.	5A	Estuarine Bioassessments	2014	L	0.302

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

CRRMH

VAP-E26E_CTO02A06 / Western Branch Corrotoman River / Mainstem downstream of SFC 132A, 4/28/1997	5A	Estuarine Bioassessments	2014	L	1.209

CRRMH

Corrotoman River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**6.956**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-05-SF** **Myer Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 198, 4/28/1997

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 021-198A, 10/31/2018

A portion of Myer Creek was included on the 1998 303(d) list due to VDH-DSS Condemnation 198, 4/28/1997. The TMDL was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008.

In the 2018 cycle, the area expanded and was now larger than the 1997 condemnation. The completed area was considered Category 4A. The expansion is addressed in fact sheet E26E-22-SF.

During the 2020 cycle, the condemnation shrank considerably and a large portion is now seasonally condemned (021-198S104, 10/31/2018). The restricted area is now smaller than the 1997 TMDL area, which will be partially delisted (Category 2C/2B). The expansion will be delisted (Category 2B).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_MYE01A00 / Myer Creek / As described in VDH shellfish condemnation 021-198A, 10/31/2018.	4A	Fecal Coliform	1998	L	0.021

Split in the 2020 cycle.

CRRMH

Myer Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.021**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-08-SF** **Senior Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 021-132B, 11/17/2015

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 021-132B, 10/31/2018

Senior Creek was included on the 1998 303(d) list due to VDH condemnation 132B, 4/28/1997. The TMDL was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008.

The condemnation shrank in the 2020 cycle and a portion is now seasonally condemned (021-132S105, 10/31/2018) and will be delisted. The condemned portion is considered Category 4A; the seasonal closure is Category 2C/2B.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_SEN01A00 / Senior Creek / The boundaries are described in VDH shellfish condemnation 021-132B, 10/31/2018.	4A	Fecal Coliform	1998	L	0.040

Segment split in the 2020 cycle.

CRRMH

Senior Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.040**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-09-SF** **Western Branch Corrotoman River**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 021-132A and -C, 10/31/2018

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 021-132A and -C, 10/31/2018

A portion of the Western Branch Corrotoman River was included on the 1998 303(d) list due to VDH condemnation 132A, 4/28/1997. The condemnation has subsequently shortened several times. In the 2020 cycle, the closure contracted again and split (021-132A and -C, 10/31/2018).

The TMDL was completed for the 1998 boundary; it was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008. The condemned portion is considered Category 4A; the open portion is considered Category 2C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_BLD01A98 / Belwood Swamp / Tidal limit to its mouth at the Western Branch Corrotoman River. CRRMH	4A	Fecal Coliform	2002	L	0.009
VAP-E26E_CTO01A02 / Western Branch Corrotoman River / The boundaries are described in VDH shellfish condemnation 021-132A and -C, 10/31/2018, not otherwise segmented. Segment shrank in the 2020 cycle. CRRMH	4A	Fecal Coliform	1998	L	0.296
VAP-E26E_LIT01A06 / Little Branch / Tidal limit to mouth at Western Branch Corrotoman River CRRMH	4A	Fecal Coliform	1998	L	0.114

Western Branch Corrotoman River **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.419**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-10-SF** **Bush Park Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 109, 4/27/1989

City / County: Middlesex Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 032-109A, 12/10/2009

Bush Park Creek was included on the 1998 303(d) list as impaired of the Shellfish Consumption Use due to VDH condemnation 109, 4/27/1989. The TMDL for this area was approved by the EPA on 6/7/2006 and by the SWCB on 6/27/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_BPC01A98 / Bush Park Creek / The segment boundaries are delineated in VDH shellfish condemnation 109, 4/27/1989.	4A	Fecal Coliform	1998	L	0.103

RPPMH

Bush Park Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.103**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-11-SF** **Mill Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 031-102B, 9/11/2018

City / County: Middlesex Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 031-102A, 9/6/2018

A portion of Mills Creek was impaired in the 1998 cycle due to VDH condemnation 103, 12/10/1991. The TMDL for this segment was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007. The segment is considered Category 4A.

However, during the 2012 cycle, the condemnation retracted and is smaller than the TMDL study area. The open area within the TMDL study area was partially delisted (Category 2C.)

The condemnation shrank further in the 2020 cycle and a portion was changed to seasonally condemned (031-102S34, 9/6/2018); it will be also be partially delisted (Category 2C/2B).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_MLL01A98 / Mill Creek / Described in VDH shellfish condemnation 031-102A, 9/6/2018	4A	Fecal Coliform	1998	L	0.077

RPPMH

Mill Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.077**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-12-SF** **Sturgeon Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 032-104A, 9/11/2018

City / County: Middlesex Co.

Use(s): Shellfishing

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

VDH condemnation 032-104A, 9/11/2018

A portion of Sturgeon Creek was included on the 1998 303(d) list due to VDH shellfish condemnation 104, 11/28/1994. The TMDL was approved by the EPA on 6/7/2006 and by the SWCB on 6/27/2007.

In the 2012 cycle, the condemnation shortened and split. A portion was reopened for harvest and another portion is now seasonally condemned (032-104M1); both areas were partially delisted (Category 2C). The remaining condemned area is Category 4A.

The condemned area shrank further during the 2014 cycle.

In the 2020 cycle, the condemnation shrank further and a portion is now only seasonally condemned (032-104S37, 9/11/2018); the seasonal section will be partially delisted (Category 2C/2B.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_STE01A98 / Sturgeon Creek / The segment boundaries are delineated in VDH shellfish condemnation 032-104A, 9/11/2018.	4A	Fecal Coliform	1998	L	0.044

RPPMH

Sturgeon 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 2020

Rappahannock River Basin

***Cause Group Code:* E26E-13-BAC** **Locklies Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 102, 10/31/1994

City / County: Middlesex Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, Locklies Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 2/12 at 3-LOL000.77.

As this impairment is within the study area for the Locklies and Mill Creek Shellfish TMDL, which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007, 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-E26E_LOL01A02 / Locklies Creek / Delineated in VDH shellfish condemnation 031-102B. 9/6/2018. RPPMH	4A	Enterococcus	2012	L	0.073
VAP-E26E_LOL01B12 / Locklies Creek / Portion of VDH shellfish condemnation 102, 10/31/1994 seasonally condemned in 031-102M1, 9/6/2018. RPPMH	4A	Enterococcus	2012	L	0.028

Locklies Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.101**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E26E-13-SF** **Locklies Creek**

Cause Location: Portion of VDH Notice and Description of Shellfish Condemnation 102,10/31/1994 included in 031-102B, 9/6/2018

City / County: Middlesex Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 031-102B, 9/6/2018

Locklies Creek was included on the 1998 303(d) list due to VDH condemnation 102, 4/13/1993. The Locklies Creek Shellfish TMDL was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007; the TMDL was based on the extent of condemnation 102, 10/31/1994.

During the 2012 cycle, the condemnation retracted and a portion of the TMDL study area was included in the seasonal condemnation 031-102M1. The seasonally condemned segment was partially delisted (Category 2C); the condemned area is considered a Category 4A water.

