York River Basin

Cause Group Code: F01L-01-HG Lake Gordonsville

Cause Location: Includes the entirety of Lake Gordonsville, also known as Bowlers Mill Lake.

Cause City/County: Louisa County

Use(s): Fish Consumption

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

Cause Description: The fish consumption use is categorized as impaired due to a Virginia Department of Health mercury fish consumption advisory. The advisory, dated 09/30/04, limits largemouth bass consumption to no more than two meals per month.

Additionally, exceedances of the water quality criterion based fish tissue value (TV) of 300 ppb for mercury (HG) were recorded in one species of fish (largemouth bass) in one sample collected in 2003 and in one species of fish (largemouth bass) in four samples collected in 2017 at DEQ fish tissue monitoring station 8-DOV001.20, near the dam.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01L_DOV01A06 / Lake Gordonsville / Segment includes all of Lake Gordonsville.	5A	Mercury in Fish Tissue	2006	L	77.31

Lake Gordonsville

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		77.31	

Sources: Source Unknown

York River Basin

Cause Group Code: F01R-01-BAC South Anna River

Cause Location: Begins at the headwaters of the South Anna River and continues downstream until the confluence with Dove Fork. Begins again at the start of waterbody F02R, where Wheeler Creek intersects the South Anna River, and continues downstream until the confluence with Rock Creek.

Cause City/County: Louisa County; Orange County

Use(s): Recreation

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

Cause Description: DEQ station 8-SAR089.35 at Route 613 (Poindexter Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples. DEQ station 8-SAR099.81 at Route 860 (Kloeckner Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples. DEQ station 8-SAR097.82 at Route 603 (2020 Assessment): E. coli bacteria criterion excursions (3 of 14 samples - 21.4%) DEQ station 8-SAR101.03 at Route 231 (Gordonsville Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

The Pamunkey River and Tributaries modified bacteria TMDL for the South Anna River (F01R-01) watershed (Eq ID POL0337) was approved by the EPA on 4/27/2015 (Fed ID 64651). The SWCB approved the modified TMDL on 12/11/2014. This impairment was originally addressed in the Pamunkey River Basin bacteria TMDL (Fed ID 24423, 8/2/2006).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01R_SAR02A02 / South Anna River / Segment begins at the upstream boundary of the Section 3C WQS designation and continues downstream until the confluence with Dove Fork.	4A	Escherichia coli (E. coli)	2002	L	1.90
VAN-F01R_SAR02B22 / South Anna River / Segment begins at the confluence with an unnamed tributary, approximately 0.25 mile downstream of the Route 231 bridge, and continues downstream until the boundary of the Section 3C WQS designation.	4A	Escherichia coli (E. coli)	2002	L	2.00
VAN-F01R_SAR02C10 / South Anna River / Segment begins at the headwaters of the South Anna River and continues downstream until the confluence with an unnamed tributary, approximately 0.25 mile downstream of the Route 231 bridge.	4A	Escherichia coli (E. coli)	2002	L	3.20
VAN-F02R_SAR02A00 / South Anna River / Segment begins at the start of waterbody F02R, where Wheeler Creek intersects the South Anna River, and continues downstream until the confluence with Rock Creek.	4A	Escherichia coli (E. coli)	2006	L	3.98

South Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			11.08

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

York River Basin

Cause Group Code: F01R-02-BAC Wheeler Creek

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

Cause City/County: Albemarle County; Louisa County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (8 of 11 samples - 72.7%) at DEQ station 8-WLR000.31 upstream of the confluence with Camp Creek. 2014 Assessment: E. coli bacteria criterion excursions (3 of 6 samples - 50.0%) at DEQ station 8-WLR000.26 at Route 640.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F02R-01) watershed was approved by the EPA on 8/2/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01R_WLR01A04 / Wheeler Creek / Segment begins at the confluence with Camp Creek and continues downstream until the confluence with Hudson Creek.	4A	Escherichia coli (E. coli)	2010	L	0.24
VAN-F01R_WLR01B10 / Wheeler Creek / Segment begins at the headwaters of Wheeler Creek and continues downstream until the confluence with Camp Creek.	4A	Escherichia coli (E. coli)	2012	L	6.01

Wheeler Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.25

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

York River Basin

Cause Group Code: F01R-02-BEN Wheeler Creek

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

Cause City/County: Albemarle County; Louisa County

Use(s): Aquatic Life

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

Cause Description: 2016 Assessment: Three biological monitoring events in 2009 and 2010 at station 8-WLR000.31 (upstream from the confluence with Camp Creek) 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-F01R_WLR01B10 / Wheeler Creek / Segment begins at the headwaters of Wheeler Creek and continues downstream until the confluence with Camp Creek.	5A	Benthic Macroinvertebrates Bioassessments	2008	L	6.01

Wheeler Creek

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

Sources: Source Unknown

York River Basin

Cause Group Code: F01R-03-BAC Hudson Creek

Cause Location: Begins at the confluence of Bunch Creek and Fielding Creek and continues downstream until the confluence with Wheeler Creek.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ ambient station 8-HUD001.80 at Route 695.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F02R-01) watershed (Eq. ID POL0335) was approved by the EPA on 8/2/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01R_HUD01A04 / Hudson Creek / Segment begins at the confluence of Bunch Creek and Fielding Creek and continues downstream until the confluence with Wheeler Creek.	4A	Escherichia coli (E. coli)	2012	L	3.62

Hudson Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.62

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

York River Basin

Cause Group Code: F01R-03-BEN Camp Creek

Cause Location: Begins at the confluence with Central Branch and continues downstream to the confluence with Wheeler Creek.

Cause City/County: Louisa County

Use(s): Aquatic Life

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

Cause Description: 2016 Assessment: A total of three biological monitoring events in 2009 and 2010 at DEQ station 8-CMP000.28 at Route 717 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-F01R_CMP01A12 / Camp Creek / Segment begins at the confluence with Central Branch and continues downstream to the confluence with Wheeler Creek.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	2.02

Camp Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.02

Sources: Source Unknown

York River Basin

Cause Group Code: F01R-04-BAC Camp Creek

Cause Location: Begins at the confluence with Central Branch and continues downstream to the confluence with Wheeler Creek.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (6 of 11 samples - 54.5%) at DEQ ambient station 8-CMP000.28 at Route 717.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F02R-01) watershed (Eq. ID POL0335) was approved by the EPA on 8/2/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01R_CMP01A12 / Camp Creek / Segment begins at the confluence with Central Branch and continues downstream to the confluence with Wheeler Creek.	4A	Escherichia coli (E. coli)	2012	L	2.02

Camp Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.02

Sources: Grazing in Riparian or Shoreline Zones; Impacts from Land Application of Wastes; Livestock (Grazing or Feeding Operations); Runoff from Forest/Grassland/Parkland; Sewage Discharges in Unsewered Areas; Wastes from Pets; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F01R-04-BEN South Anna River

Cause Location: Begins at the headwaters of the South Anna River and continues downstream until the confluence with an unnamed tributary, approximately 0.25 mile downstream of the Route 231 bridge. Begins again at the confluence with Mill Creek and continues downstream until the mouth of watershed F01, at the confluence with Wheeler Creek.

Cause City/County: Louisa County; Orange County

Use(s): Aquatic Life

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

Cause Description: Four biological monitoring events in 2016 and 2017 at DEQ station 8-SAR101.03 at Route 231 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. Four biological monitoring events in 2016 and 2017 at DEQ station 8-SAR091.64 at Route 695 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-F01R_SAR01A02 / South Anna River / Segment begins at the confluence with Mill Creek and continues downstream until the mouth of watershed F01, at the confluence of Wheeler Creek to the South Anna River.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	4.95
VAN-F01R_SAR02C10 / South Anna River / Segment begins at the headwaters of the South Anna River and continues downstream until the confluence with an unnamed tributary, approximately 0.25 mile downstream of the Route 231 bridge.	5A	Benthic Macroinvertebrates Bioassessments	2020	L	3.20

South Anna River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			8.15

Sources: Source Unknown

York River Basin

Cause Group Code: F02L-01-DO Northeast Creek Reservoir

Cause Location: Includes the entire reservoir, located northeast of the intersection of Route 33 and Route 522.

Cause City/County: Louisa County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the minimum dissolved oxygen criterion (7 of 42 samples - 16.7%) at lake station 8-NTH003.92 (100 feet from the spillway).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02L_NTH01A06 / Northeast Creek Reservoir / Includes the entire reservoir, located northeast of the intersection of Route 33 and Route 522.	5A	Dissolved Oxygen	2022	L	183.79

Northeast Creek Reservoir

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:		183.79	

Sources: Source Unknown

York River Basin

Cause Group Code: F02R-01-BAC South Anna River

Cause Location: Begins at the confluence with Rock Creek and continues downstream until the confluence with Beaver Creek.

Cause City/County: Fluvanna County; Louisa County

Use(s): Recreation

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

Cause Description: DEQ station 8-SAR070.96 at Route 646 (2014 assessment): E. coli bacteria criterion excursions (2 of 6 samples - 33.3%). DEQ station 8-SAR083.25 at Route 649: There were two or more STV exceedances in at least one 90-day period with <10 samples.

The Pamunkey River and Tributaries modified bacteria TMDL for the South Anna River (F02R-01) watershed (Eq ID POL0335) was approved by the EPA on 04/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014. This impairment was originally addressed in the Pamunkey River Basin bacteria TMDL (Fed ID 24424, 08/02/2006).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_SAR01A00 / South Anna River / Segment begins at the confluence with Harris Creek and continues downstream until the confluence with Beaver Creek.	4A	Escherichia coli (E. coli)	2004	L	4.98
VAN-F02R_SAR01B20 / South Anna River / Segment begins at the confluence with Roundabout Creek and continues downstream until the confluence with Harris Creek.	4A	Escherichia coli (E. coli)	2004	L	1.01
VAN-F02R_SAR01C18 / South Anna River / Segment begins at the confluence with Rock Creek and continues downstream to the confluence with Roundabout Creek.	4A	Escherichia coli (E. coli)	2018	L	8.19

South Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			14.18

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

York River Basin

Cause Group Code: F02R-01-BEN Fosters Creek

Cause Location: Begins at the headwaters of Fosters Creek and continues downstream until the confluence with the South Anna River.

Cause City/County: Louisa County

Use(s): Aquatic Life

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

Cause Description: Four biological monitoring events in 2015 and 2016 at DEQ station 8-FOS000.84 at Route 640 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-F02R_FOS01A06 / Fosters Creek / Segment begins at the headwaters of Fosters Creek and continues downstream until the confluence with the South Anna River.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	4.92

Fosters Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.92

Sources: Source Unknown

York River Basin

Cause Group Code: F02R-02-BAC Unnamed tributary to South Anna River

Cause Location: Begins at the headwaters of an unnamed tributary to the South Anna River and continues downstream until the confluence with the South Anna River.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2014 Assessment: E. coli bacteria criterion excursions (1 of 2 samples - 50.0%) at DEQ station 8-XIE000.27 upstream of Route 697 and E. coli bacteria criterion excursions (1 of 2 samples - 50.0%) at DEQ station 8-XIE000.40 upstream of the Twin Oaks STP.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F02R-01) watershed (Eq. ID POL0335) was approved by the EPA on 8/2/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_XIE01A08 / Unnamed tributary to South Anna River / Segment begins at the headwaters of an unnamed tributary to the South Anna River and continues downstream until the confluence with the South Anna River.	4A	Escherichia coli (E. coli)	2008	L	1.35

Unnamed tributary to South Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.35

Sources: Grazing in Riparian or Shoreline Zones; Impacts from Land Application of Wastes; Livestock (Grazing or Feeding Operations); Runoff from Forest/Grassland/Parkland; Sewage Discharges in Unsewered Areas; Wastes from Pets; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F02R-03-BAC Fosters Creek

Cause Location: Begins at the headwaters of Fosters Creek and continues downstream until the confluence with the South Anna River.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (3 of 11 samples - 27.3%) at DEQ station 8-FOS000.84 at Route 640.

A new TMDL is not required for this impaired segment of Fosters Creek because the downstream Pamunkey River and Tributaries modified bacteria TMDL (Fed ID 64664, 04/27/2015) included modeling, source identification, and reductions that covered the entire South Anna River (F02R-01) watershed (Eq. ID POL0335). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (24424, 08/02/2006).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_FOS01A06 / Fosters Creek / Segment begins at the headwaters of Fosters Creek and continues downstream until the confluence with the South Anna River.	4A	Escherichia coli (E. coli)	2014	L	4.92

Fosters Creek

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

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; Urban Runoff/Storm Sewers; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F02R-04-BAC Roundabout Creek

Cause Location: Begins at the confluence with an unnamed tributary to Roundabout Creek, approximately 0.9 rivermile downstream from the Route 64 crossing, and continues downstream until the confluence with the South Anna River.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria excursions (6 of 11 samples - 54.5%) at DEQ station 8-RDB001.72 at Route 640.

A new TMDL is not required for this impaired segment of Roundabout Creek because the downstream Pamunkey River and Tributaries modified bacteria TMDL (Fed ID 64664, 04/27/2015) included modeling, source identification, and reductions that covered the entire South Anna River (F02R-01) watershed (Eq. ID POL0335). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (24424, 08/02/2006).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_RDB01A04 / Roundabout Creek / Segment begins at the confluence with an unnamed tributary to Roundabout Creek, approximately 0.9 rivermile downstream from the Route 64 crossing, and continues downstream until the confluence with the South Anna River.	4A	Escherichia coli (E. coli)	2014	L	3.84

Roundabout Creek

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

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

York River Basin

Cause Group Code: F02R-05-BAC Harris Creek

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 6.97 and continues downstream to the confluence with the South Anna River.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria excursions (2 of 12 samples - 16.7%) at DEQ station 8-HRS001.35 at Route 604.

A new TMDL is not required for this impaired segment of Harris Creek because the downstream Pamunkey River and Tributaries modified bacteria TMDL (Fed ID 64664, 04/27/2015) included modeling, source identification, and reductions that covered the entire South Anna River watershed (Eq ID POL0335). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (Fed ID 24424, 08/02/2006).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_HRS01A16 / Harris Creek / Segment begins at confluence with an unnamed tributary at rivermile 6.97 and continues downstream to the confluence with the South Anna River.	4A	Escherichia coli (E. coli)	2016	L	6.97

Harris Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.97

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

York River Basin

Cause Group Code: F02R-06-BAC Rock Creek

Cause Location: Begins at the confluence with Little Rock Creek and continues downstream to the confluence with South Anna River.

Cause City/County: Fluvanna County; Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria excursions (2 of 12 samples - 16.7%) at DEQ station 8-RKC001.35 at Route 640.

A new TMDL is not required for this segment of Rock Creek because the downstream Pamunkey River and Tributaries modified bacteria TMDL (Fed ID 64664, 04/27/2015) included modeling, source identification, and reductions that covered the entire South Anna River (F02R-01) watershed (Eq. ID POL0335). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (24424, 08/02/2006).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_RKC01A16 / Rock Creek / Segment begins at the confluence with Little Rock Creek and continues downstream to the confluence with South Anna River.	4A	Escherichia coli (E. coli)	2016	L	2.73

Rock Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.73

Sources: Grazing in Riparian or Shoreline Zones; Impacts from Land Application of Wastes; Livestock (Grazing or Feeding Operations); Runoff from Forest/Grassland/Parkland; Sewage Discharges in Unsewered Areas; Urban Runoff/Storm Sewers; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F03R-01-BEN Cub Creek

Cause Location: Begins at the confluence with Turners Creek and continues downstream until the confluence with the South Anna River.

Cause City/County: Louisa County

Use(s): Aquatic Life

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

Cause Description: 2018 Assessment: Two biological monitoring events in 2012 at station 8-CUB002.73 at Route 648 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-F03R_CUB01A08 / Cub Creek / Segment begins at the confluence with Turners Creek and continues downstream until the confluence with the South Anna River.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	3.1

Cub Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.1

Sources: Source Unknown

York River Basin

Cause Group Code: F03R-02-BAC Taylors Creek

Cause Location: Begins at the headwaters of Taylors Creek and continues downstream until the confluence with the South Anna River.

Cause City/County: Hanover County; Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria excursions (4 of 24 samples - 16.7%) at DEQ station 8-TLR005.50 at Route 610 and E. coli bacteria excursions (2 of 12 samples - 16.7%) at DEQ station 8-TLR009.82 at Route 664.

The Pamunkey River and Tributaries modified bacteria TMDL for the Taylors Creek watershed (Eq ID POL0336) was approved by EPA on 04/27/2015 (Fed ID 64655). The SWCB approved the modified TMDL on 12/11/2014. This impairment was originally addressed in the Pamunkey River Basin bacteria TMDL (Fed ID 24425, 08/02/2006).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F03R_TLR01A00 / Taylors Creek / Segment begins at the headwaters of Taylors Creek and continues downstream until the confluence with the South Anna River.	4A	Escherichia coli (E. coli)	2008	L	16.54

Taylors Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			16.54

Sources: Grazing in Riparian or Shoreline Zones; Impacts from Land Application of Wastes; Livestock (Grazing or Feeding Operations); Runoff from Forest/Grassland/Parkland; Sewage Discharges in Unsewered Areas; Wastes from Pets; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F03R-02-BEN Taylors Creek

Cause Location: Begins at the headwaters of Taylors Creek and continues downstream until the confluence with the South Anna River.

Cause City/County: Hanover County; Louisa County

Use(s): Aquatic Life

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

Cause Description: Two biological monitoring events in 2015 at DEQ station 8-TLR014.44 (upstream of Route 602) 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-F03R_TLR01A00 / Taylors Creek / Segment begins at the headwaters of Taylors Creek and continues downstream until the confluence with the South Anna River.	5A	Benthic Macroinvertebrates Bioassessments	2016	L	16.54

Taylors Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			16.54

Sources: Source Unknown

York River Basin

Cause Group Code: F03R-03-BEN Fork Creek

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 7.63 and continues downstream to the confluence with South Branch Fork Creek.

Cause City/County: Louisa County

Use(s): Aquatic Life

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

Cause Description: Four biological monitoring events in 2015 and 2016 at DEQ station 8-FRK001.78 (upstream of South Branch Fork Creek) 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-F03R_FRK02A16 / Fork Creek / Segment begins at the confluence with an unnamed tributary just upstream from Route 683 and continues downstream to the confluence with South Branch Fork Creek.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	4.33

Fork Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			4.33

Sources: Source Unknown

York River Basin

Cause Group Code: F03R-03-DO Cub Creek

Cause Location: Begins at the confluence with Turners Creek and continues downstream until the confluence with the South Anna River.

Cause City/County: Louisa County

Use(s): Aquatic Life

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

Cause Description: 2020 Assessment: Excursions less than the minimum dissolved oxygen criterion (4 of 12 samples - 33.3%) at station 8-CUB001.73 at Route 601.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F03R_CUB01A08 / Cub Creek / Segment begins at the confluence with Turners Creek and continues downstream until the confluence with the South Anna River.	5A	Dissolved Oxygen	2008	L	3.1

Cub Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.1

Sources: Source Unknown

York River Basin

Cause Group Code: F03R-04-BAC Fork Creek

Cause Location: Begins at the perennial headwaters and continues downstream until the confluence with the South Anna River.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (3 of 23 samples - 13.0%) at DEQ station 8-FRK006.02 at Route 683. 2012 Assessment: E. coli bacteria criterion excursions (2 of 6 samples - 33.3%) at DEQ station 8-FRK001.66 at Route 640.

The modified Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F04R-01) watershed was approved by the EPA on 4/27/2015 (Fed ID 64653). A new TMDL is not required for this impaired segment of Fork Creek because the original and modified bacteria TMDLs included modeling, source identification, and reductions that covered the entire South Anna River (F04R-01) watershed (Eq ID POL0341).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F03R_FRK01A08 / Fork Creek / Segment begins at the confluence with South Branch Fork Creek and continues downstream until the confluence with the South Anna River.	4A	Escherichia coli (E. coli)	2008	L	1.80
VAN-F03R_FRK02A16 / Fork Creek / Segment begins at the confluence with an unnamed tributary just upstream from Route 683 and continues downstream to the confluence with South Branch Fork Creek.	4A	Escherichia coli (E. coli)	2016	L	4.33
VAN-F03R_FRK02B20 / Fork Creek / Segment begins at the perennial headwaters and continues downstream to the confluence with an unnamed tributary just upstream from Route 683.	4A	Escherichia coli (E. coli)	2016	L	1.51

Fork Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.64

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

York River Basin

Cause Group Code: F03R-04-BEN South Branch Fork Creek

Cause Location: Begins at Windsor Lake Drive and continues downstream to the confluence with Fork Creek.

Cause City/County: Goochland County; Louisa County

Use(s): Aquatic Life

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

Cause Description: Four biological monitoring events in 2015 and 2016 at station 8-SBK000.03 above the confluence with Fork Creek 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-F03R_SBK01A18 / South Branch Fork Creek / Segment begins at Windsor Lake Drive and continues downstream to the confluence with Fork Creek.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	3.06

South Branch Fork Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.06

Sources: Source Unknown

York River Basin

Cause Group Code: F03R-05-BEN Unnamed tributary to Taylors Creek

Cause Location: Begins at the headwaters of the unnamed tributary to Taylors Creek and continues downstream to the confluence with Taylors Creek.