The condemnation grew slightly during the 2014 cycle, but remains smaller than the TMDL study area.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_LOL01A02 / Locklies Creek / Delineated in VDH shellfish condemnation 031-102B. 9/6/2018.	4A	Fecal Coliform	1998	L	0.073

RPPMH

Locklies Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.073**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-14-SF** **Hills Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 58A, 4/25/1997

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH shellfish condemnation 021-058A, 10/31/2018

Hills Creek was included on the 1998 303(d) list due to VDH-DSS Condemnation 58A, 4/28/1997. The TMDL was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008.

During the 2020 cycle, the condemnation shrank and a portion is now seasonally condemned and will be partially delisted (021-058S59, 10/31/2018). The closed segment is considered Category 4A and the seasonal area is Category 2C/2B

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_HLS01A00 / Hills Creek / The boundaries are described in VDH shellfish condemnation 021-058A, 10/31/2018.	4A	Fecal Coliform	1998	L	0.038

Split in the 2020 cycle.

CRRMH

Hills 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 2020

Rappahannock River Basin

***Cause Group Code:* E26E-16-SF** **Eastern Branch Corrotoman River**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnations 021-058B and 021-058C, 10/31/2018

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH shellfish condemnations 021-058B and 021-058C, 10/31/2018

The Eastern Branch Corrotoman River was included on the 1998 303(d) list due to VDH condemnation 58C, 4/28/1997. The TMDL was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008. The condemnation subsequently shortened. The condemned area is considered Category 4A waters; the open area was previously partially delisted and is Category 2C.

The condemned area has expanded and contracted several times. It split again in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_CTM01A00 / Eastern Branch Corrotoman River / The boundaries are described in VDH shellfish condemnations 021-058B, 10/31/2018.	4A	Fecal Coliform	1998	L	0.369

Size decreased in the 2020 cycle.

CRRMH

Eastern Branch Corrotoman River **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.369**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-17-SF** **Eastern Branch Carter Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 041C, 11/1/1996

City / County: Lancaster Co.

Use(s): Shellfishing

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

Portion of VDH shellfish condemnation 020-041A, 11/8/2018

A portion of Eastern Branch Carters Creek was assessed as impaired of the Shellfish Use during the 1998 303(d) cycle due to VDH condemnation 41C, 11/1/1996. Although the segment has expanded several times, the TMDL was completed only for the original segment. It was approved by the EPA on 9/20/2007 and by the SWCB on 7/31/2008. The original segment is considered Category 4A; the TMDL due date for the downstream portion was 2014 since it first expanded during the 2002 cycle (see fact sheet E26E-46-SF).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_CEB01A00 / Eastern Branch Carter Creek / Described in VDH shellfish condemnation 041C, 11/1/1996.	4A	Fecal Coliform	1998	L	0.084

RPPMH

Eastern Branch Carter Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.084**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-21-SF** **XII - Windmill Point, UT (aka White Marsh)**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 018-053B, 7/23/2018

City / County: Lancaster Co. Middlesex Co.

Use(s): Shellfishing

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

VDH-DSS condemnation 018-053B, 12/4/2015

The impairment is nested in the shellfish TMDL for Oyster Creek, which was approved by the EPA on 4/15/2009 and by the SWCB on 7/27/2009. It is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_XII01A18 / XII - Windmill Point, UT (aka White Marsh) / Described in VDH-DSS condemnation 018-053B, 7/23/2018	4A	Fecal Coliform	2018	L	0.034

RPPMH

XII - Windmill Point, UT (aka White Marsh) **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.034**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-24-BAC** **Whiting Creek**

Cause Location: Tidal Whiting Creek as described in VDH Shellfish Condemnation 030-051A, 9/1/2015

City / County: Middlesex Co.

Use(s): Recreation

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

During the 2012 cycle, Whiting Creek was impaired of the Recreation Use due to an enterococci exceedance rate of 3/19 at 3-WHS000.89.

Although Whiting Creek is administratively condemned by VDH and the Shellfish Use is therefore considered removed, the TMDL was completed and was approved by the EPA on 11/15/2005 and by the SWCB on 9/27/2006. However, the TMDL did not include a nearby VPDES discharger; therefore, the Recreation Use cannot be considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_WHS01B00 / Whiting Creek / As delineated in VDH shellfish condemnation 030-051A, 9/1/2015.	5A	Enterococcus	2012	L	0.195

RPPMH

Whiting Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.195**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-26-BAC** **Little Branch**

Cause Location: Little Branch from its tidal limit to its mouth at the Western Branch Corrotoman River

City / County: Lancaster Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Little Branch was assessed as not supporting of the Recreation Use during the 2006 cycle due to enterococci exceedances at 3-LIT000.85, which is located at a private dock off Route 620. The segment remained impaired during the 2010 cycle; the violation rate was 3/11. No additional data has been collected.

The area was addressed in the Western Branch Corrotoman River Shellfish TMDL, which was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008. Because the bacterial standard for the Shellfish Use is more stringent than the standard for the Recreation Use, the impairment is considered to be nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_LIT01A06 / Little Branch / Tidal limit to mouth at Western Branch Corrotoman River	4A	Enterococcus	2006	L	0.114

CRRMH

Little Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.114**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-27-BAC** **Belwood Swamp**

Cause Location: Tidal Belwood Swamp

City / County: Lancaster Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Riverine Belwood Swamp was initially assessed in 1998 as fully supporting but threatened of the Recreation Use based on exceedances of the fecal coliform standard at monitoring station 3-BLD000.58, located at the Route 3 bridge. During the year 2002 cycle, the segment was downgraded to impaired.

However, in the 2006 cycle, it was determined that the station is tidally influenced. The station remained impaired for fecal coliform and the fact sheet and AU were renamed. The TMDL was due in 2014. There had been no enterococci monitoring at this site; therefore, the fecal coliform impairment was carried over.

The area was addressed in the Western Branch Corrotoman River Shellfish TMDL, which was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008. Because the bacterial standard for the Shellfish Use is more stringent than the standard for the Recreation Use, the impairment is considered to be nested (Category 4A).

Additional monitoring was conducted during the 2012 cycle. The impairment converted to enterococci due to an exceedance rate of 8/12 at 3-BLD000.58.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_BLD01A98 / Belwood Swamp / Tidal limit to its mouth at the Western Branch Corrotoman River.	4A	Enterococcus	2012	L	0.009

CRRMH

Belwood Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.009**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-28-BAC** **Western Branch Corrotoman River**

Cause Location: The Western Branch Corrotoman River from its tidal limit to the downstream extent of VDH-DSS condemnation 021-132A and -C, 10/31/2018

City / County: Lancaster Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

During the 2012 cycle, the upper portion of the Western Branch Corrotoman River was impaired of the Recreation Use due to an enterococci exceedance rate of 7/12 at 3-CTO007.51, which is located off of Route 3.

The area was already addressed in the Corrotoman River Watershed Shellfish Bacterial TMDL, which was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008. The condemned portion is considered nested (Category 4A).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_CTO01A02 / Western Branch Corrotoman River / The boundaries are described in VDH shellfish condemnation 021-132A and -C, 10/31/2018, not otherwise segmented.	4A	Enterococcus	2012	L	0.296

Segment shrank in the 2020 cycle.