Cause City/County: Hanover County; Louisa County

Use(s): Aquatic Life

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

Cause Description: Two biological monitoring events in 2015 at DEQ station 8-XKA000.91 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-F03R_XKA01A18 / Unnamed tributary to Taylors Creek / Segment begins at the headwaters of the unnamed tributary to Taylors Creek and continues downstream to the confluence with Taylors Creek.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	1.43

Unnamed tributary to Taylors Creek

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

Sources: Source Unknown

York River Basin

Cause Group Code: F03R-07-BAC South Anna River

Cause Location: Begins at the confluence with Northeast Creek and continues downstream until the confluence with an unnamed tributary to the South Anna River, approximately rivermile 66.97.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: DEQ station 8-SAR068.57 at Route 605 (Shannon Hill Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

This impairment was originally nested in the Pamunkey River Basin bacteria TMDL for the South Anna River (F04R-01) watershed (Federal ID 24444, 8/2/2006). The modified Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F04R-01) watershed was approved by the EPA on 4/27/2015. A new TMDL is not required for this impaired segment of the South Anna River because the original and modified bacteria TMDLs included modeling, source identification, and reductions that covered the entire South Anna River (F04R-01) watershed.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F03R_SAR03A06 / South Anna River / Segment begins at the confluence with Northeast Creek and continues downstream until the confluence with an unnamed tributary to the South Anna River, approximately rivermile 66.97.	4A	Escherichia coli (E. coli)	2006	L	1.77

South Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.77

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

York River Basin

Cause Group Code: F03R-08-BAC Deep Creek

Cause Location: Begins at the headwaters of Deep Creek and continues downstream to the confluence with the South Anna River.

Cause City/County: Goochland County; Louisa County

Use(s): Recreation

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

Cause Description: 2016 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-DEP000.37 at Route 640.

This impairment was originally nested in the Pamunkey River Basin bacteria TMDL for the South Anna River (F04R-01) watershed (Fed ID 24444, 8/2/2006). The modified Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F04R-01) watershed was approved by the EPA on 4/27/2015 (Fed ID 64653). A new TMDL is not required for this impaired segment of Deep Creek because the original and modified bacteria TMDLs included modeling, source identification, and reductions that covered the entire South Anna River (F04R-01) watershed (Eq ID POL0341).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F03R_DEP01A12 / Deep Creek / Segment begins at the headwaters of Deep Creek and continues downstream to the confluence with the South Anna River.	4A	Escherichia coli (E. coli)	2012	L	5.79

Deep Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.79

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

York River Basin

Cause Group Code: F03R-09-BAC South Anna River

Cause Location: Begins at the confluence with Jones Creek and continues downstream until the confluence with an unnamed tributary at rivermile 31.5.

Cause City/County: Hanover County; Louisa County

Use(s): Recreation

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

Cause Description: DEQ station 8-SAR035.05 at Route 617 (Spring Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

This impairment was originally nested in the Pamunkey River Basin bacteria TMDL for the South Anna River (F04R-01) watershed (Federal ID 24444, 8/2/2006). The modified Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F04R-01) watershed was approved by the EPA on 4/27/2015. A new TMDL is not required for this impaired segment of the South Anna River because the original and modified bacteria TMDLs included modeling, source identification, and reductions that covered the entire South Anna River (F04R-01) watershed (Eq ID POL0341).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F03R_SAR01C06 / South Anna River / Segment begins at the confluence with Jones Creek and continues downstream until the confluence with an unnamed tributary at rivermile 31.5.	4A	Escherichia coli (E. coli)	2012	L	4.63

South Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.63

Sources: Grazing in Riparian or Shoreline Zones; Impacts from Land Application of Wastes; Livestock (Grazing or Feeding Operations); Runoff from Forest/Grassland/Parkland; Sewage Discharges in Unsewered Areas; Wastes from Pets; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F04R-01-BAC South Anna River

Cause Location: The South Anna River from the confluence with Taylors Creek downstream to the Ashland Municipal STP discharge near the confluence with Falling Creek.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: The South Anna River from Route 33 to the Ashland Municipal STP was assessed as fully supporting but threatened during the 1998 cycle. In 2002, the segment was extended upstream to Taylors Creek and downgraded to impaired.

During the 2006 cycle, E. coli monitoring was conducted at the Route 33 bridge (8-SAR021.22), as well as at new stations 8-SAR014.47 and 8-SAR012.42. Exceedance rates were acceptable at the upstream stations (1/12 at 8-SAR021.22 and 0/9 at 8-SAR014.47), however there were 3 exceedances out of 12 samples at 8-SAR012.42. Because of the fully supporting status of the upstream portion, the impaired segment was shortened from the UT above Horseshoe Bridge Road downstream to the Ashland Municipal STP.

The Pamunkey River Basin Bacteria TMDL was completed during the 2008 cycle and was approved by the EPA on 8/2/2006; the TMDL included the entire previously listed length.

Additional monitoring occurred during the 2014 cycle. Due to E. coli exceedances at 8-SAR021.22 (6/12), the segment was returned to its original length (Taylors Creek to the Ashland Municipal STP).

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F04R_SAR01A98 / South Anna River / From Taylors Creek to 5 mi upstream of the Ashland PWS intake.	4A	Escherichia coli (E. coli)	2014	L	2.78
VAP-F04R_SAR02A98 / South Anna River / From 5 mi upstream of the Ashland PWS intake to the PWS intake.	4A	Escherichia coli (E. coli)	2014	L	5.05
VAP-F04R_SAR03A02 / South Anna River / From the Ashland PWS intake to the UT above Horseshoe Bridge Road.	4A	Escherichia coli (E. coli)	2014	L	0.54
VAP-F04R_SAR03B06 / South Anna River / From the UT above Horseshoe Bridge Road to the Ashland Municipal STP discharge.	4A	Escherichia coli (E. coli)	2008	L	8.91

South Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			17.28

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

York River Basin

Cause Group Code: F04R-02-BAC South Anna River

Cause Location: The South Anna River from the Ashland Municipal STP discharge near the confluence with Falling Creek downstream to its mouth.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: The segment VAP-F04R-02 (00249) was initially listed as impaired of the Recreation Use during the 1998 cycle. During the 2006 cycle, E. coli monitoring at the Route 738 bridge (8-SAR001.11) was fully supporting (1/21); therefore, the segment was delisted.

However, during the 2008 cycle, the Pamunkey River Basin Bacteria TMDL was completed and was approved by the EPA on 8/2/2006. The TMDL addressed the original TMDL listing and assigned WLAs and LAs. The E. coli violation rate at station 8-SAR001.11 remained acceptable during the 2008 and 2010 cycles; therefore, the water was considered a Category 2C water.

During the 2012 cycle, the segment became impaired for E. coli again. It is considered Category 4A.

The exceedance rate was 7/36 during the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F04R_SAR03A98 / South Anna River / From the Ashland Municipal STP discharge to its mouth at the Pamunkey River.	4A	Escherichia coli (E. coli)	2012	L	4.77

South Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.77

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

York River Basin

Cause Group Code: F04R-03-BAC Stagg Creek

Cause Location: Headwaters to mouth at South Anna River

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2006 cycle, Stagg Creek was assessed as not supporting the Recreation Use due to E. coli exceedances at 8-STG005.46 (Route 657) and at 8-STG001.00 (Route 686).

No additional data has been collected at 8-STG005.46.

The segment was determined to be nested within the completed TMDL for the South Anna River bacterial impairment F04R-01-BAC; therefore, it will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F04R_STG01A06 / Stagg Creek / Headwaters to mouth at the South Anna River	4A	Escherichia coli (E. coli)	2006	L	6.56

Stagg Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.56

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

York River Basin

Cause Group Code: F04R-03-DO Stagg Creek

Cause Location: Headwaters to mouth at South Anna River

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, Stagg Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 8-STG005.46 (Route 686).

Additional monitoring was conducted in the 2016 cycle, however the data was insufficient for assessment (1/9). In addition, 2009 sampling at freshwater probabilistic monitoring station 8-STG000.73 was acceptable; therefore, further monitoring is warranted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F04R_STG01A06 / Stagg Creek / Headwaters to mouth at the South Anna River	5C	Dissolved Oxygen	2008	L	6.56

Stagg Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.56

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

York River Basin

Cause Group Code: F04R-03-PH Stagg Creek

Cause Location: Headwaters to mouth at South Anna River

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, Stagg Creek was impaired of the Aquatic Life Use due to a pH exceedance rate of 3/9 at 8-STG005.46 (Route 686). In addition, the exceedance rate was 1/2 at 8-STG000.73.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F04R_STG01A06 / Stagg Creek / Headwaters to mouth at the South Anna River	5C	pH	2016	L	6.56

Stagg Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			6.56

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

York River Basin

Cause Group Code: F05R-01-BAC Newfound River

Cause Location: Newfound River from the confluence of Needstan Creek to its mouth.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2004 cycle, the segment was assessed not supporting of the Recreation Use based on fecal coliform exceedances at the Route 667 bridge (8-NFD002.26). The impairment converted to E. coli during the 2008 cycle.

The Pamunkey River Basin Bacteria TMDL was approved by the EPA on 8/2/2006. The TMDL addressed this segment and the Newfound River is classified as a Category 4A water.

Additional monitoring was conducted during the 2018 cycle. The exceedance rate was 12/24; therefore, the segment remains impaired.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F05R_NFD01A00 / Newfound River / Mainstem downstream of Needstan Creek.	4A	Escherichia coli (E. coli)	2008	L	10.96

Newfound River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.96

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

York River Basin

Cause Group Code: F05R-01-BEN Newfound River

Cause Location: Newfound River from the confluence of Needstan Creek to its mouth.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2018 cycle, the lower Newfound River was impaired of the Aquatic Life Use due to benthic community alteration at 2016 freshwater probabilistic monitoring station 8-NFD004.19.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F05R_NFD01A00 / Newfound River / Mainstem downstream of Needstan Creek.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	10.96

Newfound River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			10.96

Sources: Source Unknown

York River Basin

Cause Group Code: F06R-01-BAC Mountain Run

Cause Location: Begins at the confluence of Madison Run and continues downstream until the confluence with the North Anna River.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: DEQ station 8-MTN000.96 at Route 643 (Cox Mill Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

The York Basin Watersheds around Lake Anna bacteria TMDL for the Mountain Run watershed (Eq ID POL0239) was approved by the EPA on 11/04/2005 (Fed ID 24427). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Beaver Creek watershed (ID 152) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_MTN01A00 / Mountain Run / Segment begins at the confluence of Madison Run and continues downstream until the confluence with the North Anna River.	4A	Escherichia coli (E. coli)	1998	L	2.65

Mountain Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.65

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

York River Basin

Cause Group Code: F06R-01-BEN North Anna River

Cause Location: Begins at the confluence with Mountain Run and continues downstream until the confluence with White Oak Creek.

Cause City/County: Louisa County; Orange County

Use(s): Aquatic Life

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

Cause Description: Two biological monitoring events in 2015 at station 8-NAR065.95 (at ~0.6 rivermile downstream from Route 639) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_NAR02A04 / North Anna River / Segment begins at the confluence with Mountain Run and continues downstream until the confluence with White Oak Creek.	5A	Benthic Macroinvertebrates Bioassessments	2018	L	2.8

North Anna River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.8

Sources: Source Unknown

York River Basin

Cause Group Code: F06R-02-BAC Beaver Creek

Cause Location: Begins at the confluence with Cooks Creek, approximately 0.68 rivermile upstream from the Route 638 bridge, and continues downstream until the confluence with the North Anna River.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: 2014 Assessment: E. coli bacteria criterion excursions (5 of 13 samples - 38.5%) at DEQ station 8-BRC001.88 at Route 638.

The York Basin Watersheds around Lake Anna bacteria TMDL for the Beaver Creek watershed (Eq ID POL0238) was approved by the EPA on 11/04/2005 (Fed ID 24426). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Beaver Creek watershed (ID 250) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_BRC01A02 / Beaver Creek / Segment begins at the confluence with Cooks Creek, approximately 0.68 rivermile upstream from the Route 638 bridge, and continues downstream until the confluence with the North Anna River.	4A	Escherichia coli (E. coli)	1998	L	2.84

Beaver Creek

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

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

York River Basin

Cause Group Code: F06R-03-BAC Gold Mine Creek

Cause Location: Begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (5 of 10 samples - 50.0%) at DEQ station 8-GMC002.19 at Route 613.

The York Basin Watersheds around Lake Anna bacteria TMDL for the Goldmine Creek watershed (Eq ID POL0240) was approved by the EPA on 11/04/2005 (Fed ID 24428). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Goldmine Creek watershed (ID 247) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_GMC01A00 / Gold Mine Creek / Segment begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna.	4A	Escherichia coli (E. coli)	2002	L	7.53

Gold Mine Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.53

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

York River Basin

Cause Group Code: F06R-04-BAC North Anna River

Cause Location: Begins at the confluence with Mountain Run and continues downstream until the confluence with Hickory Creek.

Cause City/County: Louisa County; Orange County

Use(s): Recreation

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

Cause Description: DEQ station 8-NAR061.09 at Route 651 (Ellisville Rd / Cales Dr): There were two or more STV exceedances in at least one 90-day period with <10 samples. DEQ station 8-NAR066.42 at Route 639 (Mallorys Ford Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples. Citizen station 8NAR-EX5-LACA: There were two or more STV exceedances in at least one 90-day period with <10 samples.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_NAR01A02 / North Anna River / Segment begins at the confluence with Beaver Creek and continues downstream until the confluence with Hickory Creek.	5A	Escherichia coli (E. coli)	2006	L	3.79
VAN-F06R_NAR01B22 / North Anna River/Mountain Run / Segment begins at the confluence with White Oak Creek and continues downstream until the confluence with Beaver Creek.	5A	Escherichia coli (E. coli)	2022	L	2.65
VAN-F06R_NAR02A04 / North Anna River / Segment begins at the confluence with Mountain Run and continues downstream until the confluence with White Oak Creek.	5A	Escherichia coli (E. coli)	2010	L	2.80

North Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.24

Sources: Source Unknown

York River Basin

Cause Group Code: F06R-05-BAC Christopher Creek

Cause Location: Begins at an unnamed tributary to Christopher Creek and continues downstream until the confluence with Lake Anna.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: DEQ station 8-CRC001.82 at Route 613 (Mansfield Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_CRC01A10 / Christopher Creek / Segment begins at an unnamed tributary to Christopher Creek and continues downstream until the confluence with Lake Anna.	5A	Escherichia coli (E. coli)	2010	L	1.99

Christopher Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.99

Sources: Source Unknown

York River Basin

Cause Group Code: F06R-06-BAC Hickory Creek

Cause Location: Begins at the confluence with Fox Branch and continues downstream to the confluence with the North Anna River.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: Citizen monitoring station 8HIK-EX2-LACA: there were two or more STV exceedances in at least one 90-day period with <10 samples.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_HIK01A12 / Hickory Creek / Segment begins at the confluence with Fox Branch and continues downstream to the confluence with the North Anna River.	5A	Escherichia coli (E. coli)	2012	L	1.72

Hickory Creek

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

Sources: Source Unknown

York River Basin

Cause Group Code: F06R-07-BAC White Creek

Cause Location: Begins at the headwaters of White Creek and continues downstream until the confluence with Gold Mine Creek.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (8 of 12 samples - 66.7%) at DEQ station 8-WHT001.33 at Route 669.

A new TMDL is not required for this impaired segment of White Creek because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24428, 11/04/2005) included modeling, source identification, and reductions that covered the entire Goldmine Creek watershed (Eq ID POL0240). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Goldmine Creek watershed (ID 247) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_WHT01A14 / White Creek / Segment begins at the headwaters of White Creek and continues downstream until the confluence with Gold Mine Creek.	4A	Escherichia coli (E. coli)	2014	L	6.06

White Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.06

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

York River Basin

Cause Group Code: F06R-08-BAC Duckinghoe Creek

Cause Location: Begins at the headwaters of Duckinghoe Creek and continues downstream until the confluence with Lake Anna.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (8 of 12 samples - 66.7%) at DEQ station 8-DKH001.44 at Route 613.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_DKH01A04 / Duckinghoe Creek / Segment begins at the headwaters of Duckinghoe Creek and continues downstream until the confluence with Lake Anna.	5A	Escherichia coli (E. coli)	2016	L	6.98

Duckinghoe Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.98

Sources: Source Unknown

York River Basin

Cause Group Code: F06R-10-BAC Hickory Creek

Cause Location: Begins at the confluence of North Fork Hickory Creek and South Fork Hickory Creek, creating Hickory Creek, and continues downstream to the upstream portion of Lake Louisa, at Lakeshore Drive.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: Excursions from the maximum E. coli bacteria criterion (2 of 15 samples - 13.3%) at citizen monitoring station 8HIK-EX9-LACA.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_HIK03A16 / Hickory Creek / Segment begins at the confluence of North Fork Hickory Creek and South Fork Hickory Creek, creating Hickory Creek, and continues downstream to the upstream portion of Lake Louisa, at Lakeshore Drive.	5A	Escherichia coli (E. coli)	2018	L	0.69

Hickory Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.69

Sources: Source Unknown

York River Basin

Cause Group Code: F07L-01-HAB Lake Anna and Lake Anna State Park FIshing Pond

Cause Location: Upper Lake Anna from the confluence of North Anna Branch and Pamunkey Branch (at "The Splits") downstream to above the confluence with Pigeon Run; Pamunkey Branch of Lake Anna from the start of the inundated waters downstream to Route 612; North Anna Branch of Lake Anna from the start of the inundated waters downstream to the confluence of North Anna Branch and Pamunkey Branch (at "The Splits"); and the Lake Anna State Park Fishing Pond

Cause City/County: Louisa County; Orange County; Spotsylvania County

Use(s): Recreation

Causes(s)/VA Category: Harmful Algal Blooms/5A

Cause Description: The recreation use is assessed as impaired based on Virginia Department of Health harmful algae bloom (HAB) swim advisories issued during the years 2019 and 2020 for Lake Anna and the Lake Anna State Park Fishing Pond.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_FIP01A22 / Lake Anna State Park Fishing Pond / Lake Anna State Park Fishing Pond	5A	Harmful Algal Blooms	2022	H	1.92
VAN-F07L_GMC01A02 / Lake Anna/Gold Mine Creek / Segment includes the Gold Mine Creek arm of Lake Anna.	5A	Harmful Algal Blooms	2022	H	91.63
VAN-F07L_NAR03B22 / Lake Anna / Segment begins at the confluence of North Anna Branch and Pamunkey Branch (at "The Splits") and continues downstream until above the confluence with Pigeon Run.	5A	Harmful Algal Blooms	2022	H	344.31
VAN-F07L_NAR04A06 / Lake Anna / Segment includes the upper portion North Anna River of Lake Anna beginning at the start of the inundated waters of the North Anna River downstream until the boundary of the F06 watershed.	5A	Harmful Algal Blooms	2022	H	1422.31
VAN-F07L_PLT01A04 / Lake Anna/Plentiful Creek / Segment includes the Plentiful Creek arm of Lake Anna.	5A	Harmful Algal Blooms	2022	H	109.05
VAN-F07L_PMC01B22 / Lake Anna/Pamunkey Creek / Segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until Route 612.	5A	Harmful Algal Blooms	2022	H	267.91
VAN-F07L_PMC02A02 / Lake Anna/Pamunkey Creek / Segment includes the Pamunkey Creek Arm of Lake Anna from the beginning of the inundated waters of Pamunkey Creek downstream to the confluence with the Terry's Run arm of the lake.	5A	Harmful Algal Blooms	2022	H	471.90
VAN-F07L_TRY01A04 / Terrys Run/Lake Anna / Segment includes the Terrys Run arm of Lake Anna.	5A	Harmful Algal Blooms	2022	H	431.09

Lake Anna and Lake Anna State Park FIshing Pond

		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation				
	Harmful Algal Blooms - Total Impaired Size by Water Type:		3140.12	

Sources: Source Unknown

York River Basin

Cause Group Code: F07L-01-HG Lake Anna

Cause Location: Segment includes the lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge, and continues downstream until the dam.

Cause City/County: Louisa County; Spotsylvania County

Use(s): Fish Consumption

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

Cause Description: 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 at DEQ monitoring station 8-NAR034.92 in one species of fish (carp) sampled in 2003, one species of fish (channel catfish) sampled in 2006, and in three samples of two species of fish (largemouth bass and striped bass) sampled in 2017.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_NAR01A02 / Lake Anna / Segment includes the lower portion of Lake Anna (lacustrine), beginning near the northern end of the Route 690 bridge (Dike 2), and continues downstream until the dam.	5A	Mercury in Fish Tissue	2010	L	1563.36

Lake Anna

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		1563.36	

Sources: Source Unknown

York River Basin

Cause Group Code: F07L-01-PAHHMW Gold Mine Creek

Cause Location: Begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna (impairment includes the Gold Mine Creek arm).

Cause City/County: Louisa County

Use(s): Fish Consumption

Causes(s)/VA Category: Benzo[a]pyrene (PAHs)/5A

Cause Description: 2010 Assessment: Exceedances of the water quality criterion based fish tissue value (TV) of 5 parts per billion (ppb) for benzo(a)pyrene were recorded in two total samples of two species of fish (largemouth bass and carp) collected in 2003 at station 8-GMC001.43.

NOTE: In 2022, the water quality criterion based fish tissue value (TV) for benzo(a)pyrene was updated from 5.5 ppb to 5 ppb; this change did not affect the impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_GMC01A00 / Gold Mine Creek / Segment begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna.	5A	Benzo[a]pyrene (PAHs)	2010	L	7.53
VAN-F07L_GMC01A02 / Lake Anna/Gold Mine Creek / Segment includes the Gold Mine Creek arm of Lake Anna.	5A	Benzo[a]pyrene (PAHs)	2010	L	91.63

Gold Mine Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benzo[a]pyrene (PAHs) - Total Impaired Size by Water Type:		91.63	7.53

Sources: Source Unknown

York River Basin

Cause Group Code: F07L-01-PCB Lake Anna and Contrary Creek, Goldmine Creek, and Terrys Run tributaries

Cause Location: Includes the entirety of Lake Anna, including its tributaries Terrys Run, Goldmine Creek, and Contrary Creek.

Cause City/County: Louisa County; Orange County; Spotsylvania County

Use(s): Fish Consumption

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

Cause Description: The fish consumption use is categorized as impaired due to a Virginia Department of Health PCB fish consumption advisory. The advisory, dated 6/15/04 and modified 12/13/04 and 08/31/07, limits consumption of bluegill sunfish, carp, channel catfish, largemouth bass, striped bass, white catfish, and white perch to no more than two meals per month. The advisory also bans the consumption of gizzard shad. The affected area includes the entirety of Lake Anna and its tributaries Contrary Creek, Gold Mine Creek, and Terrys Run.

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: four species of fish (striped bass, largemouth bass, white catfish, and carp) in four samples collected in 2000, three species of fish (largemouth bass, brown bullhead catfish and carp) in four samples collected in 2003, and four species of fish (largemouth bass, carp, channel catfish, and white catfish) in seven samples collected in 2008 at DEQ station 8-GMC001.43; three species of fish (carp, channel catfish, largemouth bass) in five samples collected in 2003, three species of fish (carp, channel catfish, largemouth bass) in eight samples collected in 2006, one species of fish (carp) in two samples collected in 2008, and in two species of fish (carp, striped bass) in two samples collected in 2017 at DEQ station 8-NAR034.92; two species of fish (channel catfish and bluegill sunfish) in four samples collected in 2006 and in one species of fish (carp) in one sample collected in 2017 at DEQ station 8-NAR044.68; three species of fish (channel catfish, carp, and striped bass) in three samples collected in 2017 at DEQ station 8-NAR056.36; three species of fish (largemouth bass, channel catfish, and carp) in nine samples collected in 2006 at DEQ station 8-NAR056.48; three species of fish (channel catfish, striped bass, bluegill sunfish) in six samples collected in 2006 and four species of fish (largemouth bass, green sunfish, carp, striped bass) in six samples collected in 2017 at DEQ station 8-PMC002.13; three species of fish (carp, largemouth bass, and channel catfish) in three samples collected in 2000, two species of fish (carp and largemouth bass) in three samples collected in 2003, and two species of fish (carp and white catfish) in five samples collected in 2008 at DEQ station 8-CON003.84; six species of fish (bluegill sunfish, carp, channel catfish, gizzard shad, white perch, and largemouth bass) in eight samples collected in 2006 and seven species of fish (bluegill sunfish, brown bullhead catfish, carp, channel catfish, gizzard shad, white perch, and largemouth bass) in 14 samples collected in 2008 at DEQ station 8-TRY001.33; five species of fish (bluegill sunfish, carp, channel catfish, white catfish, and largemouth bass) in 2017 at DEQ station 8-TRY001.37.

The following exceedances of the human health criteria of 0.64 parts per billion (ppb) for total polychlorinated biphenyls (PCBs) in the water column were recorded: one exceedance in 2007 at DEQ station 8-PMC003.18; one exceedances in 2006 at DEQ station 8-PMC002.13; two exceedances in 2006 and two exceedances in 2007 at DEQ station 8-TRY001.39; one exceedance in 2006 at DEQ station 8-TRY002.52.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_GMC01A00 / Gold Mine Creek / Segment begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna.	5A	PCBs in Fish Tissue	2006	L	7.53
VAN-F07L_CON01A02 / Lake Anna/Contrary Creek / Segment includes most of the Contrary Creek arm of Lake Anna, beginning around rivermile 3.53 and continuing downstream until the confluence with the main portion of Lake Anna.	5A	PCBs in Fish Tissue	2002	L	445.20

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	PCBs in Fish Tissue	2002	L	27.87
VAN-F07L_FRC01A04 / Lake Anna/Freshwater Creek / Segment includes the Freshwater Creek arm of Lake Anna.	5A	PCBs in Fish Tissue	2006	L	50.67
VAN-F07L_GMC01A02 / Lake Anna/Gold Mine Creek / Segment includes the Gold Mine Creek arm of Lake Anna.	5A	PCBs in Fish Tissue	2002	L	91.63
VAN-F07L_NAR01A02 / Lake Anna / Segment includes the lower portion of Lake Anna (lacustrine), beginning near the northern end of the Route 690 bridge (Dike 2), and continues downstream until the dam.	5A	PCBs in Fish Tissue	2002	L	1563.36
VAN-F07L_NAR02A02 / Lake Anna / Segment begins at the start of the lacustrine waters of Lake Anna (0.7 miles upstream from 8-NAR044.68), and continues downstream until the northern end of the Route 690 bridge.	5A	PCBs in Fish Tissue	2006	L	3039.19
VAN-F07L_NAR03A02 / Lake Anna / Segment begins above the confluence with Pigeon Run and continues downstream until the start of the lacustrine waters of Lake Anna (0.7 miles upstream from 8-NAR044.68).	5A	PCBs in Fish Tissue	2006	L	797.54
VAN-F07L_NAR03B22 / Lake Anna / Segment begins at the confluence of North Anna Branch and Pamunkey Branch (at "The Splits") and continues downstream until above the confluence with Pigeon Run.	5A	PCBs in Fish Tissue	2006	L	344.31
VAN-F07L_NAR04A06 / Lake Anna / Segment includes the upper portion North Anna River of Lake Anna beginning at the start of the inundated waters of the North Anna River downstream until the boundary of the F06 watershed.	5A	PCBs in Fish Tissue	2006	L	1422.31
VAN-F07L_PLT01A04 / Lake Anna/Plentiful Creek / Segment includes the Plentiful Creek arm of Lake Anna.	5A	PCBs in Fish Tissue	2006	L	109.05
VAN-F07L_PMC01A04 / Lake Anna/Pamunkey Creek / Segment includes the Pamunkey Creek arm of Lake Anna beginning at Route 612 and continuing downstream until the confluence with the North Anna River at The Splits.	5A	PCBs in Fish Tissue	2006	L	534.83
VAN-F07L_PMC01B22 / Lake Anna/Pamunkey Creek / Segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until Route 612.	5A	PCBs in Fish Tissue	2006	L	267.91

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_PMC02A02 / Lake Anna/Pamunkey Creek / Segment includes the Pamunkey Creek Arm of Lake Anna from the beginning of the inundated waters of Pamunkey Creek downstream to the confluence with the Terry's Run arm of the lake.	5A	PCBs in Fish Tissue	2006	L	471.90
VAN-F07L_TRY01A04 / Terrys Run/Lake Anna / Segment includes the Terrys Run arm of Lake Anna.	5A	PCBs in Fish Tissue	2006	L	431.09
VAN-F07R_TRY01A00 / Terrys Run / Segment begins at the confluence with Riga Run and continues downstream until the confluence with Lake Anna.	5A	PCBs in Fish Tissue	2006	L	1.99
VAN-F07R_TRY02A02 / Terrys Run / Segment begins at the confluence with Horsepen Branch and continues downstream until the confluence with Riga Run.	5A	PCBs in Fish Tissue	2006	L	3.67
VAN-F07R_TRY03A08 / Terrys Run / Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch.	5A	PCBs in Fish Tissue	2006	L	4.37
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.	5A	PCBs in Fish Tissue	2006	L	5.52

Lake Anna and Contrary Creek, Goldmine Creek, and Terrys Run tributaries

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:		9596.86	23.08

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_PMC01A04 / Lake Anna/Pamunkey Creek / Segment includes the Pamunkey Creek arm of Lake Anna beginning at Route 612 and continuing downstream until the confluence with the North Anna River at The Splits.	5A	Polychlorinated biphenyls (PCBs)	2010	L	534.83
VAN-F07L_PMC01B22 / Lake Anna/Pamunkey Creek / Segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until Route 612.	5A	Polychlorinated biphenyls (PCBs)	2010	L	267.91
VAN-F07L_TRY01A04 / Terrys Run/Lake Anna / Segment includes the Terrys Run arm of Lake Anna.	5A	Polychlorinated biphenyls (PCBs)	2010	L	431.09

Lake Anna and Contrary Creek, Goldmine Creek, and Terrys Run tributaries

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Polychlorinated biphenyls (PCBs) - Total Impaired Size by Water Type:		1233.83	

Sources: Source Unknown

York River Basin

Cause Group Code: F07L-01-PH Lake Orange

Cause Location: Includes all of Lake Orange.

Cause City/County: Orange County

Use(s): Aquatic Life

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

Cause Description: The aquatic life use is assessed as impaired for pH based on exceedances of the upper limit of the criterion range (10 of 83 samples - 12.0%) recorded from pooled data at stations 8-CLC003.48 (6 of 50 samples - 12.0%) and 8-CLC004.28 (4 of 33 samples - 12.1%). Nutrients were assessed as fully supporting based on two complete monitoring years (2016 and 2017) for chlorophyll a; total phosphorus was not assessed because algaecides were not applied. Because the applicable nutrient criteria are met but the pH criterion range is not met, the pH parameter is classified as category 5C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_CLC01A06 / Lake Orange / Segment includes all of Lake Orange.	5C	pH	2022	L	124.85

Lake Orange

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		124.85	

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

York River Basin

Cause Group Code: F07R-01-BAC Pamunkey Creek

Cause Location: Begins at the confluence of Tomahawk Creek and Church Creek, forming Pamunkey Creek, and continues downstream until the impounded waters of Lake Anna.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: DEQ station 8-PMC009.85 at Route 651 (Thornhill Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

2018 Assessment: Excursions from the maximum E. coli bacteria criterion (2 of 4 samples - 50.0%) at citizen monitoring station 8PMC-P6-LACA.

The York Basin Watersheds around Lake Anna bacteria TMDL for the Pamunkey Creek and Tomahawk Creek watershed (Eq. ID POL0237) was approved by the EPA on 11/04/2005 (Fed ID 24430). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_PMC01A00 / Pamunkey Creek / Segment begins at the confluence with Clear Creek and continues downstream until the confluence with Lake Anna.	4A	Escherichia coli (E. coli)	1998	L	5.49
VAN-F07R_PMC02A02 / Pamunkey Creek / Segment begins at the confluence with Tomahawk Creek and Church Creek, where Pamunkey Creek begins, and continues downstream until the confluence with Clear Creek.	4A	Escherichia coli (E. coli)	1998	L	7.22

Pamunkey Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.71

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

York River Basin

Cause Group Code: F07R-01-BEN Pamunkey Creek

Cause Location: Begins at the confluence of Tomahawk Creek and Church Creek, forming Pamunkey Creek, and continues downstream until the confluence with Clear Creek.

Cause City/County: Orange County

Use(s): Aquatic Life

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

Cause Description: 2016 Assessment: Two biological monitoring events in 2010 at station 8-PMC014.75 at Route 630 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-F07R_PMC02A02 / Pamunkey Creek / Segment begins at the confluence with Tomahawk Creek and Church Creek, where Pamunkey Creek begins, and continues downstream until the confluence with Clear Creek.	5A	Benthic Macroinvertebrates Bioassessments	2012	L	7.22

Pamunkey Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			7.22

Sources: Source Unknown

York River Basin

Cause Group Code: F07R-01-DO Church Run

Cause Location: Begins at Taylors Pond and continues downstream until the confluence with Tomahawk Creek.

Cause City/County: Orange County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the minimum dissolved oxygen criterion (2 of 11 samples - 18.2%) at DEQ station 8-CHR000.07 at Route 631.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_CHR01A14 / Church Run / Segment begins at Taylors Pond and continues downstream until the confluence with Tomahawk Creek.	5A	Dissolved Oxygen	2022	L	0.72

Church Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.72

Sources: Source Unknown

York River Basin

Cause Group Code: F07R-02-BAC Terrys Run

Cause Location: Begins at the confluence with Horsepen Branch and continues downstream until the confluence with Lake Anna.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: DEQ station 8-TRY004.98 at Route 629 (Orange Springs Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

The York Basin Watersheds around Lake Anna bacteria TMDL for the Terrys Run watershed (Eq ID POL0235) was developed and approved by the EPA on 11/04/2005 (Fed ID 24432). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Terrys Run watershed (ID 248) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_TRY01A00 / Terrys Run / Segment begins at the confluence with Riga Run and continues downstream until the confluence with Lake Anna.	4A	Escherichia coli (E. coli)	1998	L	1.99
VAN-F07R_TRY02A02 / Terrys Run / Segment begins at the confluence with Horsepen Branch and continues downstream until the confluence with Riga Run.	4A	Escherichia coli (E. coli)	2006	L	3.67

Terrys Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.66

Sources: Grazing in Riparian or Shoreline Zones; Impacts from Land Application of Wastes; Livestock (Grazing or Feeding Operations); Runoff from Forest/Grassland/Parkland; Sewage Discharges in Unsewered Areas; Wastes from Pets; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F07R-02-BEN Plentiful Creek

Cause Location: Begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream until the confluence with Lake Anna.

Cause City/County: Spotsylvania County

Use(s): Aquatic Life

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

Cause Description: A total of four biological monitoring events in 2017, 2019, and 2020 at station 8-PLT002.82 at Route 653 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-F07R_PLT01A00 / Plentiful Creek / Segment begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream until the confluence with Lake Anna.	5A	Benthic Macroinvertebrates Bioassessments	2022	L	3.3

Plentiful Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.3

Sources: Source Unknown

York River Basin

Cause Group Code: F07R-03-BAC Plentiful Creek

Cause Location: Begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream until the confluence with Lake Anna.

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: DEQ station 8-PLT004.82 at Route 601 (Lawyers Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples. DEQ station 8-PMC009.85 at Route 651 (Thornhill Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

The York Basin Watersheds around Lake Anna bacteria TMDL for the Plentiful Creek watershed (Eq. ID POL0236) was approved by the EPA on 11/04/2005 (Fed ID 24429). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Plentiful Creek watershed (ID 198) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_PLT01A00 / Plentiful Creek / Segment begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream until the confluence with Lake Anna.	4A	Escherichia coli (E. coli)	1998	L	3.3

Plentiful Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.3

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

York River Basin

Cause Group Code: F07R-04-BAC Tomahawk Creek

Cause Location: Begins at the headwaters of Tomahawk Creek and continues downstream until the confluence with Church Run.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100.0%) at citizen monitoring station 8THK-P10-LACA.

A new TMDL is not required for this impaired segment of Tomahawk Creek because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek watershed (Eq. ID POL0237). The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_THK01A02 / Tomahawk Creek / Segment begins at the headwaters of Tomahawk Creek and continues downstream until the confluence with Church Run.	4A	Escherichia coli (E. coli)	2014	L	3.84

Tomahawk Creek

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

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

York River Basin

Cause Group Code: F07R-05-BAC Berry Run

Cause Location: Begins at the headwaters of Berry Run and continues downstream until the confluence with Clear Creek.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: DEQ station 8-BRY000.47 at Route 629 (Lahore Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

2018 Assessment: E. coli bacteria criterion excursions (2 of 4 samples - 50.0%) at citizen monitoring station 8BRY-P8-LACA.

A new TMDL is not required for this impaired segment of Berry Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek and Tomahawk Creek watershed (Eq ID POL0237). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_BRY01A06 / Berry Run / Segment begins at the confluence with Little Creek and continues downstream until the confluence with Clear Creek.	4A	Escherichia coli (E. coli)	2006	L	2.34
VAN-F07R_BRY02A14 / Berry Run / Segment begins at the headwaters of Berry Run and continues downstream until the confluence with Little Creek.	4A	Escherichia coli (E. coli)	2014	L	2.96

Berry Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.3

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

York River Basin

Cause Group Code: F07R-06-BAC Terrys Run

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

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: DEQ station 8-TRY010.80 at Route 692 (St Just Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

A new TMDL is not required for this impaired segment of Terrys Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24432, 11/04/2005) included modeling, source identification, and reductions that covered the entire Terrys Run watershed (Eq. ID POL0235). The Upper York River bacteria TMDL Implementation Plan for the Terrys Run watershed (ID 248) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_TRY03A08 / Terrys Run / Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch.	4A	Escherichia coli (E. coli)	2010	L	4.37

Terrys Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.37

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

York River Basin

Cause Group Code: F07R-07-BAC Clear Creek

Cause Location: Begins at the outlet of Lake Orange and continues downstream to the confluence with Berry Run.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (3 of 4 samples - 75.0%) at citizen monitoring station 8CLC-P5-LACA.

A new TMDL is not required for this impaired segment of Church Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek and Tomahawk Creek watershed (Eq. ID POL0237). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_CLC01A12 / Clear Creek / Segment begins at the outlet of Lake Orange and continues downstream to the confluence with Berry Run.	4A	Escherichia coli (E. coli)	2014	L	2.44

Clear Creek

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

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

York River Basin

Cause Group Code: F07R-08-BAC Riga Run

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

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: DEQ station 8-RIG004.52 at Route 650 (Independence Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

A new TMDL is not required for this impaired segment of Riga Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24432, 11/04/2005) included modeling, source identification, and reductions that covered the entire Terrys Run watershed (Eq. ID POL0235). The Upper York River bacteria TMDL Implementation Plan for the Terrys Run watershed (ID 248) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_RIG01A02 / Riga Run / Segment begins at the headwaters of Riga Run and continues downstream until the confluence with Terrys Run.	4A	Escherichia coli (E. coli)	2014	L	7.36

Riga Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.36

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

York River Basin

Cause Group Code: F07R-09-BAC Rocky Run

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

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100.0%) at citizen monitoring station 8ROC-T5-LACA and (3 of 4 samples - 75.0%) at citizen monitoring station 8ROC-T8-LACA.

A new TMDL is not required for this impaired segment of Rocky Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24432, 11/04/2005) included modeling, source identification, and reductions that covered the entire Terrys Run watershed (Eq. ID POL0235). The Upper York River bacteria TMDL Implementation Plan for the Terrys Run watershed (ID 248) was approved by the EPA on 01/09/2013

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_ROC01A10 / Rocky Run / Segment begins at the headwaters of Rocky Run and continues downstream until the confluence with Terrys Run.	4A	Escherichia coli (E. coli)	2014	L	2.41

Rocky Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.41

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

York River Basin

Cause Group Code: F07R-10-BAC Church Run

Cause Location: Begins at Taylors Pond and continues downstream until the confluence with Tomahawk Creek.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100.0%) at citizen monitoring station 8CHR-P9-LACA.

A new TMDL is not required for this impaired segment of Church Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek and Tomahawk Creek watershed (Eq. ID POL0237). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_CHR01A14 / Church Run / Segment begins at Taylors Pond and continues downstream until the confluence with Tomahawk Creek.	4A	Escherichia coli (E. coli)	2014	L	0.72

Church Run

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

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

York River Basin

Cause Group Code: F07R-11-BAC Little Creek

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

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions at citizen monitoring stations 8LIT-P7-LACA (7 of 15 samples - 46.7%) and 8LIT-P13-LACA (2 of 14 samples - 14.3%).

A new TMDL is not required for this impaired segment of Little Creek because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek and Tomahawk Creek watershed (Eq. ID POL0237). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_LIT01A14 / Little Creek / Segment begins at the headwaters of Little Creek and continues downstream until the confluence of Berry Run.	4A	Escherichia coli (E. coli)	2014	L	2.15

Little Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.15

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

York River Basin

Cause Group Code: F07R-12-BAC Poor House Run

Cause Location: Begins at the headwaters of Poor House Run and continues downstream until the confluence with Tomahawk Creek.

Cause City/County: Orange County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100.0%) at citizen monitoring station 8PHC-P12-LACA.

A new TMDL is not required for this impaired segment of Poor House Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek watershed (Eq. ID POL0237). The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_PHC01A14 / Poor House Run / Segment begins at the headwaters of Poor House Run and continues downstream until the confluence with Tomahawk Creek.	4A	Escherichia coli (E. coli)	2014	L	3.51

Poor House Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.51

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

York River Basin

Cause Group Code: F08R-01-CD Contrary Creek

Cause Location: Begins at the headwaters of Contrary Creek and continues downstream until approximately rivermile 3.53, partially into the inundated waters of Lake Anna.

Cause City/County: Louisa County

Use(s): Aquatic Life; Wildlife

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

Cause Description: A total of three exceedances of the freshwater acute criterion for cadmium were recorded in 2017 and 2018 at DEQ stations 8-CON005.38 (at Route 522) and 8-CON006.12 (at 0.6 mile upstream from Route 522).