CRRMH

Western Branch Corrotoman River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.296**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26E-42-SF** **Hunting Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 032-104B, 9/11/2018

City / County: Lancaster Co. Middlesex Co.

Use(s): Shellfishing

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

VDH Shellfish Condemnation 032-104B, 9/11/2018

The Hunting Creek shellfish impairment is nested in the nearby Sturgeon Creek Shellfish TMDL, which was approved by the EPA on 6/7/2006 and by the SWCB on 6/27/2007.

The size decreased in the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_HNU01A08 / Hunting Creek / Described in VDH Condemnation 032-104B, 9/11/2018.	4A	Fecal Coliform	2008	L	0.020

RPPMH

Hunting 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 2020

Rappahannock River Basin

***Cause Group Code:* E26E-46-SF** **Eastern Branch Carter Creek**

Cause Location: VDH-DSS condemnation 020-041C, 11/8/2018 and the portion of VDH condemnation 020-041A, 11/8/2018 not included on condemnation 41, 11/1/1996

City / County: Lancaster Co.

Use(s): Shellfishing

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

Portion of VDH shellfish condemnation 020-041A, 11/8/2018
VDH-DSS condemnation 020-041C, 11/8/2018

A portion of Eastern Branch Carter Creek was assessed as impaired of the Shellfish Use during the 1998 303(d) cycle due to VDH condemnation 41C, 11/1/1996. Although the segment has expanded several times, the TMDL was completed only for the original segment. The TMDL due date for this downstream portion was 2014 since it first expanded during the 2002 cycle.

It is considered nested in the upstream Eastern Branch Carter Creek Shellfish TMDL, which was approved by the EPA on 9/20/2007.

It expanded further in the 2018 cycle.

The closure shrank and split in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_CEB01B08 / Eastern Branch Carter Creek / VDH-DSS condemnation 020-041C, 11/8/2018 and the portion of VDH shellfish condemnation 020-041A, 11/8/2018 not included in 041C, 11/1/1996.	4A	Fecal Coliform	2002	L	0.053

Shrank in the 2020 cycle.

RPPMH

Eastern Branch Carter Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.053**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

Cause Group Code: **E26E-53-SF** **John Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation 021-132D, 10/31/2018

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH Shellfish Condemnation 021-132D, 10/31/2018

John Creek is considered nested within the Western Branch Corrotoman River Shellfish TMDL, which was approved by the EPA on 1/23/2008 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-E26E_JON01A08 / John Creek / Described in VDH-DSS Condemnation 021-132D, 10/31/2018.	4A	Fecal Coliform	2008	L	0.036

CRRMH

John Creek **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 2020

Rappahannock River Basin

***Cause Group Code:* E26E-55-SF** **Mosquito Creek**

Cause Location: As described in VDH Notice and Description of Shellfish Condemnation 018-203A, 11/7/2018

City / County: Lancaster Co.

Use(s): Shellfishing

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

VDH-DSS Condemnation 018-203A, 11/7/2018

Mosquito Creek was included on the 1998 303(d) list due to VDH Condemnation 203, 11/22/1996. The Mosquito Creek Shellfish TMDL was approved by the EPA on 4/15/2009 and by the SWCB on 7/27/2009.

The condemnation was subsequently rescinded several times.

A portion was relisted in the 2020 cycle (018-203A, 10/28/2014). It is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26E_MOS01C20 / Mosquito Creek / The boundaries are delineated in VDH shellfish condemnation 018-203A, 11/7/2018.	4A	Fecal Coliform	2020	L	0.012

RPPMH

Mosquito Creek **Shellfishing**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	**0.012**		

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26R-01-BAC** **Belwood Swamp and Tributaries**

Cause Location: Belwood Swamp and tributaries from its headwaters to its tidal limit.

City / County: Lancaster Co.

Use(s): Recreation

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

During the 2012 cycle, the nontidal Belwood Swamp watershed was impaired of the Recreation Use due to E. coli exceedances at Belwood Swamp at station 3-BLD001.54 and McMahon Swamp at 3-MCM000.96. In the 2014 cycle, the exceedance rates were 9/27 and 6/12, respectively.

Additional monitoring was conducted at 3-BLD001.54 in the 2020 cycle; the E. coli exceedance rate was 5/11.

The area drains to tidal Belwood Swamp, which was included in the Corrotoman River Shellfish Bacterial TMDL, which was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008. Implementation of the TMDL is expected to address the nontidal area; therefore, 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-E26R_BLD01A08 / Belwood Swamp and Tributaries / Watershed from its headwaters to tidal limit	4A	Escherichia coli (E. coli)	2012	L	24.54

Belwood Swamp and Tributaries **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**24.54**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26R-03-DO** **Norris Prong**

Cause Location: Norris Prong from its headwaters to its tidal limit.

City / County: Lancaster Co.

Use(s): Aquatic Life

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

During the 2008 cycle, Norris Prong was considered impaired of the Aquatic Life Use based on a dissolved oxygen exceedance rate of 4/10 at the Route 3 bridge (3-NOR001.00).

No additional data has been collected.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26R_NOR01A08 / Norris Prong / Headwaters to tidal limit	5C	Dissolved Oxygen	2008	L	2.47

Norris Prong **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**2.47**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26R-04-BAC** **Browns Creek**

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

City / County: Lancaster Co.

Use(s): Recreation

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

During the 2008 cycle, Browns Creek was considered impaired of the Recreation Use based on E. coli exceedances at the Route 614 bridge (3-BON001.65).

The exceedance rate was 5/24 in the 2014 cycle.

Additional monitoring was conduced in the 2020 cycle; the exceedance rate was 4/11.

The impairment is considered nested (Category 4A) because it is located within the watershed study area for the Corrotoman River Shellfish TMDL, which was approved by the EPA on 1/23/2008 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-E26R_BON01A08 / Browns Creek / Headwaters to tidal limit	4A	Escherichia coli (E. coli)	2008	L	2.58

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

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26R-04-DO** **Browns Creek**

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

City / County: Lancaster Co.

Use(s): Aquatic Life

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

During the 2008 cycle, Browns Creek was considered impaired of the Aquatic Life Use based on dissolved oxygen exceedances at the Route 614 bridge (3-BON001.65).

The exceedance rate was 5/25 during the 2014 cycle.

Additional monitoring was conduced in the 2020 cycle; the exceedance rate was 3/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E26R_BON01A08 / Browns Creek / Headwaters to tidal limit	5C	Dissolved Oxygen	2008	L	2.58

Browns Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			**2.58**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* E26R-05-BAC** **Little Branch**

Cause Location: Nontidal Little Branch below Blakemore Millpond

City / County: Lancaster Co.

Use(s): Recreation

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

During the 2014 cycle, the segment was impaired of the Recreation Use due to an E. coli exceedance rate of 5/12 at station 3-LIT001.89, which is located on Little Branch at Route 201.