2012 Assessment: Two exceedances of the freshwater acute criterion for cadmium were recorded in 2006 at DEQ station 8-CON003.86.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	Cadmium	2008	L	27.87
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.	5A	Cadmium	2008	L	5.52

Contrary Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Cadmium - Total Impaired Size by Water Type:		27.87	5.52

Contrary Creek

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Cadmium - Total Impaired Size by Water Type:		27.87	5.52

Sources: Impacts from Abandoned Mine Lands (Inactive)

York River Basin

Cause Group Code: F08R-01-CU Contrary Creek

Cause Location: Begins at the headwaters of Contrary Creek and continues downstream until approximately rivermile 3.53, partially into the inundated waters of Lake Anna.

Cause City/County: Louisa County

Use(s): Aquatic Life; Wildlife

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

Cause Description: A total of three exceedances of the freshwater acute criterion for copper were recorded in 2017 and 2018 at DEQ stations 8-CON005.38 (at Route 522) and 8-CON006.12 (at 0.6 mile upstream from Route 522).

One exceedance of the freshwater acute criterion for copper was recorded in one water sample collected in 2017 at station 8-CON003.53.

2012 Assessment: Two exceedances of the freshwater acute criterion for copper were recorded in 2006 at DEQ station 8-CON003.86.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	Copper	2008	L	27.87
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.	5A	Copper	2008	L	5.52

Contrary Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Copper - Total Impaired Size by Water Type:		27.87	5.52

Contrary Creek

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Copper - Total Impaired Size by Water Type:		27.87	5.52

Sources: Impacts from Abandoned Mine Lands (Inactive)

York River Basin

Cause Group Code: F08R-01-PH Contrary Creek

Cause Location: Begins at the headwaters of Contrary Creek and continues downstream until approximately rivermile 3.53, partially into the inundated waters of Lake Anna.

Cause City/County: Louisa County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the lower limit of the pH criterion range (36 of 36 samples - 100.0%) at DEQ station 8-CON005.38.

2012 Assessment: Excursions less than the lower limit of the pH criterion range (2 of 2 samples - 100%) at DEQ station 8-CON003.86.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	pH	2008	L	27.87
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.	5A	pH	2002	L	5.52

Contrary Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:		27.87	5.52

Sources: Impacts from Abandoned Mine Lands (Inactive)

York River Basin

Cause Group Code: F08R-01-ZN Contrary Creek

Cause Location: Begins at the headwaters of Contrary Creek and continues downstream until approximately rivermile 3.53, partially into the inundated waters of Lake Anna.

Cause City/County: Louisa County

Use(s): Aquatic Life; Wildlife

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

Cause Description: A total of four exceedances of the freshwater acute criterion for zinc were recorded in 2017 and 2018 at DEQ stations 8-CON005.38 (at Route 522) and 8-CON006.12 (at 0.6 mile upstream from Route 522).

One exceedance of the freshwater acute criterion for zinc was recorded in one water sample collected in 2017 at station 8-CON003.53.

2012 Assessment: Two exceedances of the freshwater acute criterion for zinc were recorded in 2006 at DEQ station 8-CON003.86.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	Zinc	2008	L	27.87
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.	5A	Zinc	2008	L	5.52

Contrary Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Zinc - Total Impaired Size by Water Type:		27.87	5.52

Contrary Creek

Wildlife	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Zinc - Total Impaired Size by Water Type:		27.87	5.52

Sources: Impacts from Abandoned Mine Lands (Inactive)

York River Basin

Cause Group Code: F09R-01-BAC Northeast Creek

Cause Location: Begins at the headwaters of Northeast Creek and continues downstream until the confluence with another unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622.

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 8-NST007.84 at Route 614. 2016 Assessment: E. coli bacteria criterion excursions (4 of 23 samples - 17.4%) at DEQ station 8-NST011.67 at Route 208.

The Pamunkey River Basin bacteria TMDL for the Northeast Creek watershed was approved by the EPA on 08/2/2006. The modified Pamunkey River and Tributaries bacteria TMDL for the Northeast Creek watershed (Eq ID 1159) was approved by the EPA on 04/27/2015 (Fed ID 64652).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F09R_NST02A98 / Northeast Creek / Segment begins at the confluence with an unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622, and continues downstream until the confluence with another unnamed tributary to Northeast Creek.	4A	Escherichia coli (E. coli)	2008	L	1.09
VAN-F09R_NST03A08 / Northeast Creek / Segment begins at the confluence with an unnamed tributary to Northeast Creek, at rivermile 9.39, and continues downstream until the confluence with another unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622.	4A	Escherichia coli (E. coli)	2006	L	6.37
VAN-F09R_NST04A08 / Northeast Creek / Segment begins at the confluence of Knights Branch with Music Branch, forming Northeast Creek, and continues downstream until the confluence with an unnamed tributary to Northeast Creek, approximately 2.28 rivermiles downstream from Route 208.	4A	Escherichia coli (E. coli)	2012	L	3.52

Northeast Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.98

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

York River Basin

Cause Group Code: F09R-02-BAC Music Branch

Cause Location: Begins at the headwaters of Music Branch and continues downstream until the confluence with Northeast Creek.

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-MUS000.57 at Route 677.

This impairment was originally nested in the Pamunkey River Basin bacteria TMDL for the South Anna River (F04R-01) watershed (Fed ID 24448, 8/2/2006). The modified Pamunkey River and Tributaries bacteria TMDL for the Northeast Creek watershed was approved by the EPA on 4/27/2015 and this segment was included in the modified Northeast Creek TMDL watershed (Eq ID 1159).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F09R_MUS01A06 / Music Branch / Segment begins at the headwaters of Music Branch and continues downstream until the confluence with Northeast Creek.	4A	Escherichia coli (E. coli)	2008	L	3.57

Music Branch

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.57

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

York River Basin

Cause Group Code: F09R-02-BEN XHS - North Anna River, UT

Cause Location: Unnamed Tributary XHS from its headwaters to its mouth at the North Anna River

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: The unnamed tributary was assessed as not supporting of the Aquatic Life Use in the 2008 cycle due to impairment of the benthic community at station 8-XHS000.72.

It was confirmed by benthic monitoring at 8-XHS000.72 in 2011. Additional 2011 and 2012 benthic monitoring at 8-XHS000.49 also showed benthic community impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F09R_XHS01A08 / XHS - North Anna River, UT / Unnamed Tributary XHS from its headwaters to its mouth at the North Anna River	5A	Benthic Macroinvertebrates Bioassessments	2008	L	1.09

XHS - North Anna River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.09

Sources: Industrial Point Source Discharge; Source Unknown

York River Basin

Cause Group Code: F09R-03-PH XIM - North Anna River, UT

Cause Location: Unnamed Tributary XIM from its mouth at the North Anna River to the first tributary (near Chandler Crossing)

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, the tributary was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 2/2 at freshwater probabilistic monitoring station 8-XIM000.53.

Additional monitoring was conducted during the 2016 cycle; the exceedance rate was 2/12.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F09R_XIM01A10 / XIM - North Anna, UT / Mouth upstream to first tributary (near Chandler Crossing)	5C	pH	2010	L	0.7

XIM - North Anna River, UT

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

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

York River Basin

Cause Group Code: F09R-04-BAC Mill Creek

Cause Location: Mill Creek in its entirety.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Mill Creek was impaired of the Recreation Use due to an E. coli violation rate of 7/13 at the Route 652 bridge (8-MLL001.19).

The Pamunkey River and Tributaries Bacterial TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. The impairment is considered Category 4A.

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F09R_MLL01A12 / Mill Creek / Headwaters to mouth at the North Anna River	4A	Escherichia coli (E. coli)	2012	L	4.37

Mill Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.37

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

York River Basin

Cause Group Code: F09R-04-PH Mill Creek

Cause Location: Mill Creek in its entirety.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Mill Creek was impaired of the Aquatic Life Use due to a pH violation rate of 5/13 at the Route 652 bridge (8-MLL001.19).

Additional monitoring was conducted during the 2022 cycle. Mill Creek remained impaired (5/10).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F09R_MLL01A12 / Mill Creek / Headwaters to mouth at the North Anna River	5C	pH	2012	L	4.37

Mill Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.37

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

York River Basin

Cause Group Code: F09R-05-PH XJP - North Anna River, UT

Cause Location: Headwaters to mouth

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, tributary XJP was impaired of the Aquatic Life Use due to a pH exceedance rate of 6/7 at station 8-XJP000.01, which is located 15 meters above the mouth.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F09R_XJP01A14 / XJP - North Anna River, UT / Headwaters to mouth at XBU	5C	pH	2016	L	1.01

XJP - North Anna River, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.01

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

York River Basin

Cause Group Code: F09R-06-BAC North Anna River

Cause Location: The North Anna River from Bull Run downstream to the Little River.

Cause City/County: Caroline County; Hanover County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the North Anna River from Bull Run to the mouth was impaired of the Recreation Use due to an E. coli exceedance rate of 8/59 at station 8-NAR005.42, which is located at the Route 30 bridge (Morris Bridge).

The Pamunkey River and Tributaries Bacterial TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015; therefore, the segment is considered Category 4A.

The exceedance rate was 9/76 in the 2020 cycle.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F09R_NAR01A00 / North Anna River / From Bull Run to the Doswell PWS intake approximately 0.5 mi upstream of the Rte. 30 bridge.	4A	Escherichia coli (E. coli)	2016	L	1.74
VAP-F09R_NAR02A00 / North Anna River / From the Doswell PWS intake approximately 0.5 mi. upstream of the Route 30 bridge to the confluence with the Little River.	4A	Escherichia coli (E. coli)	2016	L	2.42

North Anna River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.16

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

York River Basin

Cause Group Code: F09R-07-BAC Unnamed tributary to Northeast Creek

Cause Location: Begins at the headwaters of an unnamed tributary to Northeast Creek and continues downstream until the confluence with Northeast Creek, approximately 0.46 rivermiles upstream from the Route 208 crossing.

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion (3 of 12 samples - 25.0%) at DEQ station 8-XIA000.89 at Route 659.

A new TMDL is not required for this impaired segment because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 64652, 04/27/2015) included modeling, source identification, and reductions that covered the entire Northeast Creek watershed (Eq. ID 1159).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F09R_XIA01A06 / Unnamed tributary to Northeast Creek / Segment begins at the headwaters of an unnamed tributary to Northeast Creek and continues downstream until the confluence with Northeast Creek, approximately 0.46 rivermiles upstream from the Route 208 crossing.	4A	Escherichia coli (E. coli)	2016	L	3.01

Unnamed tributary to Northeast Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.01

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

York River Basin

Cause Group Code: F10R-01-BAC Little River

Cause Location: Begins at the confluence with Hawkins Creek and continues downstream until the confluence with Locust Creek.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (8 of 34 samples - 23.5%) at DEQ station 8-LTL030.55 at Route 654 (Signboard Road).

The Pamunkey River and Tributaries bacteria TMDL for the Upper Little River watershed (EQ ID 1160) was approved by the EPA on 4/27/2015 (Fed ID 65140). The SWCB approved the TMDL on 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F10R_LTL01A02 / Little River / Segment begins at the confluence with Hawkins Creek and continues downstream until the confluence with Locust Creek.	4A	Escherichia coli (E. coli)	2006	L	4.17

Little River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.17

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

York River Basin

Cause Group Code: F10R-02-BAC Little River

Cause Location: Begins at the outlet from Swift Millpond and continues downstream until the confluence with Long Creek.

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at DEQ station 8-LTL035.32 at Route 609.

A new TMDL is not required for this impaired segment of Long Creek because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 65140, 04/27/2015) included modeling, source identification, and reductions that covered the entire Upper Little River watershed (Eq. ID 1160).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F10R_LTL02A04 / Little River / Segment begins at the outlet from Swift Millpond and continues downstream until the confluence with Long Creek.	4A	Escherichia coli (E. coli)	2014	L	1.29

Little River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.29

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

York River Basin

Cause Group Code: F10R-02-DO Long Creek

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

Cause City/County: Louisa County

Use(s): Aquatic Life

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

Cause Description: 2018 Assessment: Excursions less than the minimum dissolved oxygen criterion (2 of 10 samples - 20.0%) at station 8-LNG000.94 at Route 655.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F10R_LNG01A14 / Long Creek / Segment begins at the headwaters of Long Creek and continues downstream until the confluence with Little River.	5A	Dissolved Oxygen	2014	L	5.16

Long Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			5.16

Sources: Source Unknown

York River Basin

Cause Group Code: F10R-03-BAC Long Creek

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

Cause City/County: Louisa County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at DEQ station 8-LNG000.94 at Route 655.

A new TMDL is not required for this impaired segment of Long Creek because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 65140, 04/27/2015) included modeling, source identification, and reductions that covered the entire Upper Little River watershed (Eq. ID 1160).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F10R_LNG01A14 / Long Creek / Segment begins at the headwaters of Long Creek and continues downstream until the confluence with Little River.	4A	Escherichia coli (E. coli)	2014	L	5.16

Long Creek

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

York River Basin

Cause Group Code: F11R-01-BAC Little River

Cause Location: The Little River from its confluence with Locust Creek downstream to the confluence with Beaverdam Creek.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, the segment was assessed as not supporting of the Recreation Use due to E. coli violations at the Route 715 bridge (8-LTL024.86). Additional monitoring at station 8-LTL018.80 in the 2012 cycle confirmed the impairment with a violation rate of 3/12. The violation rate at 8-LTL024.86 was 3/15 during the 2014 cycle.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F11R_LTL01B08 / Little River / From Locust Creek downstream to Fulcher Millpond dam.	4A	Escherichia coli (E. coli)	2008	L	6.30
VAP-F11R_LTL02B14 / Little River / Little River from Fulcher Millpond dam downstream to Beaverdam Creek.	4A	Escherichia coli (E. coli)	2008	L	4.22

Little River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.52

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

York River Basin

Cause Group Code: F11R-01-BEN Locust Creek

Cause Location: Begins at the headwaters to of Locust Creek and continues downstream until the confluence with Little River.

Cause City/County: Hanover County; Louisa County

Use(s): Aquatic Life

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

Cause Description: 2014 Assessment: Two biological monitoring events in 2007 at DEQ station 8-LOC002.00 (0.9 miles upstream from Route 608) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F11R_LOC01A06 / Locust Creek / Segment begins at the headwaters to of Locust Creek and continues downstream until the confluence with Little River.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	6.6

Locust Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			6.6

Sources: Source Unknown

York River Basin

Cause Group Code: F11R-01-DO Little River

Cause Location: The Little River from its confluence with Locust Creek downstream to the Fulcher Millpond dam.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2008 cycle, the Little River from Locust Creek downstream to Beaverdam Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen violation rate of 2/9 at the Route 715 bridge (8-LTL024.86).

During the 2012 cycle, additional monitoring within the segment at station 8-LTL018.80 was acceptable; therefore, further monitoring was recommended.

The original listing station 8-LTL024.86 was subsequently monitored during the 2014 cycle. A dissolved oxygen impairment was confirmed with an exceedance rate of 10/16. The segment was shortened to end at the Fulcher Millpond dam because of the acceptable downstream dissolved oxygen levels and because of the probable impact caused by backwatering from the dam. The downstream segment was partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F11R_LTL01B08 / Little River / From Locust Creek downstream to Fulcher Millpond dam.	5A	Dissolved Oxygen	2008	L	6.3

Little River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.3

Sources: Dam or Impoundment; Source Unknown

York River Basin

Cause Group Code: F11R-02-BAC Beaverdam Creek

Cause Location: Beaverdam Creek mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Beaverdam Creek was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 4/9 at the Route 601 bridge (8-BDC000.05).

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F11R_BDC01A12 / Beaverdam Creek / Headwaters to mouth at the Little River	4A	Escherichia coli (E. coli)	2012	L	8.48

Beaverdam Creek

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

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

York River Basin

Cause Group Code: F11R-02-PH Beaverdam Creek

Cause Location: Beaverdam Creek mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Beaverdam Creek was assessed as not supporting of the Aquatic Life Use due to a pH violation rate of 3/10 at the Route 601 bridge (8-BDC000.05).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F11R_BDC01A12 / Beaverdam Creek / Headwaters to mouth at the Little River	5A	pH	2012	L	8.48

Beaverdam Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			8.48

Sources: Source Unknown

York River Basin

Cause Group Code: F11R-03-BAC Little River

Cause Location: The Little River from Route 1 downstream to its mouth.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: The Little River from Beaverdam Creek to its mouth at the North Anna River was impaired during the 2014 cycle due to E. coli exceedances.

The violation rates are as follows in the 2018 cycle: 7/65 at 8-LTL009.54 (Rt. 685) 5/11 at 8-LTL002.69 (Rt. 689)

The Little River is within the study area for the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. The impairment is considered nested.

In the 2020 cycle, the exceedance rate was acceptable at 8-LTL009.54 (4/57). No additional data has been collected at 8-LTL002.69. The segment was shortened to extend from Route 1 to the mouth until data can be collected to characterize 8-LTL002.69 again. Additional monitoring should be prioritized. The upper portion (14.54 miles) was partially delisted (Category 2A).

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected; therefore, the impairment is carried over. There is insufficient information to assess the criteria in the delisted upper portion.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F11R_LTL01A98 / Little River / From Route 1 to its mouth at the North Anna River.	4A	Escherichia coli (E. coli)	2014	L	3.74

Little River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.74

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

York River Basin

Cause Group Code: F11R-04-BAC Locust Creek

Cause Location: Begins at the headwaters to of Locust Creek and continues downstream until the confluence with Little River.

Cause City/County: Hanover County; Louisa County

Use(s): Recreation

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

Cause Description: 2020 Assessment: Excursions from the maximum E. coli bacteria criterion (3 of 12 samples - 25.0%) at DEQ station 8-LOC001.10 at Route 608.

A new TMDL is not required for this impaired segment of Locust Creek because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 65140, 04/27/2015) included modeling, source identification, and reductions that covered the entire Upper Little River watershed (Eq. ID 1160).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F11R_LOC01A06 / Locust Creek / Segment begins at the headwaters to of Locust Creek and continues downstream until the confluence with Little River.	4A	Escherichia coli (E. coli)	2020	L	6.6

Locust Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.6

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

York River Basin

Cause Group Code: F12R-02-BAC Mechumps Creek

Cause Location: Mechumps Creek from its confluence with Slayden Creek to the Pamunkey River.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: Mechumps Creek was initially assessed as not supporting of the Recreation Use due to fecal coliform exceedances at 8-MCP002.42.

During the 2006 cycle, the Bacteria TMDL for Mechumps Creek was developed and approved by the EPA on 10/21/2004. The segment remained impaired for fecal coliform and E. coli and was classified as Cat. 4A.

During the 2008 cycle, the impairment converted to E. coli. The exceedance rate at 8-MCP002.42 was 4/19 during the 2010 cycle. No additional data has been collected by the DEQ. However, Level 2 Coliscan data from 8-MCP-8-RMC, which is co-located with 8-MCP002.42, was acceptable during the 2014 cycle (0/16); therefore, additional monitoring by the DEQ is recommended.

The TMDL was superseded by the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_MCP01A94 / Mechumps Creek / Slayden Creek to the Pamunkey River	4A	Escherichia coli (E. coli)	2006	L	5.78

Mechumps Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.78

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

York River Basin

Cause Group Code: F12R-05-BAC Mechumps Creek

Cause Location: Headwaters to the confluence with unnamed tributary to XEG

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2010 cycle, Mechumps Creek from its headwaters to the confluence with tributary XEG was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 3/11 at 8-MCP009.56, which is located at Arbor Oak Drive. The bacterial TMDL for a downstream segment of Mechumps Creek was already completed and was approved by the EPA on 10/21/2004 and by the SWCB on 12/20/2005. As this downstream impairment required a 94.04% in nonpoint sources in the watershed, this segment was considered nested (Category 4A.)

Subsequently, the segment was specifically addressed in the Pamunkey River and Tributaries Bacterial TMDL, which superseded the previous TMDL. The TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. No additional data has been collected by the DEQ; however, coliscan monitoring at a citizen station showed evidence of continued impairment.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_MCP03A06 / Mechumps Creek / Mechumps Creek from its headwaters downstream to the confluence with XEG.	4A	Escherichia coli (E. coli)	2010	L	1.06

Mechumps Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.06

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

York River Basin

Cause Group Code: F12R-05-DO Mechumps Creek

Cause Location: Headwaters to the confluence with unnamed tributary to XEG

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, Mechumps Creek from its headwaters to the confluence with tributary XEG was assessed as impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/23 at 8-MCP009.56, which is located at Arbor Oak Drive.

During the 2016 cycle, the exceedance rate was 3/10.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_MCP03A06 / Mechumps Creek / Mechumps Creek from its headwaters downstream to the confluence with XEG.	5A	Dissolved Oxygen	2010	L	1.06

Mechumps Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			1.06

Sources: Source Unknown

York River Basin

Cause Group Code: F12R-05-PH Mechumps Creek

Cause Location: Headwaters to the confluence with unnamed tributary to XEG

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2006 cycle, Mechumps Creek from its headwaters to the confluence with tributary XEG was assessed as impaired of the Aquatic Life Use due to pH exceedances at 8-MCP009.56, which is located at Arbor Oak Drive.