The watershed was addressed in the Western Branch Corrotoman River Shellfish Bacterial TMDL, which was approved by the EPA on 1/23/2008 and by the SWCB on 7/31/2008. Implementation of the TMDL is expected to address the nontidal area; therefore, 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-E26R_LIT01A14 / Little Branch / Blakemore Millpond dam downstream to its tidal limit	4A	Escherichia coli (E. coli)	2014	L	0.63

Little Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			**0.63**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* RPPMH-DO-BAY** **Rappahannock River**

Cause Location: The mesohaline Rappahannock River and tidal tributaries.

City / County: Essex Co. Lancaster Co. Middlesex Co. Richmond Co. Westmoreland Co.

Use(s): Aquatic Life Deep-Channel Seasonal Refuge Deep-Water Aquatic Life Open-Water Aquatic Life

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

The mainstem of the Rappahannock River from Myrtle Swamp to its mouth was originally listed in 1998 by DEQ due to dissolved oxygen exceedances and nutrient overenrichment. The EPA extended the segment upstream to the confluence with Totuskey Creek. In the 2004 cycle, dissolved oxygen exceedances were noted in deep water and deep channel stations downstream of the confluence with Lancaster Creek (Morattico), which is further downstream.

The Chesapeake Bay Water Quality Standards were implemented during the 2006 cycle. During the 2014 cycle, the mesohaline portion of the Rappahannock failed the Chesapeake Bay Open Water Subuse's summer 30-day mean dissolved oxygen criterion. Applicable areas also failed the Deep Water 30-day mean dissolved oxygen criteria and the Deep Channel Subuse's instantaneous minimum dissolved oxygen criteria.

RPPMH passed both Open Water Subuse 30-day mean criterion as well as the Deep Water summer 30-day mean criterion in the 2016 cycle; these areas were delisted in the tributaries (Category 2C). However, due to EPA rules, areas included on the 1998 EPA overlist for dissolved oxygen must remain listed until all dissolved oxygen criteria can be assessed. This includes the Rappahannock River mainstem from Totuskey Creek to the mouth as well as the tidal Corrotoman River. These areas were considered Category 4D.

In the 2018 cycle, Deep Water areas also were impaired.

In the 2020 cycle, the Deep Water and Deep Channel Subuses continue to be impaired in applicable areas. In addition, the Open Water Use also failed. The Chesapeake Bay TMDL was approved by the EPA on 12/29/2010; therefore, all areas are considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-E22E_RPP05A02 / Rappahannock River / The oligohaline/mesohaline boundary at river mile 48.51 downstream to the upstream limit of VDH shellfish condemnation area 025A-068A, 3/24/2015.	4A	Dissolved Oxygen	2020	L	6.958
RPPMH					
VAP-E22E_WAR01A18 / Waterview Creek / Tidal portion of Waterview Creek	4A	Dissolved Oxygen	2020	L	0.038
RPPMH					
VAP-E22E_ZZZ02A06 / Unsegmented estuaries in E22 / Unsegmented portion of watershed.	4A	Dissolved Oxygen	2020	L	0.013
RPPMH					
VAP-E23E_CAT01A02 / Cat Point Creek / The tidal portion of Cat Point Creek.	4A	Dissolved Oxygen	2020	L	1.280
RPPMH					
VAP-E23E_CRC01A08 / Church Swamp / Tidal limit to mouth at Hoskins Creek	4A	Dissolved Oxygen	2020	L	0.002
RPPMH					

Rappahannock River Basin

VAP-E23E_HOK02A08 / Hoskins Creek / Hoskins Creek from its tidal limit to the confluence with Church Swamp.	4A	Dissolved Oxygen	2020	L	0.052
RPPMH					
VAP-E23E_HOK02A10 / Hoskins Creek / Hoskins Creek from the confluence with Church Swamp downstream to the Tappahannock STP.	4A	Dissolved Oxygen	2020	L	0.016
RPPMH					
VAP-E23E_LIE01A98 / Little Carter Creek, Jugs Creek / Tidal limit to mouth at the Rappahannock River.	4A	Dissolved Oxygen	2020	L	0.419
RPPMH					
VAP-E23E_MTL01A10 / Mount Landing Creek / Tidal limit to mouth at the Rappahannock River.	4A	Dissolved Oxygen	2020	L	0.172
RPPMH					
VAP-E23E_PIS02A00 / Piscataway Creek / The estuarine portion of Piscataway Creek.	4A	Dissolved Oxygen	2020	L	0.589
RPPMH					
VAP-E23E_RPP02A98 / Rappahannock River / Mainstem Rappahannock as described in VDH shellfish condemnation 025A-068A, 3/24/2015 excluding administratively condemned portion.	4A	Dissolved Oxygen	2020	L	7.035
RPPMH					
VAP-E23E_RPP02B10 / Rappahannock River / Portion of mainstem Rappahannock River that is administratively condemned within condemnation 025A-068A, 3/24/2015.	4A	Dissolved Oxygen	2020	L	0.158
RPPMH					
VAP-E23E_RPP02C12 / Rappahannock River / Portion of VDH shellfish condemnation 025A-068A, 11/14/2005 not included in 025A-068A, 3/24/2015.	4A	Dissolved Oxygen	2020	L	1.474
RPPMH					
VAP-E23E_ZZZ02A06 / Unsegmented estuaries in E23 / Unsegmented portion within SFC 025A-068A, 3/24/2015.	4A	Dissolved Oxygen	2020	L	0.046
RPPMH					
VAP-E23E_ZZZ02B10 / Unsegmented estuaries in E23 / Administrative portion within SFC 025A-068A, 3/24/2015	4A	Dissolved Oxygen	2020	L	0.007
RPPMH					
VAP-E23E_ZZZ02C12 / Unsegmented estuaries in E23 / Unsegmented portion within Upper Rappahannock TMDL not included in SFC 025-068A, 3/24/2015.	4A	Dissolved Oxygen	2020	L	0.004
RPPMH					
VAP-E24E_LIK01A12 / Little Totuskey Creek / Tidal limit to mouth at Totuskey Creek	4A	Dissolved Oxygen	2020	L	0.055
RPPMH					
VAP-E24E_RIC01A04 / Richardson Creek / Richardson Creek	4A	Dissolved Oxygen	2020	L	0.277

Rappahannock River Basin

within SFC 025-071A, 3/25/2015 (non-administrative.)

RPPMH

VAP-E24E_RIC01B10 / Richardson Creek / Portion of Richardson Creek within VDH-DSS condemnation 025-071A, 3/16/2007 open on 3/25/2015.	4A	Dissolved Oxygen	2020	L	0.044

RPPMH

VAP-E24E_RIC01C10 / Richardson Creek / Portion of Richardson Creek within SFC 025-071A, 3/25/2015 (administratively condemned)	4A	Dissolved Oxygen	2020	L	0.024

RPPMH

VAP-E24E_RPP01B14 / Garrett's Marina / As delineated in VDH shellfish condemnation 026-181A, 3/25/2015.	4A	Dissolved Oxygen	2020	L	0.003

RPPMH

VAP-E24E_RPP01B98 / Rappahannock River: Garrett's Marina / As delineated in VDH shellfish condemnation 026-181M1, 3/25/2015.	4A	Dissolved Oxygen	1998	L	0.025

RPPMH

VAP-E24E_RPP01C06 / Rappahannock River / The Rappahannock River mainstem within VDH shellfish condemnation 025-071A, 3/16/2007 (non-admin) that is currently open	4A	Dissolved Oxygen	1998	L	0.644

RPPMH

VAP-E24E_RPP01D10 / Rappahannock River / The portion of the Rappahannock River within VDH shellfish condemnation 025-071A, 3/25/2015(administratively condemned)	4A	Dissolved Oxygen	1998	L	0.137

RPPMH

VAP-E24E_RPP01E18 / Rappahannock River / The Rappahannock River mainstem within VDH shellfish condemnation 025-071A, 3/25/2015 (non-admin)	4A	Dissolved Oxygen	1998	L	0.061

RPPMH

VAP-E24E_RPP03A00 / Rappahannock River / The Rappahannock River from the limit of VDH shellfish condemnation 068A, 11/14/2005 downstream to end of MSN (Sharps/0.7 mi DS of Mark Haven Beach) unless otherwise segmented	4A	Dissolved Oxygen	1998	L	10.919

RPPMH

VAP-E24E_TOT01A00 / Totuskey Creek / The segment boundary is delineated in VDH condemnation 025-071B, 3/25/2015 excluding Little Totuskey Creek.	4A	Dissolved Oxygen	2020	L	0.302

RPPMH

VAP-E24E_TOT02A00 / Totuskey Creek / Portion of VDH shellfish condemnation 025-071A, 3/25/2015 within Totuskey Creek.	4A	Dissolved Oxygen	2020	L	0.647

RPPMH

VAP-E24E_TOT02B10 / Totuskey Creek / Downstream of VDH shellfish condemnation 025-071A, 3/25/2015.	4A	Dissolved Oxygen	2020	L	0.064

Rappahannock River Basin

RPPMH

VAP-E25E_DEE01A04 / Deep Creek / Described in VDH shellfish condemnation 121, 11/16/1994.	4A	Dissolved Oxygen	2020	L	0.049

RPPMH

VAP-E25E_DEE01B08 / Deep Creek / Portions of VDH-DSS condemnations 023-121B, -D, -E, and -F, 1/7/2019 not included in the 11/16/1994 condemnation.	4A	Dissolved Oxygen	2020	L	0.064

Size decreased in the 2020 cycle.

RPPMH

VAP-E25E_DEE02A20 / Deep Creek / As described in VDH-DSS Condemnation 023-121S121, 1/7/2019.	4A	Dissolved Oxygen	2020	L	0.076

RPPMH

VAP-E25E_FAM01A98 / Farnham Creek / As delineated in VDH shellfish condemnation VDH shellfish condemnation 070, 10/22/1996.	4A	Dissolved Oxygen	2020	L	0.431

Segment merged in the 2020 cycle.

RPPMH

VAP-E25E_GEE01A98 / Greenvale Creek / The segment boundaries are delineated in VDH shellfish condemnation 094, 11/7/1994.	4A	Dissolved Oxygen	2020	L	0.087

RPPMH

VAP-E25E_GEE02A06 / Greenvale Creek / Described in VDH-DSS condemnation 022-094S108, 11/7/2018.	4A	Dissolved Oxygen	2020	L	0.012

RPPMH

VAP-E25E_GEE02B10 / Greenvale Creek/Belmont Creek / Portion of Greenvale Creek downstream of the 9/24/2009 condemnation	4A	Dissolved Oxygen	2020	L	0.038

RPPMH

VAP-E25E_HRY01A06 / Harry George Creek / Designated in VDH SFC 027-202B, 9/11/2013	4A	Dissolved Oxygen	2020	L	0.095

RPPMH

VAP-E25E_LAN01A98 / Lancaster Creek / As delineated in VDH SFC 023-120A, 8/14/1995.	4A	Dissolved Oxygen	2020	L	0.270

RPPMH

VAP-E25E_LAN01B08 / Lancaster Creek / The portion of VDH SFC 023-120A, 1/7/2019 not included in 120A, 8/14/1995.	4A	Dissolved Oxygen	2020	L	0.082

Segment split in the 2020 cycle.

RPPMH

VAP-E25E_LAN01C20 / Lancaster Creek / As described in VDH SFC 023-120S118, 1/7/2019.	4A	Dissolved Oxygen	2020	L	0.156

RPPMH

Rappahannock River Basin

VAP-E25E_LAN02A02 / Lancaster Creek / The mouth of Lancaster Creek downstream of VDH SFC 023-120S119, 1/7/2019, not otherwise segmented.	4A	Dissolved Oxygen	2020	L	1.174
RPPMH					
VAP-E25E_LAN02B20 / Lancaster Creek / Described in VDH SFC 023-120S119, 1/7/2019	4A	Dissolved Oxygen	2020	L	0.108
RPPMH					
VAP-E25E_LAN03A06 / Lancaster Creek / Described in VDH SFC 023-120M1, 1/7/2019	4A	Dissolved Oxygen	2020	L	0.023
RPPMH					
VAP-E25E_LGG01A98 / Lagrange Creek / As described in VDH SFC 028-127A, 1/12/2018.	4A	Dissolved Oxygen	2020	L	0.470
Segment shrank in 2020 cycle.					
RPPMH					
VAP-E25E_LGG01B18 / Lagrange Creek / Portion of VDH SFC 127, 6/11/1996 open on 028-127, 1/23/2018.	4A	Dissolved Oxygen	2020	L	0.120
Expanded in 2020 cycle.					
RPPMH					
VAP-E25E_LGG02A06 / Lagrange Creek / Lagrange Creek downstream of SFC 127, 6/11/1996	4A	Dissolved Oxygen	2020	L	0.048
RPPMH					
VAP-E25E_MTT01A00 / Morattico Creek / Delineated in VDH SFC 023-120B, 1/7/2019.	4A	Dissolved Oxygen	2020	L	0.138
RPPMH					
VAP-E25E_MUB01A02 / Mulberry Creek / Described in VDH shellfish condemnation 023-121A, 1/7/2019.	4A	Dissolved Oxygen	2020	L	0.094
Segment shrank in the 2020 cycle.					
RPPMH					
VAP-E25E_MUB01B16 / Mulberry Creek / Portion of VDH shellfish condemnation 120B, 8/14/1995, not condemned in 023-121,1/7/2019.	4A	Dissolved Oxygen	2020	L	0.054
Segment expanded in the 2020 cycle.					
RPPMH					
VAP-E25E_MUB02A06 / Mulberry Creek / Downstream of VDH shellfish condemnation 023-121S120, 1/7/2019.	4A	Dissolved Oxygen	2020	L	0.051
RPPMH					
VAP-E25E_MUB02B20 / Mulberry Creek / From the boundary of VDH shellfish condemnation 120B, 8/14/1995 downstream to the boundary of VDH-DSS condemnation 023-121S120, 1/7/2019.	4A	Dissolved Oxygen	2020	L	0.041
RPPMH					