During the 2016 cycle, the exceedance rate was 4/10.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_MCP03A06 / Mechumps Creek / Mechumps Creek from its headwaters downstream to the confluence with XEG.	5A	pH	2006	L	1.06

Mechumps Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.06

Sources: Source Unknown

York River Basin

Cause Group Code: F12R-07-BAC Crump Creek

Cause Location: The mainstem of Crump Creek.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, Crump Creek was assessed as not supporting of the Recreation Use based on E.coli exceedances at the Route 605 bridge (8-CRU000.92).

During the 2016 cycle, the violation rates in the segment were as follows: 0/12 at 8-CRU000.92 3/12 at 8-CRU005.61 2/12 at 8-CRU008.30

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_CRU01A02 / Crump Creek / Crump Creek from its headwaters downstream to its mouth at the Pamunkey River.	4A	Escherichia coli (E. coli)	2008	L	10

Crump Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10

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

York River Basin

Cause Group Code: F12R-07-PH Crump Creek

Cause Location: The mainstem of Crump Creek.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, Crump Creek was assessed as not supporting of the Aquatic Life Use based on pH violations at the Route 605 bridge (8-CRU000.92). During the 2016 cycle, the violation rates in the segment were as follows:

5/24 at 8-CRU000.92

5/12 at 8-CRU005.61

10/12 at 8-CRU008.30

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_CRU01A02 / Crump Creek / Crump Creek from its headwaters downstream to its mouth at the Pamunkey River.	5C	pH	2010	L	10

Crump Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			10

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

York River Basin

Cause Group Code: F12R-08-BAC Pamunkey River

Cause Location: The Pamunkey River from its start at the confluence of the South Anna and North Anna Rivers downstream to the confluence with Mechumps Creek.

Cause City/County: Caroline County; Hanover County; King William County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the Pamunkey River from its headwaters to the confluence with Mechumps Creek was assessed as not supporting of the Recreation Use based on an E. coli violation rate of 12/58 at the Route 614 bridge (8-PMK082.34). Violation rates at 8-PMK088.11 were acceptable.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

In the 2020 cycle, exceedance rates were 18/72 at 8-PMK082.34 and 5/24 at 8-PMK088.11 (2018 cycle).

New bacteria criteria were implemented in the 2022 cycle; the segment remains impaired due to two or more STV exceedances within the same 90-day window with <10 samples at station 8-PMK082.34. There was insufficient data to assess station 8-PMK088.11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_PMK01B08 / Pamunkey River / The nontidal Pamunkey River from the North and South Anna Rivers to Mechumps Creek.	4A	Escherichia coli (E. coli)	2016	L	12.28

Pamunkey River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.28

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

York River Basin

Cause Group Code: F12R-09-BAC XEG - Mechumps Creek, UT

Cause Location: Headwaters to its mouth at Mechumps Creek

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2010 cycle, tributary XEG was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at 8-XEG000.06, which is located at Cottage Green Drive. The bacterial TMDL for a downstream segment of Mechumps Creek was already completed and was approved by the EPA on 10/21/2004 and by the SWCB on 12/20/2005. As this downstream impairment required a 94.04% in nonpoint sources in the watershed, this segment was considered nested (Category 4A.)

The TMDL was superseded in the 2016 cycle by the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015; XEG was specifically addressed.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_XEG01A06 / XEG - Mechumps Creek, UT (aka Middle Branch) / Headwaters to mouth at Mechumps Creek	4A	Escherichia coli (E. coli)	2010	L	0.48

XEG - Mechumps Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.48

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

York River Basin

Cause Group Code: F12R-10-PH Millpond Creek

Cause Location: The mainstem of Millpond Creek downstream of Gravatts Millpond.

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Millpond Creek was assessed as not supporting of the Aquatic Life Use based on pH exceedances at the Route 614 bridge (8-MLP002.74).

The exceedance rate was 5/23 during the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_MLP01A00 / Millpond Creek / Mainstem downstream of Gravatts Millpond.	5C	pH	2012	L	3.03

Millpond Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.03

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

York River Basin

Cause Group Code: F12R-11-BAC Kersey Creek

Cause Location: Kersey Creek mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Kersey Creek was assessed as impaired of the Recreation Use due to an E. coli violation rate of 3/12 at the Route 301 bridge (8-KER001.31).

Kersey Creek was included in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_KER01A12 / Kersey Creek / Headwaters to mouth at Crump Creek	4A	Escherichia coli (E. coli)	2012	L	3.33

Kersey Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.33

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

York River Basin

Cause Group Code: F12R-11-PH Kersey Creek

Cause Location: Kersey Creek mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Kersey Creek was assessed as impaired of the Aquatic Life Use due to a pH violation rate of 4/12 at the Route 301 bridge (8-KER001.31).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_KER01A12 / Kersey Creek / Headwaters to mouth at Crump Creek	5C	pH	2012	L	3.33

Kersey Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.33

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

York River Basin

Cause Group Code: F12R-12-BAC XJC - Crump Creek, UT

Cause Location: XJC mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, XJC was assessed as impaired of the Recreation Use due to an E. coli violation rate of 5/12 at the Route 301 bridge (8-XJC001.12).

The tributary was included in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_XJC01A12 / XJC - Crump Creek, UT / Headwaters to mouth at Crump Creek	4A	Escherichia coli (E. coli)	2012	L	1.97

XJC - Crump Creek, UT

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

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

York River Basin

Cause Group Code: F12R-12-PH XJC - Crump Creek, UT

Cause Location: XJC mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XJC was assessed as impaired of the Aquatic Life Use due to a pH violation rate of 5/12 at the Route 301 bridge (8-XJC001.12).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_XJC01A12 / XJC - Crump Creek, UT / Headwaters to mouth at Crump Creek	5C	pH	2012	L	1.97

XJC - Crump Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.97

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

York River Basin

Cause Group Code: F12R-13-BAC Pollard Creek

Cause Location: Pollard Creek mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Pollard Creek was assessed as impaired of the Recreation Use due to an E. coli violation rate of 2/12 at the Route 647 bridge (8-PLD001.73).

Pollard Creek was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

The exceedance rate was 5/12 in the 2020 cycle.

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected; however, re-evaluation of the 2020 data using the new methodology confirms impairment due to two or more STV exceedances within the same 90-day period with <10 samples.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_PLD01A12 / Pollard Creek / Headwaters to its mouth at Crump Creek	4A	Escherichia coli (E. coli)	2012	L	4.21

Pollard Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.21

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

York River Basin

Cause Group Code: F12R-13-DO Pollard Creek

Cause Location: Pollard Creek mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2020 cycle, Pollard Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/12 at 8-PLD001.73, which is located at the Route 647 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_PLD01A12 / Pollard Creek / Headwaters to its mouth at Crump Creek	5C	Dissolved Oxygen	2020	L	4.21

Pollard Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.21

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

York River Basin

Cause Group Code: F12R-13-PH Pollard Creek

Cause Location: Pollard Creek mainstem in its entirety.

Cause City/County: Hanover County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Pollard Creek was assessed as impaired of the Aquatic Life Use due to a pH violation rate of 8/12 at the Route 647 bridge (8-PLD001.73).

The exceedance rate was 4/12 in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_PLD01A12 / Pollard Creek / Headwaters to its mouth at Crump Creek	5C	pH	2012	L	4.21

Pollard Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.21

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

York River Basin

Cause Group Code: F12R-14-BAC Pamunkey River

Cause Location: The Pamunkey River from the confluence with Mechumps Creek downstream to the tidal limit.

Cause City/County: Hanover County; King William County

Use(s): Recreation

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

Cause Description: During the 2020 cycle, the Pamunkey River from Mechumps Creek downstream to Nelson Bridge Road (Rt. 615) was impaired of the Recreation Use due to an E. coli exceedance rate of 3/24 at 8-PMK072.34.

This segment is located within the Middle Pamunkey River TMDL Watershed Unit which was addressed in the Pamunkey River and Tributaries Bacterial TMDL. The TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. Although the impairment was not listed at the time that the TMDL was completed, it is considered nested (Category 4A.)

New bacteria criteria were implemented in the 2022 cycle. The segment remains impaired due to a 90-day geometric mean exceedance. In addition, downstream monitoring at 8-PMK064.73 also indicated impairment due to a geometric mean exceedance. The impairment will be extended downstream to the tidal limit. The expansion is due in 2034, but will be considered nested.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_PMK01A00 / Pamunkey River / The nontidal Pamunkey River from Mechumps Creek to Nelson Bridge Road (Route 615.)	4A	Escherichia coli (E. coli)	2020	L	9.17
VAP-F13R_PMK01A98 / Pamunkey River / From Nelson Bridge Road (Rt. 615) in F12 to limit of tide near Totopotomoy Creek	4A	Escherichia coli (E. coli)	2022	L	11.56

Pamunkey River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			20.73

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

York River Basin

Cause Group Code: F13E-01-BAC Pamunkey River

Cause Location: From the tidal limit at Totopotomoy Creek to Pampatike Landing

Cause City/County: Hanover County; King William County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, the Pamunkey River from the tidal limit to Pampatike Landing was impaired of the Recreation Use due to E. coli exceedances at 8-PMK056.87 (Rt. 360 bridge). The exceedance rate was 8/35 during the 2020 cycle.

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

The Pamunkey River and Tributaries Bacterial TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_PMK01A98 / Pamunkey River / Extent of tide near Totopotomoy Creek to Pampatike Landing. PMKTF	4A	Escherichia coli (E. coli)	2008	L	0.307

Pamunkey River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	0.306		

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

York River Basin

Cause Group Code: F13E-02-BAC Pamunkey River

Cause Location: From Route 654 (Pampatike Landing to Macon Creek (the downstream boundary of watershed F13).

Cause City/County: Hanover County; King William County; New Kent County

Use(s): Recreation

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

Cause Description: The Pamunkey River from Pampatike Landing to Macon Creek was initially listed on the 1998 303(d) list as impaired of the Recreation Use goal because of fecal coliform exceedances at Pampatike Landing (Route 654). EPA also identified the station on their list of "Waters Identified to Virginia for Consideration During Development of the Next Listing Cycle." This inclusion was probably in error as the segment was already 303(d) listed.

During the 2006 cycle, the bacteria standard changed to E. coli and the segment had acceptable exceedance rates and the segment was delisted. However, it was included in the Pamunkey Basin TMDL which was approved by the EPA on 8/2/2006.

During the 2008 cycle, the Pamunkey River again failed the Recreation Use based on E. coli exceedances at 8-PMK048.80. The original impairment is considered a Category 4A water.

The Pamunkey remains impaired in the 2020 cycle (6/29 at 8-PMK048.80 and 2/12 at 8-PMK039.74 (2016 cycle)). Monitoring at 8-PMK044.64 was acceptable.

The segment is considered a Category 4A water. The TMDL was superseded by the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_PMK02A98 / Pamunkey River / Pampatike Landing downstream to Jacks Creek. PMKTF	4A	Escherichia coli (E. coli)	2008	L	0.783
VAP-F13E_PMK03A06 / Pamunkey River / Jacks Creek downstream to Macon Creek. PMKTF	4A	Escherichia coli (E. coli)	2008	L	0.115

Pamunkey River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	0.898		

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

York River Basin

Cause Group Code: F13R-01-BAC Matadequin Creek

Cause Location: Matadequin from the confluence with Parsleys Creek to the mouth.

Cause City/County: Hanover County; New Kent County

Use(s): Recreation

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

Cause Description: Matadequin Creek from Parsleys Creek to its mouth was assessed in 1998 as fully supporting but threatened of the Recreation Use goal. However, it was mistakenly included on the 1998 Consent Decree as an Attachment A Part 1 Water ("Waters listed on Part 1 of Virginia's October 14, 1998 303(d) Report"); therefore, the TMDL was due by 2010.

In 2002, the segment was downgraded to impaired. The impairment converted to E. coli during the 2008 cycle.

The bacterial TMDL for Matadequin Creek was approved by the EPA on 10/21/2004 and the segment is a Cat. 4A water. The TMDL was subsequently superseded by the Pamunkey River and Tributaries TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

The segment continued to be impaired of the Recreation Use goal based on an E. coli violation rate of 4/12 at 8-MDQ001.37 in the 2012 cycle.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_MDQ01A98 / Matadequin Creek / Downstream of Parsleys Creek.	4A	Escherichia coli (E. coli)	2006	L	4.92

Matadequin Creek

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

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

York River Basin

Cause Group Code: F13R-02-BAC Totopotomoy Creek

Cause Location: Strawhorn Creek to the Pamunkey River.

Cause City/County: Hanover County

Use(s): Recreation

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

Cause Description: Totopotomoy Creek was initially listed in 2002 as not supporting of the Recreation Use goal based on fecal coliform exceedances at the Route 606 bridge (8-TPT004.37). During the 2006 cycle, the impairment switched to E. coli.

The bacteria TMDL was completed during the 2008 cycle as part of the Pamunkey River Basin TMDL, which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007. The segment is now considered a Category 4A water.

The exceedance rates were 3/9 at 8-TPT004.37 and 2/10 at 8-TPT000.79 during the 2018 cycle.

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_TPT01A98 / Totopotomoy Creek / Strawhorn Creek to the Pamunkey River.	4A	Escherichia coli (E. coli)	2006	L	10.27

Totopotomoy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			10.27

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

York River Basin

Cause Group Code: F13R-03-BAC Jacks Creek and major tributaries

Cause Location: Jacks Creek, Acquinton Creek, and Mallory Creek in their entireties.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: During the 2008 cycle, the streams were assessed as not supporting of the Recreation Use based on E. coli violations at the Route 621 bridge (8-JKC004.15).

Additional E. coli data was collected in the 2014 cycle. The Jacks Creek impairment was confirmed with violation rates of 3/12, 2/11, and 4/12 at stations 8-JKC004.15, 8-JKC005.80, and 8-MLY001.58, respectively (8-JKC007.95 was acceptable (0/12).) E. coli levels on Acquinton Creek was determined to meet the WQS and therefore Acquinton Creek was partially delisted. However, the assessment was in error and Acquinton Creek remains listed.

The entire impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the SWCB on 4/27/2015. The creeks are considered Category 4A.

Monitoring was continued at 8-JKC004.15 in the 2016 cycle (3/12.)

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_ACQ01A14 / Acquinton Creek / Headwaters to mouth at Jacks Creek	4A	Escherichia coli (E. coli)	2008	L	9.66
VAP-F13R_JKC01A98 / Jacks Creek / Jacks Creek in its entirety	4A	Escherichia coli (E. coli)	2008	L	7.52
VAP-F13R_MLY01A12 / Mallory Creek / Mallory Creek in its entirety.	4A	Escherichia coli (E. coli)	2008	L	4.02

Jacks Creek and major tributaries

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			21.2

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

York River Basin

Cause Group Code: F13R-04-BAC Moncuin Creek, Webb Creek

Cause Location: From the headwaters of Webb Creek downstream to the swampy area around river mile 2.0.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: In 1998, Moncuin Creek was assessed as fully supporting but threatened of the Recreation use because of fecal coliform exceedances at the Route 618 bridge.

In the 2002 cycle, the segment was extended to incorporate the station on Webb Creek and was assessed not supporting of the Recreation Use because of fecal coliform exceedances. The TMDL was due in 2014. The impairment converted to E. coli during the 2006 cycle.

During the 2008 cycle, the bacteria TMDL was addressed as part of the Pamunkey River Basin Bacteria TMDL, which was approved by the EPA on 8/2/2006. This is considered a Category 4A water.

The exceedance rate was 5/23 at 8-MNQ004.19 during the 2010 cycle.

The TMDL was superseded by the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

During the 2018 cycle, the E. coli exceedance rate was 4/11 at 8-WEB002.00.

New bacteria criteria were implemented in the 2022 cycle. No additional data have been collected; however, a re-analysis of the 2018 data confirms impairment due to two or more STV hits in the same 90-day period with < 10 samples.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_MNQ01A98 / Monquin Creek / Webb Creek / From the headwaters of Webb Creek downstream to the swampy area on Monquin Creek around river mile 2.	4A	Escherichia coli (E. coli)	2006	L	12.12

Moncuin Creek, Webb Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.12

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

York River Basin

Cause Group Code: F13R-04-PCB Moncuin Creek, Webb Creek

Cause Location: From the headwaters of Webb Creek downstream to the swampy area around river mile 2.0.

Cause City/County: King William County

Use(s): Fish Consumption

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

Cause Description: During the 2010 cycle, Moncuin and Webb Creeks were assessed as impaired of the Fish Consumption Use due to exceedances of the PCB tissue value at 8-MNQ004.19. PCBs exceeded in yellow bullhead catfish in 2003 and American eel in 2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_MNQ01A98 / Monquin Creek / Webb Creek / From the headwaters of Webb Creek downstream to the swampy area on Monquin Creek around river mile 2.	5A	PCBs in Fish Tissue	2010	L	12.12

Moncuin Creek, Webb Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:			12.12

Sources: Source Unknown

York River Basin

Cause Group Code: F13R-07-PH Jacks Creek

Cause Location: Headwaters to limit of tide

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: During the 2018 cycle, the Jacks Creek watershed was reclassified as Class VII swampwaters. It was assessed against the Class VII pH criteria of 3.7-8.0 SU. Jacks Creek was impaired due to elevated pH levels (2/12) at 8-JKC007.95.

The remaining stations 8-JKC004.15 and 8-JKC005.80 had acceptable exceedance rates (0/24 and 0/13, respectively).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_JKC01A98 / Jacks Creek / Jacks Creek in its entirety	5A	pH	2018	L	7.52

Jacks Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			7.52

Sources: Dam or Impoundment; Source Unknown

York River Basin

Cause Group Code: F13R-08-BAC Black Creek

Cause Location: Black Creek from Southern Branch downstream to tidal limit

Cause City/County: New Kent County

Use(s): Recreation

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

Cause Description: During the 2018 cycle, Black Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 8-BLC001.77 (Route 608).

The bacteria TMDL was previously completed for this segment as part of the Pamunkey River Basin Bacteria TMDL, which was approved by the EPA on 8/2/2006. The TMDL was subsequently superseded by the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. The segment is considered a Category 4A water.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_BLC01A00 / Black Creek / Southern Branch downstream to tidal limit	4A	Escherichia coli (E. coli)	2018	L	1.96

Black Creek

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

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

York River Basin

Cause Group Code: F13R-09-BAC XDX - UT to XDW (Pamunkey River, UT)

Cause Location: The mainstem of unnamed tributary XDX.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: The tributary was initially considered as not supporting of the Recreation Use goal during the 2004 cycle based on fecal coliform violations at the Route 604 bridge (8-XDX000.38). The impairment converted to E.coli during the 2012 cycle due to an exceedance rate of 3/12.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XDX01A04 / XDX - UT to Pamunkey River, UT (XDW) / Headwaters to mouth at XDW	4A	Escherichia coli (E. coli)	2012	L	3.86

XDX - UT to XDW (Pamunkey River, UT)

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.86

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

York River Basin

Cause Group Code: F13R-09-PH XDX - UT to XDW (Pamunkey River, UT)

Cause Location: The mainstem of unnamed tributary XDX.

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: The tributary was considered as not supporting of the Aquatic Life Use goal during the 2012 cycle based on a pH violation rate of 2/11 at the Route 604 bridge (8-XDX000.38).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XDX01A04 / XDX - UT to Pamunkey River, UT (XDW) / Headwaters to mouth at XDW	5C	pH	2012	L	3.86

XDX - UT to XDW (Pamunkey River, UT)

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.86

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

York River Basin

Cause Group Code: F13R-11-BAC XDW - Pamunkey River, UT

Cause Location: The mainstem of unnamed tributary XDW.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: The tributary was assessed as not supporting of the Recreation Use goal during the 2012 cycle based on E. coli exceedances at the Route 604 bridge (8-XDW000.67). During the 2016 cycle, the violation rate was 2/12.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XDW01A08 / XDW - Pamunkey River, UT / Headwaters to mouth at the Pamunkey River	4A	Escherichia coli (E. coli)	2012	L	5.52

XDW - Pamunkey River, UT

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

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

York River Basin

Cause Group Code: F13R-11-PH XDW - UT to Pamunkey River

Cause Location: The mainstem of unnamed tributary XDW.

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: The tributary was assessed as not supporting of the Aquatic Life Use goal during the 2012 cycle based on pH exceedances at the Route 604 bridge (8-XDW000.67).

The exceedance rate was 4/23 during the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XDW01A08 / XDW - Pamunkey River, UT / Headwaters to mouth at the Pamunkey River	5C	pH	2012	L	5.52

XDW - UT to Pamunkey River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			5.52

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

York River Basin

Cause Group Code: F13R-12-PH Judy Swamp

Cause Location: Judy Swamp from its headwaters to its mouth at the Pamunkey River.

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Judy Swamp was impaired of the Aquatic Life Use due to pH exceedances at 8-JDY000.19 and at 8-JDY001.27, the Rt. 604 and Rt. 639 bridges.

The 2016 cycle's exceedance rates were 4/10 and 9/23, respectively.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_JDY01A02 / Judy Swamp / The mainstem of Judy Swamp.	5C	pH	2012	L	3.34

Judy Swamp

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

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

York River Basin

Cause Group Code: F13R-13-HG Pamunkey River

Cause Location: The Pamunkey River from Nelson Bridge Road (Route 15) downstream approximately 72 miles to the mouth at the York River.