Rappahannock River Basin

VAP-E25E_MUB03A08 / Mulberry Creek / Described in VDH shellfish condemnation 023-021C, 1/7/2019.	4A	Dissolved Oxygen	2020	L	0.008
RPPMH					
VAP-E25E_MUC01A04 / Mud Creek / Described in VDH SFC 027-090B, 8/26/2008	4A	Dissolved Oxygen	2020	L	0.204
RPPMH					
VAP-E25E_PAY01A02 / Paynes Creek / As delineated in VDH-DSS SFC 022-094B, 9/24/2009.	4A	Dissolved Oxygen	2020	L	0.049
RPPMH					
VAP-E25E_PRR01A02 / Parrotts Creek / The segment boundaries are delineated in VDH shellfish condemnation 090, 4/27/1989.	4A	Dissolved Oxygen	2020	L	0.153
RPPMH					
VAP-E25E_PRR02A08 / Parrotts Creek / Condemnation 027-090A, 1/27/2015 downstream of VDH Condemnation 090, 4/27/1989.	4A	Dissolved Oxygen	2020	L	0.011
RPPMH					
VAP-E25E_ROS01A00 / Robinson Creek / Described in VDH shellfish condemnation 028-177A, -E, and -F, 1/23/2018	4A	Dissolved Oxygen	2020	L	0.126
Split in the 2020 cycle.					
RPPMH					
VAP-E25E_ROS01B20 / Robinson Creek / Described in VDH shellfish condemnation 028-177M2, 1/23/2018	4A	Dissolved Oxygen	2020	L	0.042
RPPMH					
VAP-E25E_ROS01C20 / Robinson Creek / Portion of VDH shellfish condemnation 177, 5/28/1997 open in 028-177, 1/23/2018	4A	Dissolved Oxygen	2020	L	0.039
RPPMH					
VAP-E25E_ROS02A04 / Robinson Creek / Perkins Creek / Described in VDH Shellfish Condemnation 028-177B and -C, 1/23/2018.	4A	Dissolved Oxygen	2010	L	0.039
RPPMH					
VAP-E25E_ROS02B12 / Robinson Creek / Described in VDH Shellfish Condemnation 028-177M1, 1/23/2018.	4A	Dissolved Oxygen	2020	L	0.007
RPPMH					
VAP-E25E_ROS02C16 / Robinson Creek / Described in VDH Shellfish Condemnation 028-177D, 1/23/2018.	4A	Dissolved Oxygen	2020	L	0.016
RPPMH					
VAP-E25E_RPP01A02 / Rappahannock River / The mainstem of the Rappahannock River from end of MSN (Sharps/0.7 mi DS of Mark Haven Beach) to the start of deep channel.	4A	Dissolved Oxygen	1998	L	12.455
Segment adjusted in the 2020 cycle.					

Rappahannock River Basin

RPPMH

VAP-E25E_RPP01C10 / Rappahannock River: Mark Haven Beach Basin / The portion of VDH shellfish condemnation 026-181B, 1/20/2006 not administratively closed.	4A	Dissolved Oxygen	1998	L	0.010

RPPMH

VAP-E25E_RPP01C98 / Mark Haven Beach Basin / As delineated in VDH shellfish condemnation 026-181A, 4/3/2012.	4A	Dissolved Oxygen	2020	L	0.004

RPPMH

VAP-E25E_RPP02A02 / Rappahannock River / The mainstem of the Rappahannock River from the start of deep channel downstream to the mouth, excluding area in SFC 051A.	4A	Dissolved Oxygen	1998	L	68.829

Segment adjusted in the 2020 cycle.

RPPMH

VAP-E25E_RPP03A06 / Rappahannock River / Described in VDH SFC 024-070B, 1/7/2019.	4A	Dissolved Oxygen	1998	L	0.008

RPPMH

VAP-E25E_RPP03B16 / Rappahannock River / As described in VDH shellfish condemnation 026-181M2, 4/13/2018.	4A	Dissolved Oxygen	1998	L	0.003

RPPMH

VAP-E25E_TWN01A12 / Town Bridge Swamp / Tidal limit to mouth at Urbanna Creek	4A	Dissolved Oxygen	2020	L	0.002

RPPMH

VAP-E25E_URB01A00 / Urbanna Creek / As described in VDH-DSS SFC 029-042B, 2/14/2006.	4A	Dissolved Oxygen	2020	L	0.215

RPPMH

VAP-E25E_URB02A00 / Urbanna Creek / As delineated in VDH shellfish condemnation 029-042A, 2/14/2006.	4A	Dissolved Oxygen	2020	L	0.238

RPPMH

VAP-E25E_WEE01A00 / Weeks Creek / The segment boundaries are delineated in VDH shellfish condemnation 202, 10/8/1996.	4A	Dissolved Oxygen	2020	L	0.123

RPPMH

VAP-E25E_WEE02A04 / Weeks Creek / The portion of VDH shellfish condemnation 027-202A, 1/27/2015 not included in the 1989 closure.	4A	Dissolved Oxygen	2020	L	0.013

RPPMH

VAP-E25E_XDV01A02 / Beach Creek / The segment boundaries are delineated in VDH shellfish condemnation 022-116S107, 11/7/2018.	4A	Dissolved Oxygen	2020	L	0.083

RPPMH

VAP-E25E_ZZZ01A14 / Unsegmented estuaries in E25 / Unsegmented portion of watershed RA65	4A	Dissolved Oxygen	2020	L	0.077

Rappahannock River Basin

RPPMH					
VAP-E25E_ZZZ01C14 / Unsegmented estuaries in E25 / Unsegmented portion of watershed RA68.	4A	Dissolved Oxygen	2020	L	0.242
RPPMH					
VAP-E25E_ZZZ01D14 / Unsegmented estuaries in E25 / Unsegmented portion of watershed RA69.	4A	Dissolved Oxygen	2018	L	0.274
RPPMH					
VAP-E26E_BPC01A98 / Bush Park Creek / The segment boundaries are delineated in VDH shellfish condemnation 109, 4/27/1989.	4A	Dissolved Oxygen	2020	L	0.103
RPPMH					
VAP-E26E_BRD01A00 / Broad Creek / The boundaries are defined in VDH shellfish condemnation 033-038B, 11/21/2013.	4A	Dissolved Oxygen	2020	L	0.084
RPPMH					
VAP-E26E_BRD02A00 / Broad Creek / The boundaries are defined in VDH shellfish condemnation 033-038A, 11/21/2013.	4A	Dissolved Oxygen	2020	L	0.040
RPPMH					
VAP-E26E_BRD04A00 / Broad Creek / Described in VDH-DSS condemnation 033-038M1, 11/21/2013.	4A	Dissolved Oxygen	2020	L	0.037
RPPMH					
VAP-E26E_CEB01A00 / Eastern Branch Carter Creek / Described in VDH shellfish condemnation 041C, 11/1/1996.	4A	Dissolved Oxygen	2020	L	0.084
RPPMH					
VAP-E26E_CEB01B08 / Eastern Branch Carter Creek / VDH-DSS condemnation 020-041C, 11/8/2018 and the portion of VDH shellfish condemnation 020-041A, 11/8/2018 not included in 041C, 11/1/1996.	4A	Dissolved Oxygen	2020	L	0.053
Shrank in the 2020 cycle.					
RPPMH					
VAP-E26E_CRR02A08 / Corrotoman River / The portion of the Corrotoman River that is within CB segment RPPMH.	4A	Dissolved Oxygen	1998	L	1.039
VAP-E26E_CTR01A00 / Carter Creek / The segment boundaries are delineated in VDH shellfish condemnation 020-041E, 11/8/2018.	4A	Dissolved Oxygen	2020	L	0.204
RPPMH					
VAP-E26E_CTR02A00 / Carter Creek / The segment boundaries are delineated in VDH shellfish condemnation 020-041B, 11/8/2018.	4A	Dissolved Oxygen	2020	L	0.058
RPPMH					
VAP-E26E_CTR03A00 / Carter Creek / Portion of VDH-DSS SFC 020-041M1, 11/8/2018 not included in 020-041A, 11/1/1996.	4A	Dissolved Oxygen	2020	L	0.114
RPPMH					
VAP-E26E_CTR03B16 / Carter Creek / Carter Creek open in 020-041, 10/25/2016, excluding Yopps Cove.	4A	Dissolved Oxygen	2020	L	0.351

Rappahannock River Basin

Expanded in the 2020 cycle.

RPPMH

VAP-E26E_CTR03C18 / Bridge Cove / Described in VDH-DSS condemnation 020-041D, 11/8/2018.	4A	Dissolved Oxygen	2020	L	0.005

Shrank in the 2020 cycle.

RPPMH

VAP-E26E_CTR03D18 / Yopps Cove / Described in VDH-DSS condemnation 020-041E, 10/25/2016.	4A	Dissolved Oxygen	2020	L	0.022

RPPMH

VAP-E26E_CTR04A02 / Carter Cove / Described in VDH-DSS SFC 020-041C, 10/25/2016.	4A	Dissolved Oxygen	2020	L	0.018

RPPMH

VAP-E26E_CTR04B14 / Carter Cove / Portion of VDH-DSS SFC 020-041A, 11/1/1996 included in 020-041M1, 11/8/2018.	4A	Dissolved Oxygen	2020	L	0.038

RPPMH

VAP-E26E_HNU01A08 / Hunting Creek / Described in VDH Condemnation 032-104B, 9/11/2018.	4A	Dissolved Oxygen	2020	L	0.020

RPPMH

VAP-E26E_HNU02A20 / Hunting Creek / Described in VDH-DSS condemnation 032-104S36, 9/11/2018	4A	Dissolved Oxygen	2020	L	0.017

RPPMH

VAP-E26E_LOL01A02 / Locklies Creek / Delineated in VDH shellfish condemnation 031-102B. 9/6/2018.	4A	Dissolved Oxygen	2020	L	0.073

RPPMH

VAP-E26E_LOL01B12 / Locklies Creek / Portion of VDH shellfish condemnation 102, 10/31/1994 seasonally condemned in 031-102M1, 9/6/2018.	4A	Dissolved Oxygen	2020	L	0.028

RPPMH

VAP-E26E_LOL02A06 / Locklies Creek / Described in VDH-DSS SFC 031-102M1, 1/24/2008.	4A	Dissolved Oxygen	2020	L	0.054

RPPMH

VAP-E26E_LOL03A08 / Roane Cove of Locklies Creek / Described in VDH-DSS SFC 031-102C, 9/4/2014.	4A	Dissolved Oxygen	2020	L	0.034

RPPMH

VAP-E26E_MEA01A00 / Meachim Creek / Described in VDH shellfish condemnation 030-179A and -*C, 9/13/2017.	4A	Dissolved Oxygen	2020	L	0.058

Segment shrank in the 2020 cycle.

RPPMH

VAP-E26E_MEA01B00 / Meachim Creek / Described in VDH	4A	Dissolved Oxygen	2020	L	0.012

Rappahannock River Basin

shellfish condemnation 030-179B, 9/13/2017.

RPPMH

VAP-E26E_MEA01C06 / Meachim Creek, UT / Described in VDH SFC 030-179M1, 9/3/2017.	4A	Dissolved Oxygen	2020	L	0.034

RPPMH

VAP-E26E_MEA02A00 / Meachim Creek / Downstream of VDH SFC 030-179, 12/9/1996 not otherwise segmented.	4A	Dissolved Oxygen	2020	L	0.136

RPPMH

VAP-E26E_MEA03A10 / Meachim Creek / Portions of VDH shellfish condemnation 179A, 12/9/1996 open on 030-179, 9/13/2017.	4A	Dissolved Oxygen	2020	L	0.041

Segment split in 2020 cycle.

RPPMH

VAP-E26E_MEA03B12 / Meachim Creek / Portion of VDH shellfish condemnation 179B, 12/9/1996 open in 030-179, 9/13/2017.	4A	Dissolved Oxygen	2020	L	0.020

RPPMH

VAP-E26E_MEA03C20 / Meachim Creek / Described in VDH shellfish condemnation 030-179S35, 9/13/2017.	4A	Dissolved Oxygen	2020	L	0.030

RPPMH

VAP-E26E_MLL01A98 / Mill Creek / Described in VDH shellfish condemnation 031-102A, 9/6/2018	4A	Dissolved Oxygen	2020	L	0.077

RPPMH

VAP-E26E_MLL01B12 / Mill Creek / Portion of VDH shellfish condemnation 103, 12/10/1991 open in 031-102, 9/6/2018.	4A	Dissolved Oxygen	2020	L	0.013

RPPMH

VAP-E26E_MLL01C20 / Mill Creek / Described in VDH shellfish condemnation 031-102S34, 9/6/2018	4A	Dissolved Oxygen	2020	L	0.034

RPPMH

VAP-E26E_MLL02A06 / Mill Creek / Downstream of VDH shellfish condemnation 103, 12/10/1991	4A	Dissolved Oxygen	2020	L	0.358

RPPMH

VAP-E26E_MOS01A00 / Mosquito Creek / The boundaries are delineated in VDH shellfish condemnation 018-203M1, 11/7/2018.	4A	Dissolved Oxygen	2020	L	0.011

Split in the 2020 cycle.

RPPMH

VAP-E26E_MOS01B12 / Mosquito Creek / Portion of VDH shellfish condemnation 018-203, 1/6/2005 open in 018-203, 11/7/2018.	4A	Dissolved Oxygen	2020	L	0.046

RPPMH

VAP-E26E_MOS01C20 / Mosquito Creek / The boundaries are delineated in VDH shellfish condemnation 018-203A, 11/7/2018.	4A	Dissolved Oxygen	2020	L	0.012