Cause City/County: Hanover County; King William County; New Kent County

Use(s): Fish Consumption

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

Cause Description: On 9/30/2004, VDH issued a fish consumption advisory from Nelson Bridge Road to Jacks Creek near Liberty Hall. The advisory recommends no more than two meals per month of blue catfish because of mercury contamination in the fish tissue.

This condemnation was expanded on 10/7/2009 and now extends downstream to the mouth at the York River.

The advisory is based on mercury fish tissue exceedances at DEQ monitoring stations 8-PMK056.87, 8-PMK032.00, and 8-PMK006.36.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_PMK01A98 / Pamunkey River / Extent of tide near Totopotomoy Creek to Pampatike Landing. PMKTF	5A	Mercury in Fish Tissue	2006	L	0.307
VAP-F13E_PMK02A98 / Pamunkey River / Pampatike Landing downstream to Jacks Creek. PMKTF	5A	Mercury in Fish Tissue	2006	L	0.783
VAP-F13E_PMK03A06 / Pamunkey River / Jacks Creek downstream to Macon Creek. PMKTF	5A	Mercury in Fish Tissue	2010	L	0.115
VAP-F13R_PMK01A98 / Pamunkey River / From Nelson Bridge Road (Rt. 615) in F12 to limit of tide near Totopotomoy Creek	5A	Mercury in Fish Tissue	2006	L	11.560
VAP-F14E_PMK02A00 / Pamunkey River / Macon Creek to downstream extent of tidal freshwater segment at approximately river mile 23.6 PMKTF	5A	Mercury in Fish Tissue	2010	L	3.638
VAP-F14E_PMK05A18 / Pamunkey River / 0.5 miles above station 8-PMK017.90 downstream to Sweet Hall Landing. PMKOH	5A	Mercury in Fish Tissue	2010	L	0.113
VAP-F14E_PMK05B00 / Pamunkey River / Tidal freshwater/oligohaline boundary at approximately river mile 23.6 downstream to 0.5 mile above station 8-PMK017.90 PMKOH	5A	Mercury in Fish Tissue	2010	L	1.193
VAP-F14E_PMK06A00 / Pamunkey River / Sweet Hall Landing to upstream boundary of VDH-DSS SFC 049-004A, 7/15/2020 PMKOH	5A	Mercury in Fish Tissue	2010	L	3.382

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK06B06 / Pamunkey River / VDH-DSS SFC 049-004A, 7/15/2020 to mesohaline boundary PMKOH	5A	Mercury in Fish Tissue	2010	L	0.584
VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth YRKMH	5A	Mercury in Fish Tissue	2010	L	0.398

Pamunkey River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:	10.513		11.56

Sources: Atmospheric Deposition - Toxics; Source Unknown

York River Basin

Cause Group Code: F13R-13-PCB Pamunkey River

Cause Location: The Pamunkey River from Nelson Bridge Road (Route 15) downstream approximately 72 miles to the mouth at the York River.

Cause City/County: Hanover County; King William County; New Kent County

Use(s): Fish Consumption

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

Cause Description: On 10/7/2009, VDH issued a fish consumption advisory from Nelson Bridge Road to the mouth at West Point. The advisory recommends no more than two meals per month of gizzard shad because of PCB contamination in the fish tissue.

The advisory is based on PCB fish tissue exceedances at DEQ monitoring stations 8-PMK056.87, 8-PMK032.00, and 8-PMK006.36.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_PMK01A98 / Pamunkey River / Extent of tide near Totopotomoy Creek to Pampatike Landing. PMKTF	5A	PCBs in Fish Tissue	2010	L	0.307
VAP-F13E_PMK02A98 / Pamunkey River / Pampatike Landing downstream to Jacks Creek. PMKTF	5A	PCBs in Fish Tissue	2010	L	0.783
VAP-F13E_PMK03A06 / Pamunkey River / Jacks Creek downstream to Macon Creek. PMKTF	5A	PCBs in Fish Tissue	2010	L	0.115
VAP-F13R_PMK01A98 / Pamunkey River / From Nelson Bridge Road (Rt. 615) in F12 to limit of tide near Totopotomoy Creek	5A	PCBs in Fish Tissue	2010	L	11.560
VAP-F14E_PMK02A00 / Pamunkey River / Macon Creek to downstream extent of tidal freshwater segment at approximately river mile 23.6 PMKTF	5A	PCBs in Fish Tissue	2010	L	3.638
VAP-F14E_PMK05A18 / Pamunkey River / 0.5 miles above station 8-PMK017.90 downstream to Sweet Hall Landing. PMKOH	5A	PCBs in Fish Tissue	2010	L	0.113
VAP-F14E_PMK05B00 / Pamunkey River / Tidal freshwater/oligohaline boundary at approximately river mile 23.6 downstream to 0.5 mile above station 8-PMK017.90 PMKOH	5A	PCBs in Fish Tissue	2010	L	1.193
VAP-F14E_PMK06A00 / Pamunkey River / Sweet Hall Landing to upstream boundary of VDH-DSS SFC 049-004A, 7/15/2020 PMKOH	5A	PCBs in Fish Tissue	2010	L	3.382
VAP-F14E_PMK06B06 / Pamunkey River / VDH-DSS SFC 049-004A, 7/15/2020 to mesohaline boundary PMKOH	5A	PCBs in Fish Tissue	2010	L	0.584

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth YRKMH	5A	PCBs in Fish Tissue	2010	L	0.398

Pamunkey River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	10.513		11.56

Sources: Atmospheric Deposition - Toxics; Source Unknown

York River Basin

Cause Group Code: F13R-14-PH XIV - Mehixen Creek, UT

Cause Location: Headwaters to mouth at the Pamunkey River

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, Mehixen Creek and its tributary XIV were impaired of the Aquatic Life Use due to pH violation rates of 4/11 at stations 8-MHX001.50 and 8-XIV000.88, which are both located at Rt. 652.

A Natural Conditions Assessment was completed during the 2014 cycle. The exceedances were attributed to natural swampwater conditions and the report recommends that the watershed be reclassified as Class VII swampwater. However, the slopes and nutrients were slightly above the current protocol, so the watershed remained Category 5C.

Additional monitoring was conducted in the 2018 cycle at 8-MHX001.50. The exceedance rate was acceptable (1/11); therefore, the Mehixen Creek mainstem was partially delisted. XIV remained impaired until monitoring at 8-XIV000.88 could be conducted.

The XIV pH impairment was confirmed in the 2022 cycle (2/10 at 8-XIV000.88).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XIV01A18 / XIV - Mehixen Creek, UT / Headwaters to mouth at Mehixen Creek	5C	pH	2012	L	2.05

XIV - Mehixen Creek, UT

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

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

York River Basin

Cause Group Code: F13R-15-BAC XIW - Jacks Creek, UT

Cause Location: The tributary XIW from its headwaters to its mouth at Jacks Creek.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: The tributary was monitored during the 2014 cycle to help characterize the downstream bacterial impairment on Jacks Creek. The station was located at the Route 663 bridge (8-XIW000.42).

The E. coli exceedance rate was 3/11; therefore, the stream is considered impaired.

The E. coli data results were included in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the SWCB on 4/27/2015. Although the data from XIW was included in the TMDL, the impairment itself was not specifically mentioned so it is considered nested.

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XIW01A12 / XIW - Jacks Creek, UT / Headwaters to mouth at Jacks Creek	4A	Escherichia coli (E. coli)	2014	L	2.28

XIW - Jacks Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.28

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

York River Basin

Cause Group Code: F14E-03-BAC Pamunkey River

Cause Location: The Pamunkey River from Sweet Hall Landing to the mouth.

Cause City/County: King William County; New Kent County

Use(s): Recreation

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

Cause Description: The Pamunkey River from Sweet Hall Landing to the mouth was assessed as not supporting of the Recreation Use during the 2006 cycle based on enterococci exceedances at 8-PMK006.36, located at the southern end of Lee Marsh.

The TMDL was approved by the EPA on 7/28/2010 and by the SWCB on 12/13/2010.

The exceedance rate in the 2020 cycle was 9/47. Sampling at 8-PMK016.23 was acceptable (1/12).

New bacteria criteria were implemented in the 2022 cycle. The segment remains impaired due to sampling at 8-PMK006.36 (two or more STV exceedances in the same 90-day period with <10 samples.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK06A00 / Pamunkey River / Sweet Hall Landing to upstream boundary of VDH-DSS SFC 049-004A, 7/15/2020 PMKOH	4A	Enterococcus	2006	L	3.382
VAP-F14E_PMK06B06 / Pamunkey River / VDH-DSS SFC 049-004A, 7/15/2020 to mesohaline boundary PMKOH	4A	Enterococcus	2006	L	0.584
VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth YRKMH	4A	Enterococcus	2006	L	0.398

Pamunkey River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	4.364		

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

York River Basin

Cause Group Code: F14E-04-EBEN York-, Pamunkey-, and Mattaponi Rivers

Cause Location: The York mesohaline mainstem, including the applicable mainstem portions of the Pamunkey and Mattaponi Rivers.

Cause City/County: James City County; King And Queen County; King William County; New Kent County

Use(s): Aquatic Life

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

Cause Description: Since the 2018 cycle, the mainstem York mesohaline segment, which includes the mouths of the Pamunkey- and Mattaponi Rivers, has been impaired of the Aquatic Life Use due to failure of the Chesapeake Bay B-IBI. The YRKMHa remains impaired for benthics in the 2022 IR cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth YRKMH	5A	Estuarine Bioassessments	2018	L	0.398
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004E, 7/15/2020. YRKMH	5A	Estuarine Bioassessments	2018	L	0.209
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 7/15/2020 within Mattaponi River mainstem. YRKMH	5A	Estuarine Bioassessments	2006	L	0.641
VAT-F26E_YRK01A04 / York River / York River at Goalders Creek downstream to the boundary of DSS OPEN condemnation # 049-004 (effective 20200715). CBP segment YRKMH.	5A	Estuarine Bioassessments	2018	L	3.962
VAT-F26E_YRK01B10 / York River / Start of York River at West Point (RM 32.0) downstream to the boundary of ADMIN COND # 049-004 A (effective 7/15/2020), approx. Goff Point . CBP segment YRKMH.	5A	Estuarine Bioassessments	2018	L	1.086
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049-004 C, 7/15/2020. CB Seg - YRKMH.	5A	Estuarine Bioassessments	2018	L	0.029
VAT-F26E_YRK01D12 / York River / Portion of York River within VDH Seasonal Cond 0049-004 effective date 20200715 YRKMH	5A	Estuarine Bioassessments	2018	L	0.042
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 7/15/2020 . CBP segment YRKMH.	5A	Estuarine Bioassessments	2018	L	0.457

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_YRK02A14 / York River (Lower Middle MSN) / Segment starts south of New Kent and James City Boundary and extends downstream to the MSN boundary near Mt. Folly/Poropotank Bay. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	5A	Estuarine Bioassessments	2018	L	2.680
VAT-F26E_YRK03A00 / York River (Lower Middle) / Segment starts at end of MSN boundary near Mt. Folly/Poropotank Bay and extends downstream to the mesohaline/polyhaline boundary. CBP segment YRKMH. Open DSS shellfish direct harvesting condemnation present (effective date 20200715)	5A	Estuarine Bioassessments	2018	L	20.372
VAT-F26E_YRK03B12 / York River (Lower Middle) / Portion of York River at Carter Creek north of Camp Peary. Within VDH-DSS Open condemnation-type #049-004 , 20200715. CB segment YRKMH.	5A	Estuarine Bioassessments	2018	L	0.023

York-, Pamunkey-, and Mattaponi Rivers

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	29.898		

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); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

York River Basin

Cause Group Code: F14E-05-EBEN Pamunkey River

Cause Location: The mainstem Pamunkey River from 0.5 mile upstream of station 8-PMK017.90 downstream to Sweet Hall Landing.

Cause City/County: King William County; New Kent County

Use(s): Aquatic Life

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

Cause Description: The oligohaline Pamunkey River mainstem initially failed the Chesapeake Bay Index of Biologic Integrity during the 2010 cycle. The impairment continued during the 2014 cycle.

In addition, a 2012 weight-of-evidence analysis at estuarine probabilistic monitoring station 8-PMK017.90 showed benthic alteration probably caused by metals in sediment (Category 5A).

The mainstem met the B-IBI criteria in the 2018 cycle. However, due to the 2012 WOE sample the portion of the mainstem around the station will remain listed. Continued monitoring is recommended. The remaining Pamunkey mainstem was partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK05A18 / Pamunkey River / 0.5 miles above station 8-PMK017.90 downstream to Sweet Hall Landing. PMKOH	5A	Estuarine Bioassessments	2010	L	0.113

Pamunkey River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.113		

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

York River Basin

Cause Group Code: F14E-06-BAC Harrison Creek

Cause Location: The tidal portion of Harrison Creek.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, tidal Harrison Creek was impaired of the Recreation Use due to E.coli exceedances at 8-HSN000.92, which is located at Elsing Green Road. The violation rate was 3/12 during the 2014 cycle.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the EPA on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_HSN01A12 / Harrison Creek / Tidal portion of Harrison Creek PMKTF	4A	Escherichia coli (E. coli)	2012	L	0.044

Harrison Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	0.044		

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

York River Basin

Cause Group Code: F14E-07-EBEN Pamunkey River

Cause Location: The mainstem Pamunkey River from the boundary of VDH-DSS condemnation 049-004A downstream to the mesohaline boundary.

Cause City/County: King William County; New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2020 cycle, monitoring at 8-PMK002.60, a 2017 weight-of-evidence station, indicated impairment due to the probable effects of multiple PAHs and metals in sediment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK06B06 / Pamunkey River / VDH-DSS SFC 049-004A, 7/15/2020 to mesohaline boundary PMKOH	5A	Estuarine Bioassessments	2020	L	0.584

Pamunkey River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.584		

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

York River Basin

Cause Group Code: F14E-08-BAC Pamunkey River

Cause Location: Tidal Pamunkey River from Macon Creek downstream to the transition zone boundary.

Cause City/County: King William County; New Kent County

Use(s): Recreation

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

Cause Description: During the 2022 cycle, the Pamunkey River from Macon Creek downstream to the transition zone boundary was impaired of the Recreation Use due to two or more STV exceedances within the same 90-day period with <10 samples at station 8-PMK034.17, which is located at the railroad trestle near White House.

The station only violated during one 90-day period; therefore, continued monitoring is recommended.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015; therefore, it was Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK02A00 / Pamunkey River / Macon Creek to downstream extent of tidal freshwater segment at approximately river mile 23.6 PMKTF	4A	Escherichia coli (E. coli)	2022	L	3.638

Pamunkey River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	3.638		

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

York River Basin

Cause Group Code: F14R-01-DO Cohoke Mill Creek

Cause Location: Cohoke Mill Stream mainstem from its headwaters downstream to Cohoke Millpond

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, Cohoke Mill Stream was assessed as not supporting of the Aquatic Life Use based on dissolved oxygen violations at 8-CMC005.16, which is located at the Route 626 bridge.

The exceedance rate was 9/25 during the 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14R_CMC01A00 / Cohoke Mill Creek / Mainstem upstream of Cohoke Millpond.	5C	Dissolved Oxygen	2010	L	7.39

Cohoke Mill Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			7.39

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

York River Basin

Cause Group Code: F14R-02-BAC Harrison Creek

Cause Location: Harrison Creek and tributary upstream of pond at Elsing Green upstream to nearest tributaries.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: Harrison Creek was assessed as not supporting of the Recreation Use in 2008 based on an E. coli violations at the Route 632 bridge (8-HSN002.12). During the 2014 cycle, the exceedance rates were as follows:

2/12 at 8-HSN002.12 3/12 at 8-HSN002.43 4/15 at 8-HSN003.93

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14R_HSN01A00 / Harrison Creek and Tributary / Upstream of pond at Elsing Green to nearest tributaries.	4A	Escherichia coli (E. coli)	2008	L	2.8

Harrison Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.8

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

York River Basin

Cause Group Code: F14R-02-DO Harrison Creek

Cause Location: Harrison Creek and tributary upstream of pond at Elsing Green upstream to nearest tributaries.

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, Harrison Creek was assessed as not supporting of the Aquatic Life Use based on a dissolved oxygen exceedance rate of 2/11 at the Route 632 bridge (8-HSN002.12).

Monitoring at stations 8-HSN002.43 and 8-HSN003.93 was acceptable (1/11).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14R_HSN01A00 / Harrison Creek and Tributary / Upstream of pond at Elsing Green to nearest tributaries.	5C	Dissolved Oxygen	2014	L	2.8

Harrison Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.8

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

York River Basin

Cause Group Code: F14R-04-BAC XJD - Harrison Creek, UT

Cause Location: Harrison Creek, UT from its headwaters to its mouth at Harrison Creek

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: The UT was impaired of the Recreation Use during the 2012 cycle based on E. coli exceedances at 8-XJD000.02. The exceedance rate was 4/12 during the 2014 cycle.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14R_XJD01A12 / XJD - Harrison Creek, UT / Headwaters to mouth at Harrison Creek	4A	Escherichia coli (E. coli)	2012	L	0.17

XJD - Harrison Creek, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.17

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

York River Basin

Cause Group Code: F14R-04-PH XJD - Harrison Creek, UT

Cause Location: Harrison Creek, UT from its headwaters to its mouth at Harrison Creek

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: During the 2012 cycle, XJD was impaired of the Aquatic Life Use due to pH exceedance at 8-XJD000.02. The violation rate was 5/11 during the 2014 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14R_XJD01A12 / XJD - Harrison Creek, UT / Headwaters to mouth at Harrison Creek	5C	pH	2012	L	0.17

XJD - Harrison Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			0.17

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

York River Basin

Cause Group Code: F14R-05-DO Mill Creek

Cause Location: Mill Creek from Cooks Millpond dam downstream to the tidal limit

Cause City/County: New Kent County

Use(s): Aquatic Life

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

Cause Description: During the 2022 cycle, lower Mill Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/10 at 8-MCR001.64, which is located on the Route 623 bridge (dam).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14R_MCR01A98 / Mill Creek / Mill Creek below Cooks Millpond.	5A	Dissolved Oxygen	2022	L	0.78

Mill Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.78

Sources: Dam or Impoundment; Source Unknown

York River Basin

Cause Group Code: F15R-01-BAC Ni River

Cause Location: Begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.

Cause City/County: Caroline County; Spotsylvania County

Use(s): Recreation

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

Cause Description: DEQ station 8-NIR003.96 at Route 1: There were two or more STV exceedances in at least one 90-day period with <10 samples.

A new TMDL is not required for this impaired segment of Ni River because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66031, 07/19/2016) included modeling, source identification, and reductions that covered the entre Poni River watershed (Eq. ID 1577). The Mattaponi River Watershed TMDL Implementation Plan for the Poni River Watershed (ID 341) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F15R_NIR01A00 / Ni River / Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.	4A	Escherichia coli (E. coli)	2020	L	5.69

Ni River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			5.69

Sources: Discharges from Municipal Separate Storm Sewer Systems (MS4); 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

York River Basin

Cause Group Code: F15R-01-BEN Ni River

Cause Location: Begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.

Cause City/County: Caroline County; Spotsylvania County

Use(s): Aquatic Life

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

Cause Description: 2014 Assessment: Three biological monitoring events in 2007 and 2008 at DEQ station 8-NIR003.96 at 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-F15R_NIR01A00 / Ni River / Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.	5A	Benthic Macroinvertebrates Bioassessments	2010	L	5.69

Ni River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.69

Sources: Source Unknown

York River Basin

Cause Group Code: F15R-01-DO Brock Run

Cause Location: Begins at the confluence with Aunt Sarah Spring Creek and continues downstream until the confluence with the Ni River.

Cause City/County: Spotsylvania County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the minimum dissolved oxygen criterion (2 of 8 samples - 25.0%) at DEQ ambient water quality monitoring station 8-BRK000.06 at Jackson Trail off Route 613.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F15R_BRK01A06 / Brock Run / Segment begins at the confluence with Aunt Sarah Spring Creek and continues downstream until the confluence with the Ni River.	5A	Dissolved Oxygen	2012	L	2.57

Brock Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.57

Sources: Source Unknown

York River Basin

Cause Group Code: F15R-01-PH Brock Run

Cause Location: Begins at the headwaters of Brock Run, and continues downstream to the confluence with Aunt Sarah Spring Creek.

Cause City/County: Spotsylvania County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the lower limit of the pH criterion range (4 of 26 samples - 15.4%) recorded at National Park Service's station 8BRK-17-NPS in Wilderness Battlefield.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F15R_BRK01B12 / Brock Run / Segment begins at the headwaters of Brock Run, and continues downstream to the confluence with Aunt Sarah Spring Creek.	5A	pH	2014	L	3.22

Brock Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.22

Sources: Source Unknown

York River Basin

Cause Group Code: F15R-02-BAC Brock Run

Cause Location: Begins at the confluence with Aunt Sarah Spring Creek and continues downstream until the confluence with the Ni River.

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (4 of 10 samples - 40.0%) at station 8-BRK000.06 at Jackson Trail off Route 613.

The Mattaponi River Watershed bacteria TMDL for the Brock Run watershed (Eq ID 1566) was developed and approved by the EPA on 07/19/2016 (Fed ID 66045). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Poni River Watershed (ID 341) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F15R_BRK01A06 / Brock Run / Segment begins at the confluence with Aunt Sarah Spring Creek and continues downstream until the confluence with the Ni River.	4A	Escherichia coli (E. coli)	2008	L	2.57

Brock Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.57

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

York River Basin

Cause Group Code: F16R-01-BAC Po River

Cause Location: Begins at the confluence with Piltzer Creek and continues downstream until the confluence with the Ni River, forming the Poni River.

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: E. coli bacteria criterion excursions (17 of 68 samples - 25.0%) at DEQ station 8-POR004.13 at Route 1 (2014 Assessment). E. coli bacteria criterion excursions (8 of 39 samples - 20.5%) at DEQ station 8-POR008.97 at Route 208 (Courthouse Rd). Two or more STV exceedances in at least one 90-day period with <10 samples at DEQ station 8-POR016.04 at Route 608 (Robert E Lee Dr).

The Mattaponi River Watershed bacteria TMDL for the Po River watershed (Eq. ID 1575) was approved by the EPA on 07/19/2016 (Fed ID 66035). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Po River Watershed (ID 340) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F16R_POR01A10 / Po River / Segment begins at an unnamed tributary to the Po River and continues downstream until the confluence with the Ni River, forming the Poni River.	4A	Escherichia coli (E. coli)	2010	L	7.22
VAN-F16R_POR01B02 / Po River / Segment begins at the confluence with Glady Run and continues downstream until the confluence with an unnamed tributary to the Po River at rivermile 6.69, near the upstream boundary of the Old Trap development.	4A	Escherichia coli (E. coli)	2018	L	7.71
VAN-F16R_POR01C06 / Po River / Segment begins at the confluence with Piltzer Creek and continues downstream until the confluence with Glady Run.	4A	Escherichia coli (E. coli)	2018	L	5.18

Po River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			20.11

Sources: Discharges from Municipal Separate Storm Sewer Systems (MS4); 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

York River Basin

Cause Group Code: F16R-01-BEN Glady Run

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

Cause City/County: Spotsylvania County

Use(s): Aquatic Life

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

Cause Description: A total of two biological monitoring events in 2019 at DEQ freshwater probabilistic monitoring station 8-GDY000.88 (2.8 miles downstream of Route 649) 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-F16R_GDY01A10 / Glady Run / Segments begins at the headwaters of Glady Run and continues downstream until the confluence with the Po River.	5A	Benthic Macroinvertebrates Bioassessments	2022	L	9.31

Glady Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			9.31

Sources: Source Unknown

York River Basin

Cause Group Code: F16R-02-BAC Glady Run

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

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (2 of 7 samples - 28.6%) at DEQ station 8-GDY003.00 at Route 649.

The Mattaponi River Watershed bacteria TMDL for the Glady Run watershed (Eq ID 1569) was approved by the EPA on 07/19/2016 (Fed ID 66042). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Po River Watershed (ID 340) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F16R_GDY01A10 / Glady Run / Segments begins at the headwaters of Glady Run and continues downstream until the confluence with the Po River.	4A	Escherichia coli (E. coli)	2010	L	9.31

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

York River Basin

Cause Group Code: F17L-01-HG Bowies Pond

Cause Location: Includes all of Bowies Pond.

Cause City/County: Caroline County

Use(s): Fish Consumption

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

Cause Description: 2012 Assessment: Six exceedances of the water quality criterion based tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded in three species of fish (bowfin, chain pickerel, largemouth bass) sampled in 2005 at DEQ fish tissue/sediment station 8-CAM001.00.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F17L_CAM01A06 / Bowies Pond / Segment includes all of Bowies Pond.	5A	Mercury in Fish Tissue	2008	L	25.72

Bowies Pond

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		25.72	

Sources: Source Unknown

York River Basin

Cause Group Code: F17R-02-BAC Mattaponi River

Cause Location: Begins at the confluence with Matta River and continues downstream until the confluence with Polecat Creek at the outlet of waterbody F17R.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: E. coli bacteria criterion excursions (3 of 22 samples - 13.6%) at DEQ station 8-MPN083.62 at Route 301 (2014 Assessment). E. coli bacteria criterion (5 of 12 samples - 41.7%) at DEQ station 8-MPN090.74 at Route 722 (2020 Assessment). E. coli bacteria criterion excursions (12 of 67 samples - 17.9%) at DEQ station 8-MPN094.79 (fka 8-MPN094.94) at Route 605 (2020 Assessment). E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at DEQ station 8-MPN101.86 at Route 626 (2020 Assessment).

The Mattaponi River Watershed bacteria TMDL for the Mattaponi River watershed (Eq ID 1573) was approved by the EPA on 07/19/2016 (Fed ID 66038). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Mattaponi River Watershed (ID 343) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F17R_MPN01A02 / Mattaponi River / Segment begins at the confluence with an unnamed tributary, draining from Goose Pond, and continues downstream until the confluence with Polecat Creek at the outlet of waterbody F17R.	4A	Escherichia coli (E. coli)	2008	L	3.21
VAN-F17R_MPN02A20 / Mattaponi River / Segment begins at the confluence with South River and continues downstream until the confluence with an unnamed tributary draining from Goose Pond.	4A	Escherichia coli (E. coli)	2020	L	6.59
VAN-F17R_MPN02B02 / Mattaponi River / Segment begins at the confluence with Downers Branch and continues downstream until the confluence with the South River.	4A	Escherichia coli (E. coli)	2006	L	8.24
VAN-F17R_MPN03A02 / Mattaponi River / Segment begins at the confluence of the Matta River and the Poni River, forming the Mattaponi River, and continues downstream until the confluence with Downers Branch.	4A	Escherichia coli (E. coli)	2020	L	3.66

Mattaponi River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			21.7

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

York River Basin

Cause Group Code: F17R-02-PH Unnamed Tributary to Poni River

Cause Location: Begins at the confluence of an unnamed tributary at rivermile 3.66 and continues downstream to the confluence with an unnamed tributary at rivermile 0.05.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the lower limit of the pH criterion range (2 of 6 samples - 33.3%) at DEQ station 8-XJV001.81 at Route 660 (2020 Assessment). Excursions less than the lower limit of the pH criterion range (5 of 12 samples - 41.7%) at DEQ station 8-XJV000.80 at Route 607.

The pH excursions may be attributable to natural conditions as this water is in a low-lying coastal plain environment that is subject to low pH.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F17R_XJV01A18 / Unnamed Tributary to Poni River / Segment begins at the confluence with an unnamed tributary at rivermile 0.72 and continues downstream to the confluence with an unnamed tributary at rivermile 0.05.	5C	pH	2018	L	0.67
VAN-F17R_XJV02A16 / Unnamed Tributary to Poni River / Segment begins at the confluence of an unnamed tributary at rivermile 3.66 and continues downstream to the confluence with an unnamed tributary at rivermile 0.72.	5C	pH	2018	L	2.94

Unnamed Tributary to Poni River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			3.61

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

York River Basin

Cause Group Code: F17R-03-BAC Poni River

Cause Location: Begins at the confluence with an unnamed tributary and continues downstream until the confluence with the Matta River, forming the Mattaponi River

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ station 8-PNI002.43 at Route 606.

The Mattaponi River Watershed bacteria TMDL for the Poni River watershed (Eq ID 1577) was approved by the EPA on 07/19/2016 (Fed ID 66031). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Poni River Watershed (ID 341) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F17R_PNI01A10 / Poni River / Segment begins at the confluence with an unnamed tributary and continues downstream until the confluence with the Matta River, forming the Mattaponi River	4A	Escherichia coli (E. coli)	2010	L	3.21

Poni River

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

Sources: Discharges from Municipal Separate Storm Sewer Systems (MS4); 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

York River Basin

Cause Group Code: F17R-04-BAC Unnamed Tributary to Poni River

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 0.72 and continues downstream to the confluence with an unnamed tributary at rivermile 0.05.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: DEQ station 8-XJV000.80 at Route 607 (Guinea Station Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

A new TMDL is not required for this impaired segment of an unnamed tributary to Poni River because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66031, 07/19/2016) included modeling, source identification, and reductions that covered the entire Poni River watershed (Eq. ID 1577). The Mattaponi River Watershed bacteria TMDL Implementation Plan for the Poni River watershed (ID 341) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F17R_XJV01A18 / Unnamed Tributary to Poni River / Segment begins at the confluence with an unnamed tributary at rivermile 0.72 and continues downstream to the confluence with an unnamed tributary at rivermile 0.05.	4A	Escherichia coli (E. coli)	2018	L	0.67

Unnamed Tributary to Poni River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.67

Sources: Discharges from Municipal Separate Storm Sewer Systems (MS4); 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

York River Basin

Cause Group Code: F18R-02-BAC Matta River

Cause Location: Begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with the Poni River, forming the Mattaponi River.

Cause City/County: Caroline County; Spotsylvania County

Use(s): Recreation

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

Cause Description: DEQ station 8-MTA001.69 at Route 632 (Edgehill Academy Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples. 2020 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-MTA008.96 at Route 646.

The Mattaponi River Watershed bacteria TMDL for the Matta River watershed (Eq ID 1572) was approved by the EPA on 07/19/2016 (Fed ID 66039). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Matta River Watershed (ID 342) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F18R_MTA01A00 / Matta River / Segment begins at the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from the Route 646 bridge, and continues downstream until the confluence with the Poni River, forming the Mattaponi River.	4A	Escherichia coli (E. coli)	2006	L	11.89
VAN-F18R_MTA02A04 / Matta River / Segment begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.	4A	Escherichia coli (E. coli)	2020	L	1.24

Matta River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			13.13

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

York River Basin

Cause Group Code: F18R-02-DO Bluff Run

Cause Location: Begins at the confluence with Glebe Run and continues downstream to the confluence with Ta River.

Cause City/County: Spotsylvania County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the minimum dissolved oxygen criterion (4 of 12 samples - 33.3%) were recorded at DEQ station 8-BLF001.48 at Route 648.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F18R_BLF01A20 / Bluff Run / Segment begins at the confluence with Glebe Run and continues downstream to the confluence with Ta River.	5A	Dissolved Oxygen	2020	L	3.07

Bluff Run

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			3.07

Sources: Source Unknown

York River Basin

Cause Group Code: F18R-03-BAC Mat River

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 2.14 and continues downstream to the confluence with the Ta River to form the Matta River.

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 8-MAT001.87 at Route 647. DEQ station 8-MAT005.35 at Route 738 (Partlow Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

The Mattaponi River Watershed bacteria TMDL for the Mat River watershed (Eq ID 1571) was approved by the EPA on 07/19/2016 (Fed ID 66040). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Matta River Watershed (ID 342) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F18R_MAT01A12 / Mat River / Segment begins at the confluence with an unnamed tributary, at rivermile 2.14, and continues downstream to the confluence with the Ta River to form the Matta River.	4A	Escherichia coli (E. coli)	2014	L	2.3
VAN-F18R_MAT02A18 / Mat River / Segment begins at the perennial headwaters and continues downstream to the confluence with an unnamed tributary at rivermile 2.14.	4A	Escherichia coli (E. coli)	2018	L	5.2

Mat River

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

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

York River Basin

Cause Group Code: F18R-03-BEN Matta River

Cause Location: Begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.

Cause City/County: Spotsylvania County

Use(s): Aquatic Life

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

Cause Description: 2010 Assessment: One of two biological monitoring events in 2003 at station 8-MTA012.09 (upstream of Route 646) 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-F18R_MTA02A04 / Matta River / Segment begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.	5A	Benthic Macroinvertebrates Bioassessments	2008	L	1.24

Matta River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.24

Sources: Source Unknown

York River Basin

Cause Group Code: F18R-04-BAC Ta River

Cause Location: Begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.

Cause City/County: Spotsylvania County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-TAR002.40 at Route 738.

A new TMDL is not required for this impaired segment of Ta River because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66039, 07/19/2016) included modeling, source identification, and reductions that covered the entire Matta River watershed (Eq. ID 1572). The Mattaponi River Watershed TMDL Implementation Plan for the Matta River Watershed (ID 342) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F18R_TAR01A00 / Ta River / Segment begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.	4A	Escherichia coli (E. coli)	2018	L	3.76

Ta River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.76

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

York River Basin

Cause Group Code: F19R-01-BAC South River

Cause Location: Begins at the headwaters of the South River and continues downstream until the confluence with the Motto River.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-STH010.79 at Route 1.

A new TMDL is not required for this impaired segment of South River because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66038, 07/19/2016) included modeling, source identification, and reductions that covered the entire Mattaponi River watershed (Eq. ID 1573). The Mattaponi River Watershed TMDL Implementation Plan for the Mattaponi River Watershed (ID 343) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F19R_STH03A08 / South River / Segment begins at the headwaters of the South River and continues downstream until the confluence with the Motto River.	4A	Escherichia coli (E. coli)	2020	L	9.1

South River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			9.1

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

York River Basin

Cause Group Code: F19R-02-BAC Motto River

Cause Location: Begins at the confluence with an unnamed tributary, approximately 0.5 rivermile upstream from Route One, and continues downstream until the confluence with another unnamed tributary (streamcode XCF), downstream from I-95.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (2 of 8 samples - 25.0%) at DEQ station MOT002.62 at Route 1.

The Mattaponi River Watershed bacteria TMDL for the Motto River watershed (Eq ID 1574) was approved by the EPA on 07/19/2016 (Fed ID 66036). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Mattaponi River Watershed (ID 343) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F19R_MOT01A04 / Motto River / Segment begins at the confluence with an unnamed tributary, approximately 0.5 rivermile upstream from Route One, and continues downstream until the confluence with another unnamed tributary (streamcode XCF), downstream from I-95.	4A	Escherichia coli (E. coli)	2014	L	1.81

Motto River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.81

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

York River Basin

Cause Group Code: F19R-02-PH Hobby Swamp

Cause Location: Begins at the confluence with an unnamed tributary to Hobby Swamp, approximately 0.36 rivermile upstream from Route 634, and continues downstream until the confluence with the South River.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the lower limit of the pH criterion range (9 of 9 samples - 100.0%) at DEQ station 8-HBS001.85 at Route 634

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F19R_HBS01A00 / Hobby Swamp / Segment begins at the confluence with an unnamed tributary to Hobby Swamp, approximately 0.36 rivermile upstream from Route 634, and continues downstream until the confluence with the South River.	5C	pH	2020	L	1.28

Hobby Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			1.28

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

York River Basin

Cause Group Code: F19R-03-BAC Hobby Swamp

Cause Location: Begins at the confluence with an unnamed tributary to Hobby Swamp, approximately 0.36 rivermile upstream from Route 634, and continues downstream until the confluence with the South River.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (3 of 9 samples - 33.3%) at DEQ station 8-HBS001.85 at Route 634.

A new TMDL is not required for this impaired segment of Hobby Swamp because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66038, 07/19/2016) included modeling, source identification, and reductions that covered the entire Mattaponi River watershed (Eq. ID 1573). The Mattaponi River Watershed TMDL Implementation Plan for the Mattaponi River Watershed (ID 343) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F19R_HBS01A00 / Hobby Swamp / Segment begins at the confluence with an unnamed tributary to Hobby Swamp, approximately 0.36 rivermile upstream from Route 634, and continues downstream until the confluence with the South River.	4A	Escherichia coli (E. coli)	2020	L	1.28

Hobby Swamp

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

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

York River Basin

Cause Group Code: F20R-01-BEN Polecat Creek

Cause Location: Begins at the confluence with Hackett Creek, approximately 0.5 rivermile upstream from Route 207, and continues downstream until the confluence with the Mattaponi River.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: 2018 Assessment: Two biological monitoring events at station 8-PCT002.29 at Route 601 in 2011 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-F20R_PCT01A00 / Polecat Creek / Segment begins at the confluence with an unnamed tributary at rivermile 5.0 and continues downstream until the confluence with the Mattaponi River.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	5.24

Polecat Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.24

Sources: Source Unknown

York River Basin

Cause Group Code: F20R-01-DO Polecat Creek

Cause Location: Begins at the confluence with Stevens Mill Run and continues downstream until the confluence with an unnamed tributary at rivermile 5.0.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: 2018 Assessment: Excursions less than the minimum dissolved oxygen criterion (5 of 8 samples - 50.0%) at station 8-PCT005.44 at Polecat Creek below Caroline County POTW; excursions less than the minimum dissolved oxygen criterion (5 of 8 samples - 62.5%) at station 8-PCT006.34 at Route 207.

The DO excursions may be attributable to natural conditions as this segment is in a low-lying coastal plain environment that is subject to low DO.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F20R_PCT01B06 / Polecat Creek / Segment begins at the confluence with Stevens Mill Run and continues downstream until the confluence with an unnamed tributary at rivermile 5.0.	5C	Dissolved Oxygen	2018	L	4.34

Polecat Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.34

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

York River Basin

Cause Group Code: F20R-02-BAC Polecat Creek

Cause Location: Begins at the headwaters of Polecat Creek and continues downstream until the confluence with Stevens Mill Run.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: DEQ station 8-PCT010.10 at Route 652 (Cool Water Dr): There were two or more STV exceedances in at least one 90-day period with <10 samples.

The Mattaponi River Watershed bacteria TMDL for the Polecat Creek watershed was approved by the EPA on 07/19/2016 (Fed ID 66034). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Polecat Creek Watershed (ID 345) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F20R_PCT02A02 / Polecat Creek / Segment begins at the headwaters of Polecat Creek and continues downstream until the confluence with Stevens Mill Run.	4A	Escherichia coli (E. coli)	2012	L	5.31

Polecat Creek

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

York River Basin

Cause Group Code: F21R-01-BAC Boot Swamp

Cause Location: Begins at the confluence with Malden Creek and continues downstream to the confluence with Mattaponi River.

Cause City/County: Caroline County; King William County

Use(s): Recreation

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

Cause Description: 2020 Assessment: Excursions from the maximum E. coli bacteria criterion (3 of 12 samples - 25%) at DEQ station 8-BOT002.14 at Route 600.

While this impaired segment is not included in a TMDL, it was considered during development of the Mattaponi River Watershed TMDL Implementation Plan for the Reedy Creek watershed (ID 347; approved by the EPA on 04/23/2020).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_BOT01A20 / Boot Swamp / Segment begins at the confluence with Malden Creek and continues downstream to the confluence with Mattaponi River.	5A	Escherichia coli (E. coli)	2020	L	1.68

Boot Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			1.68

Sources: Source Unknown

York River Basin

Cause Group Code: F21R-01-BEN Herring Creek

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

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: 2008 Assessment: Two biological monitoring events in 2002 at DEQ freshwater probabilistic monitoring station 8-HER012.99 (downstream of Route 601) 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-F21R_HER02A04 / Herring Creek / Segment begins at the outlet of a pond near the perennial headwaters of Herring Creek and continues downstream until the confluence with Millpond Creek.	5A	Benthic Macroinvertebrates Bioassessments	2008	L	3.64

Herring Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.64

Sources: Source Unknown

York River Basin

Cause Group Code: F21R-01-HG Herring Creek

Cause Location: Extends from the Route 628 bridge (Dorrell Road) to the confluence with the Mattaponi River.

Cause City/County: King William County

Use(s): Fish Consumption

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

Cause Description: The fish consumption use is categorized as impaired due to a Virginia Department of Health mercury fish consumption advisory. The advisory, dated 09/30/04, limits bluegill sunfish and yellow bullhead catfish consumption to no more than two meals per month.

Additionally, there were three exceedances of the fish tissue value (TV) of 300 parts per billion (ppb) for mercury in three fish species (redbreast sunfish, chain pickerel, and fallfish) collected in 2019 and two exceedances of the fish TV of 300 ppb for mercury in two fish species (flier sunfish, largemouth bass) collected in 2003 at DEQ fish tissue station 8-HER005.12 at Route 609.

Additional monitoring in 2019 at station 8-MPN041.41 confirmed the impairment with mercury in white perch and spotted bass.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_HER01A06 / Herring Creek / Segment begins at the confluence with an unnamed tributary to Herring Creek, at rivermile 2.14, and continues downstream until the confluence with the Mattaponi River.	5A	Mercury in Fish Tissue	2006	L	2.14
VAN-F21R_HER01B02 / Herring Creek / Segment begins at the confluence with Dorrell Creek and continues downstream until the confluence with an unnamed tributary to Herring Creek, at rivermile 2.14.	5A	Mercury in Fish Tissue	2006	L	5.09

Herring Creek

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			7.23

Sources: Source Unknown

York River Basin

Cause Group Code: F21R-02-BEN Reedy Creek

Cause Location: Begins at Route 301 and continues downstream until the start of Reedy Millpond. Class VII waters.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: 2018 Assessment: Two biological monitoring events in 2011 at DEQ station 8-RDY003.43 at Route 648 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-F21R_RDY02A10 / Reedy Creek / Segment begins at Route 301 and continues downstream until the start of Reedy Millpond.	5A	Benthic Macroinvertebrates Bioassessments	2014	L	3.3

Reedy Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.3

Sources: Source Unknown

York River Basin

Cause Group Code: F21R-02-HG Mattaponi River

Cause Location: Extends from the Route 628 bridge and continues downstream approximately 55 miles, to the confluence with Pamunkey River near West Point.

Cause City/County: King And Queen County; King William County

Use(s): Fish Consumption

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

Cause Description: The fish consumption use is categorized as impaired due to a Virginia Department of Health mercury fish consumption advisory. The advisory, dated 09/30/04, limits largemouth bass consumption to no more than two meals per month. It originally extended from the Route 628 bridge downstream about 40 miles to Melrose Landing at Rt. 602.