Rappahannock River Basin

RPPMH VAP-E26E_RPP02A00 / Rappahannock River / The Rappahannock River in the area delineated in VDH shellfish condemnation 030-051A, 10/3/2005.	4A	Dissolved Oxygen	1998	L	0.127
RPPMH VAP-E26E_RPP03A00 / Rappahannock River / The Rappahannock River in the area delineated in VDH shellfish condemnation 030-051D, 10/3/2005.	4A	Dissolved Oxygen	1998	L	0.031
RPPMH VAP-E26E_RPP04A00 / Rappahannock River / Described in VDH Shellfish Condemnation 030-051B, 9/1/2015.	4A	Dissolved Oxygen	1998	L	0.131
RPPMH VAP-E26E_RPP05A00 / Rappahannock River / Delineated in VDH-DSS condemnation 030-051C, 9/1/2015.	4A	Dissolved Oxygen	1998	L	0.031
RPPMH VAP-E26E_RPP07A02 / Rappahannock River / As delineated in VDH-DSS SFC 018-053A, 7/23/2018	4A	Dissolved Oxygen	1998	L	0.139
RPPMH VAP-E26E_STE01A98 / Sturgeon Creek / The segment boundaries are delineated in VDH shellfish condemnation 032-104A, 9/11/2018.	4A	Dissolved Oxygen	2020	L	0.044
RPPMH VAP-E26E_STE01B12 / Sturgeon Creek / The segment boundaries are delineated in VDH shellfish condemnation 032-104M1, 9/11/2018.	4A	Dissolved Oxygen	2020	L	0.002
RPPMH VAP-E26E_STE01C12 / Sturgeon Creek / Portion of VDH shellfish condemnation 104, 11/28/1994 open in 032-104, 9/11/2018.	4A	Dissolved Oxygen	2020	L	0.017
RPPMH VAP-E26E_STE01D20 / Sturgeon Creek / As delineated in VDH shellfish condemnation 032-104S37, 9/11/2018.	4A	Dissolved Oxygen	2020	L	0.022
RPPMH VAP-E26E_STE02A08 / Sturgeon Creek / Sturgeon Creek downstream of condemnation 104, 11/28/1994.	4A	Dissolved Oxygen	2020	L	0.192
RPPMH VAP-E26E_WHS01B00 / Whiting Creek / As delineated in VDH shellfish condemnation 030-051A, 9/1/2015.	4A	Dissolved Oxygen	2020	L	0.195
RPPMH VAP-E26E_WID01A12 / Windmill Point Creek / Described in VDH-DSS condemnation 018-053B, 11/2/2010.	4A	Dissolved Oxygen	2020	L	0.082

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

RPPMH

VAP-E26E_WOO01A08 / Woods Creek / Tidal Woods Creek	4A	Dissolved Oxygen	2020	L	0.037

RPPMH

VAP-E26E_XEV01A02 / XEV - Rappahannock River, UT (Windmill Point Yacht Harbor) / As delineated in VDH-DSS SFC 018-053C, 7/23/2018	4A	Dissolved Oxygen	2020	L	0.015

RPPMH

VAP-E26E_XII01A18 / XII - Windmill Point, UT (aka White Marsh) / Described in VDH-DSS condemnation 018-053B, 7/23/2018	4A	Dissolved Oxygen	2020	L	0.034

RPPMH

VAP-E26E_ZZZ01D14 / Unsegmented estuaries in E26 / Unsegmented portion of watershed RA73	4A	Dissolved Oxygen	2020	L	0.028

RPPMH

VAP-E26E_ZZZ01E14 / Unsegmented estuaries in E26 / Unsegmented portion of watershed RA74	4A	Dissolved Oxygen	2020	L	0.613

RPPMH

Rappahannock River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	**123.508**		

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)

Fact Sheets for Impaired (Category 4 or 5) Waters in 2020

Rappahannock River Basin

***Cause Group Code:* RPPTF-DO-BAY** **Rappahannock Tidal Freshwater Estuary**

Cause Location: The tidal freshwater Rappahannock River and its tributaries to the segment.

City / County: Caroline Co. Essex Co. Fredericksburg City King George Co. Spotsylvania Co. Stafford Co. Westmoreland Co.

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

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

During the 2018 and 2020 cycles, the tidal freshwater Rappahannock estuary fails the Open Water Subuse 30-day mean summer dissolved oxygen criterion. The Open Water rest-of-year criterion was met and there was insufficient data to assess the other dissolved oxygen criteria.

The Chesapeake Bay TMDL was approved by the EPA on 12/19/2010; therefore, RPPTF is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-E20E_RPP01A02 / Rappahannock River / Segment begins at the confluence with Massaponax Creek and continues downstream until the outlet of waterbody VAN-E20E. This segment represents the upper reach of VAN-E21E_RPP05A02. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	0.188
VAN-E20E_RPP02A02 / Rappahannock River / Segment begins at the confluence with Deep Run and continues downstream until the confluence with Massaponax Creek. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	0.231
VAN-E20E_RPP03A02 / Rappahannock River / Segment begins at the fall line at Route 1 and continues downstream until the confluence with Deep Run. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	0.195
VAN-E21E_MIC01A06 / Mill Creek / Segment includes all tidal waters of Mill Creek. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	0.203
VAN-E21E_RPP01A02 / Rappahannock River / Segment begins at the confluence with Mill Creek, at rivermile 78.94, and continues downstream until immediately upstream of Devils Elbow, at rivermile 70.52. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	4.547
VAN-E21E_RPP03A02 / Rappahannock River / Segment begins at the confluence with Mount Creek and continues downstream until the confluence with Mill Creek. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	1.366
VAN-E21E_RPP04A02 / Rappahannock River / Segment begins at the confluence with Ware Creek and continues downstream until the confluence with Mount Creek. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	1.206
VAN-E21E_RPP05A02 / Rappahannock River / Segment begins at the confluence with Massaponax Creek and continues downstream until the confluence with Ware Creek. The upper reach of this segment (approx. 0.3 sq mi) extends into waterbody VAN-E20E. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	0.579
VAN-E21E_RPP48A02 / Rappahannock River-Muddy Creek /	4A	Dissolved Oxygen	2014	L	0.006

Rappahannock River Basin

Segment includes all tidal waters in watershed RA48 not included in other delineated stream segments. Portion of CBP segment RPPTF.					
VAN-E21E_RPP49A02 / Rappahannock River-Mount Creek / Segment includes all tidal waters in watershed RA49 not included in other delineated stream segments. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2014	L	0.147
VAN-E21E_RPP51A02 / Rappahannock River-Goldenvale Creek / Segment includes all tidal waters in watershed RA51 not included in other delineated stream segments. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2014	L	0.192
VAN-E21E_RPP52A02 / Rappahannock River-Portobago Creek / Segment includes all tidal waters in watershed RA52 not included in other delineated stream segments. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2014	L	0.079
VAN-E22E_ZZZ01A08 / Unnamed Rappahannock River Embayments / Segment includes all tidal waters in watershed not included in other delineated stream segments. Portion of CBP segment RPPTF.	4A	Dissolved Oxygen	2008	L	0.073
VAP-E22E_ELM01A10 / Elmwood Creek / Tidal limit to mouth at the Rappahannock River.	4A	Dissolved Oxygen	2018	L	0.047
RPPTF					
VAP-E22E_RPP01A02 / Rappahannock River / The Rappahannock River from Devils Elbow at Toby Point and Green Bay (river mile 70.52) downstream to the tidal freshwater/oligohaline boundary at river mile 57.85.	4A	Dissolved Oxygen	2018	L	5.133
RPPTF					
VAP-E22E_ZZZ01A00 / Unsegmented estuaries in E22 / Unsegmented portion of watershed within RPPTF.	4A	Dissolved Oxygen	2018	L	0.164

Rappahannock Tidal Freshwater Estuary **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	**14.356**		

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)