The advisory was revised on 10/7/2009. The advisory now extends from Route 628 downstream approximately 55 miles to the mouth of the Mattaponi at West Point.

The advisory is based on the results of DEQ's monitoring fish tissue monitoring program, which indicated exceedances at 8-MPN041.41, 8-MPN029.08, and 8-MPN014.33.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_MPN01A06 / Mattaponi River / Segment begins at the confluence with Gravel Run and continues downstream until the confluence with Herring Creek.	5A	Mercury in Fish Tissue	2006	L	6.070
VAN-F21R_MPN01B02 / Mattaponi River / Segment begins at the Route 628 crossing and continues downstream until the confluence with Gravel Run.	5A	Mercury in Fish Tissue	2006	L	4.910
VAP-F23E_MPN02A98 / Mattaponi River / From the limit of tide above the Route 360 bridge to Aylett Creek. MPNTF	5A	Mercury in Fish Tissue	2006	L	0.159
VAP-F23E_MPN03A06 / Mattaponi River / Aylett Creek to Garnetts Creek. MPNTF	5A	Mercury in Fish Tissue	2006	L	1.756
VAP-F23R_MPN01A00 / Mattaponi River / From the watershed boundary (Herring Creek) to the limit of tide near the Route 360 bridge.	5A	Mercury in Fish Tissue	2006	L	4.720
VAP-F24E_MPN03A98 / Mattaponi River / Garnetts Creek to tidal freshwater/oligohaline boundary at approximately river mile 18 MPNTF	5A	Mercury in Fish Tissue	2006	L	1.384
VAP-F24E_MPN03B02 / Mattaponi River / Tidal freshwater/oligohaline boundary to Melrose Landing at Route 602 MPNOH	5A	Mercury in Fish Tissue	2006	L	0.423
VAP-F24E_MPN03C06 / Mattaponi River / Melrose Landing (Route 602) to Heartquake Creek. MPNOH	5A	Mercury in Fish Tissue	2010	L	0.717

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F25E_MPN05A00 / Mattaponi River / Mattaponi River from Heartquake Creek to the downstream boundary of VDH-DSS 049-004F, 7/15/2020 MPNOH	5A	Mercury in Fish Tissue	2010	L	1.292
VAP-F25E_MPN05B06 / Mattaponi River / From the upstream boundary of VDH-SFC 049-004B, 7/15/2020 downstream to the oligohaline/York mesohaline boundary. MPNOH	5A	Mercury in Fish Tissue	2010	L	0.384
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004E, 7/15/2020. YRKMH	5A	Mercury in Fish Tissue	2010	L	0.209
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 7/15/2020 within Mattaponi River mainstem. YRKMH	5A	Mercury in Fish Tissue	2010	L	0.641

Mattaponi River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:	6.965		15.7

Sources: Atmospheric Deposition - Toxics; Source Unknown

York River Basin

Cause Group Code: F21R-03-BAC Reedy Creek

Cause Location: Begins at the headwaters of Reedy Creek and continues downstream until the start of Reedy Millpond.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: E. coli bacteria criterion excursions (3 of 23 samples - 13.0%) at DEQ station 8-RDY003.43 at Route 648 (2014 Assessment). There were two or more STV exceedances in at least one 90-day period with <10 samples at DEQ station 8-RDY004.39 at Route 301/2 (Richmond Turnpike)

The Mattaponi River Watershed bacteria TMDL for the Reedy Creek watershed (Eq ID 1578) was approved by the EPA on 07/19/2016 (Fed ID 66030). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Reedy Creek Watershed (ID 347) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_RDY02A10 / Reedy Creek / Segment begins at Route 301 and continues downstream until the start of Reedy Millpond.	4A	Escherichia coli (E. coli)	2010	L	3.3
VAN-F21R_RDY02B10 / Reedy Creek / Segment begins at the headwaters of Reedy Creek and continues downstream to Route 301 bridge.	4A	Escherichia coli (E. coli)	2010	L	9.4

Reedy Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			12.7

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

York River Basin

Cause Group Code: F21R-03-HG Reedy Creek and Reedy Millpond

Cause Location: Begins at the 301 bridge and continues downstream to the confluence with the Mattaponi River.

Cause City/County: Caroline County

Use(s): Fish Consumption

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

Cause Description: The fish consumption use is categorized as impaired due to a Virginia Department of Health mercury fish consumption advisory. The advisory, dated 10/07/09, limits redbreast sunfish and yellow bullhead catfish consumption to no more than two meals per month and is applicable from Rt. 301 downstream to the confluence with Mattaponi River

Additionally, the following exceedances of the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury in fish tissue were recorded: DEQ station 8-RDY003.43: one species of fish (creek chubsucker) in 2003, three species of fish (yellow bullhead catfish, bluegill sunfish, and redbreast sunfish) in 2008, four species of fish (American eel, yellow bullhead catfish, redbreast sunfish, and chain pickerel) in 2019

Four exceedances of the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury in fish tissue were recorded in two species of fish (bowfin and largemouth bass) sampled in 2003 at DEQ station 8-RDY000.87.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21L_RDY01A06 / Reedy Millpond / Segment includes all of Reedy Millpond.	5A	Mercury in Fish Tissue	2010	L	41.25
VAN-F21R_RDY01A10 / Reedy Creek / Segment begins at the outlet of Reedy Millpond and continues downstream to the confluence with the Mattaponi River.	5A	Mercury in Fish Tissue	2010	L	0.14
VAN-F21R_RDY02A10 / Reedy Creek / Segment begins at Route 301 and continues downstream until the start of Reedy Millpond.	5A	Mercury in Fish Tissue	2010	L	3.30
VAN-F21R_RDY02B10 / Reedy Creek / Segment begins at the headwaters of Reedy Creek and continues downstream to Route 301 bridge.	5A	Mercury in Fish Tissue	2010	L	9.40

Reedy Creek and Reedy Millpond

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		41.25	12.84

Sources: Source Unknown

York River Basin

Cause Group Code: F21R-04-BAC Chapel Creek

Cause Location: Begins at the confluence with Beaver Branch and continues downstream until the confluence with the Mattaponi River.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 8-CPL004.15 at Route 721.

The Mattaponi River Watershed bacteria TMDL for the Chapel Creek watershed (Eq ID 1567) was approved by the EPA on 07/19/2016 (Fed ID 66044). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Chapel Creek (ID 344) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_CPL01A06 / Chapel Creek / Segment begins at the confluence with Beaver Branch and continues downstream until the confluence with the Mattaponi River.	4A	Escherichia coli (E. coli)	2014	L	4.65

Chapel Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.65

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

York River Basin

Cause Group Code: F21R-04-PH Chapel Creek

Cause Location: Begins at the perennial headwaters of Chapel Creek and continues downstream to the upstream boundary of Garnett Millpond. Begins again at the confluence with Beaver Branch and continues downstream until the confluence with the Mattaponi River.

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the lower limit of the pH criterion range (2 of 12 samples - 16.7%) at DEQ station 8-CPL004.15 at Route 721. Excursions less than the lower limit of the pH criterion range (4 of 12 samples - 33.3%) at DEQ station 8-CPL011.27 at Route 623.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_CPL01A06 / Chapel Creek / Segment begins at the confluence with Beaver Branch and continues downstream until the confluence with the Mattaponi River.	5C	pH	2008	L	4.65
VAN-F21R_CPL02A18 / Chapel Creek / Segment begins at the perennial headwaters of Chapel Creek and continues downstream to the upstream boundary of Garnett Millpond.	5C	pH	2018	L	3.94

Chapel Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			8.59

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

York River Basin

Cause Group Code: F21R-05-BAC Herring Creek

Cause Location: Begins at the confluence with Dorrell Creek and continues downstream until the confluence with the Mattaponi River

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (4 of 24 samples - 16.7%) at DEQ station 8-HER000.33 at Route 600. E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 8-HER005.12 at Route 609.

The Mattaponi River and Tributaries bacteria TMDL for the Herring Creek watershed (Eq ID 2701) was approved by the EPA on 02/04/2022. The SWCB approved the TMDL on 12/14/2021.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_HER01A06 / Herring Creek / Segment begins at the confluence with an unnamed tributary to Herring Creek, at rivermile 2.14, and continues downstream until the confluence with the Mattaponi River.	4A	Escherichia coli (E. coli)	2018	L	2.14
VAN-F21R_HER01B02 / Herring Creek / Segment begins at the confluence with Dorrell Creek and continues downstream until the confluence with an unnamed tributary to Herring Creek, at rivermile 2.14.	4A	Escherichia coli (E. coli)	2016	L	5.09

Herring Creek

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

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Sewage Discharges in Unsewered Areas; Wastes from Pets; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F21R-07-BAC Mattaponi River

Cause Location: Begins at the confluence with Union Swamp, at rivermile 76.58, and continues downstream until the confluence with Cobbin Creek, at rivermile 67.64.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (2 of 13 samples - 15.4%) at DEQ station 8-MPN073.75 at Route 647.

While this impaired segment is not included in a TMDL, it was considered during development of the Mattaponi River Watershed TMDL Implementation Plan for the Reedy Creek watershed (ID 347; approved by the EPA on 04/23/2020).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_MPN02A02 / Mattaponi River / Segment begins at the confluence with Union Swamp, at rivermile 76.58, and continues downstream until the confluence with Cobbin Creek, at rivermile 67.64.	5A	Escherichia coli (E. coli)	2018	L	8.87

Mattaponi River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			8.87

Sources: Source Unknown

York River Basin

Cause Group Code: F21R-08-BAC Dorrell Creek

Cause Location: Begins at the confluence with Little Dorrell Creek and continues downstream to the confluence with Herring Creek.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 8-DRL000.85 at Route 608.

The Mattaponi River and Tributaries bacteria TMDL for the Dorrell Creek watershed (Eq ID 2679) was approved by the EPA on 02/04/2022. The SWCB approved the TMDL on 12/14/2021.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_DRL01A18 / Dorrell Creek / Segment begins at the confluence with Little Dorrell Creek and continues downstream to the confluence with Herring Creek.	4A	Escherichia coli (E. coli)	2018	L	4.97

Dorrell Creek

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

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Sewage Discharges in Unsewered Areas; Wastes from Pets; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F21R-09-BAC Gravel Run

Cause Location: Begins at the perennial headwaters of Gravel Run and continues downstream to the confluence with Mattaponi River.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: DEQ station 8-GVL000.56 at Route 628 (Spring Cottage Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

The Mattaponi River and Tributaries bacteria TMDL for the Gravel Run watershed (Eq ID 2700) was approved by the EPA on 02/04/2022. The SWCB approved the TMDL on 12/14/2021.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_GVL01A18 / Gravel Run / Segment begins at the perennial headwaters of Gravel Run and continues downstream to the confluence with Mattaponi River.	4A	Escherichia coli (E. coli)	2018	L	3.55

Gravel Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.55

Sources: Agriculture; Grazing in Riparian or Shoreline Zones; On-site Treatment Systems (Septic Systems and Similar Decentralized Systems); Sewage Discharges in Unsewered Areas; Wastes from Pets; Waterfowl; Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F22L-01-HG Collins Pond

Cause Location: Segment includes all of Collins Pond.

Cause City/County: Caroline County

Use(s): Fish Consumption

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

Cause Description: 2010 Assessment: three exceedances of the water quality criterion based tissue value (TV) of 300 parts per billion (ppb) for mercury were recorded in two species of fish (largemouth bass and yellow bullhead catfish) sampled in 2003 at DEQ station 8-DOC003.63.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22L_DOC01A06 / Collins Pond / Segment includes all of Collins Pond.	5A	Mercury in Fish Tissue	2010	L	63.93

Collins Pond

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		63.93	

Sources: Source Unknown

York River Basin

Cause Group Code: F22R-01-BAC Maracossic Creek

Cause Location: Begins at the outlet of Broaddus Pond and continues downstream until the confluence with Jones Run. Begins again at the confluence with Beverly Run and continues downstream until the confluence with the Mattaponi River.

Cause City/County: Caroline County; King And Queen County

Use(s): Recreation

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

Cause Description: 2020 Assessment: E. coli bacteria criterion excursions (8 of 35 samples - 22.9%) at DEQ station 8-MAR003.24 at Route 627. 2020 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-MAR011.09 at Route 721. DEQ station 8-MAR014.20 at Route 641: There were two or more STV exceedances in at least one 90-day period with <10 samples.

The Mattaponi River Watershed bacteria TMDL for the Maracossic Creek watershed (Eq ID 1570) was approved by the EPA on 07/19/2016 (Fed ID 66041). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Maracossic Creek Watershed (ID 346) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_MAR01A02 / Maracossic Creek / Segment begins at the confluence with Beverly Run and continues downstream until the confluence with the Mattaponi River.	4A	Escherichia coli (E. coli)	2006	L	4.22
VAN-F22R_MAR03A08 / Maracossic Creek / Segment begins at the confluence with Jones Run and continues downstream until the confluence with Doctors Creek.	4A	Escherichia coli (E. coli)	2020	L	5.14
VAN-F22R_MAR04A08 / Maracossic Creek / Segment begins at the outlet of Broaddus Pond and continues downstream until the confluence with Jones Run.	4A	Escherichia coli (E. coli)	2018	L	6.77

Maracossic Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			16.13

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

York River Basin

Cause Group Code: F22R-02-BAC Doctors Creek

Cause Location: Begins at the confluence with Tanyard Swamp and continues downstream until the confluence with Maracossic Creek.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: DEQ station 8-DOC000.69 at Route 644 (Bagby Rd): There were two or more STV exceedances in at least one 90-day period with <10 samples.

The Mattaponi River Watershed bacteria TMDL for the Doctors Creek watershed (Eq ID 1568) was approved by the EPA on 07/19/2016 (Fed ID 66043). The SWCB approved the TMDL on 6/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Maracossic Creek Watershed (ID 346) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_DOC01A08 / Doctors Creek / Segment begins at the confluence with Tanyard Swamp and continues downstream until the confluence with Maracossic Creek.	4A	Escherichia coli (E. coli)	2014	L	2.33

Doctors Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.33

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

York River Basin

Cause Group Code: F22R-02-PH Root Swamp

Cause Location: Begins at the headwaters of Root Swamp and continues downstream until the confluence with Beverly Run.

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: 2018 Assessment: Excursions less than the lower limit of the pH criterion range (3 of 19 samples - 15.8%) at DEQ station 8-ROT001.09 at Route 721 and excursions less than the lower limit of the pH criterion range (5 of 11 samples - 45.5%) at DEQ station 8-ROT003.65 at Route 649.

The pH excursions may be attributable to natural conditions as this segment is in a low-lying coastal plain environment that is subject to low pH.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_ROT01A06 / Root Swamp / Segment begins at the headwaters of Root Swamp and continues downstream until the confluence with Beverly Run.	5C	pH	2006	L	7.84

Root Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			7.84

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

York River Basin

Cause Group Code: F22R-03-BAC Root Swamp

Cause Location: Begins at the confluence with Cook Swamp and continues downstream until the confluence with Beverly Run.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: 2018 Assessment: E. coli bacteria criterion excursions (4 of 18 samples - 22.2%) at station 8-ROT001.09 at Route 721.

The Mattaponi River Watershed bacteria TMDL for the Root Swamp watershed (Eq ID 1579) was approved by the EPA on 07/19/2016 (Fed ID 66029). The SWCB approved the TMDL on 06/27/2016. The Mattaponi River Watershed TMDL Implementation Plan for the Maracossic Creek Watershed (ID 346) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_ROT01A06 / Root Swamp / Segment begins at the headwaters of Root Swamp and continues downstream until the confluence with Beverly Run.	4A	Escherichia coli (E. coli)	2014	L	7.84

Root Swamp

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

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

York River Basin

Cause Group Code: F22R-03-DO Unnamed tributary to Root Swamp

Cause Location: Begins at the headwaters of an unnamed tributary to Root Swamp and continues downstream until the confluence with Root Swamp.

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: 2008 Assessment: Excursions less than the minimum dissolved oxygen criterion (2 of 6 samples - 33.3%) at DEQ station 8-XDY000.27 at Route 689.

The DO excursions may be attributable to natural conditions as this segment is in a low-lying coastal plain environment that is subject to low DO.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_XDY01A06 / Unnamed tributary to Root Swamp / Segment begins at the headwaters of an unnamed tributary to Root Swamp and continues downstream until the confluence with Root Swamp.	5C	Dissolved Oxygen	2006	L	0.71

Unnamed tributary to Root Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.71

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

York River Basin

Cause Group Code: F22R-03-PH Unnamed tributary to Root Swamp

Cause Location: Begins at the headwaters of an unnamed tributary to Root Swamp and continues downstream until the confluence with Root Swamp.

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: 2008 Assessment: Excursions less than the lower limit of the pH criterion range (6 of 6 samples - 100%) at DEQ station 8-XDY000.27 at Route 689.

The pH excursions may be attributable to natural conditions as this segment is in a low-lying coastal plain environment that is subject to low pH.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_XDY01A06 / Unnamed tributary to Root Swamp / Segment begins at the headwaters of an unnamed tributary to Root Swamp and continues downstream until the confluence with Root Swamp.	5C	pH	2006	L	0.71

Unnamed tributary to Root Swamp

		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life	pH - Total Impaired Size by Water Type:			0.71

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

York River Basin

Cause Group Code: F22R-04-BAC Beverly Run

Cause Location: Begins at the confluence with Mason Swamp and continues downstream until the confluence with King and Queen Swamp.

Cause City/County: Caroline County

Use(s): Recreation

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

Cause Description: E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 8-BEV006.78 at Route 630.

A new TMDL is not required for this impaired segment of Beverly Run because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66041, 07/19/2016) included modeling, source identification, and reductions that covered the entire Maracossic Creek watershed (Eq ID 1570). The Mattaponi River Watershed TMDL Implementation Plan for the Maracossic Creek Watershed (ID 346) was approved by the EPA on 04/23/2020.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_BEV01B00 / Beverly Run / Segment begins at the confluence with Mason Swamp and continues downstream until the confluence with King and Queen Swamp.	4A	Escherichia coli (E. coli)	2016	L	3.07

Beverly Run

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.07

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

York River Basin

Cause Group Code: F22R-04-PH Beverly Run

Cause Location: Begins at the confluence with Shady Grove Run and continues downstream until the confluence with Mason Swamp.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the lower limit of the pH criterion range (6 of 10 samples - 60.0%) at DEQ station 8-BEV008.47 at Route 665.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_BEV02A08 / Beverly Run / Segment begins at the outlet of White Lake and continues downstream until the confluence with Mason Swamp.	5C	pH	2008	L	2.58

Beverly Run

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

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

York River Basin

Cause Group Code: F22R-05-PH Doctors Creek

Cause Location: Begins at the confluence with Tanyard Swamp and continues downstream until the confluence with Maracossic Creek.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the lower limit of the pH criterion range (3 of 17 samples - 17.6%) at DEQ station 8-DOC000.69 at Route 644.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_DOC01A08 / Doctors Creek / Segment begins at the confluence with Tanyard Swamp and continues downstream until the confluence with Maracossic Creek.	5C	pH	2008	L	2.33

Doctors Creek

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

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

York River Basin

Cause Group Code: F22R-06-PH Maracossic Creek

Cause Location: Begins at the outlet of Broaddus Pond and continues downstream until the confluence with Jones Run.

Cause City/County: Caroline County

Use(s): Aquatic Life

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

Cause Description: Excursions less than the lower limit of the pH criterion range (3 of 12 samples - 25.0%) at DEQ station 8-MAR014.20 at Route 641. Excursions less than the lower limit of the pH criterion range (7 of 10 samples - 70.0%) at DEQ station 8-MAR018.48 at Route 619.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F22R_MAR04A08 / Maracossic Creek / Segment begins at the outlet of Broaddus Pond and continues downstream until the confluence with Jones Run.	5C	pH	2018	L	6.77

Maracossic Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			6.77

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

York River Basin

Cause Group Code: F23E-02-BAC Mattaponi River

Cause Location: The mainstem Mattaponi River from Ayletts Creek to the confluence with Garnetts Creek.

Cause City/County: King And Queen County; King William County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, the Mattaponi River from Ayletts Creek to Garnetts Creek was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 2/9 at 8-MPN034.33 (pier at Rosepont.)

Continued monitoring was recommended due to an acceptable exceedance rate at 8-MPN029.08 (Rt. 629 bridge near Walkerton.)

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23E_MPN03A06 / Mattaponi River / Aylett Creek to Garnetts Creek. MPNTF	4A	Escherichia coli (E. coli)	2016	L	1.756

Mattaponi River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	1.756		

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

York River Basin

Cause Group Code: F23E-03-BAC Mattaponi River

Cause Location: The mainstem Mattaponi River from the limit of tide to the confluence with Aylett Creek.

Cause City/County: King And Queen County; King William County

Use(s): Recreation

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

Cause Description: During the 2020 cycle, the Mattaponi River from the tidal limit to Ayletts Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 5/33 at 8-MPN039.10.

New bacteria criteria were implemented in the 2022 cycle. The segment remains impaired due a geometric mean exceedance.

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was not specifically addressed; however, the segment is located within the study watershed for the tidal Mattaponi River impairment. It 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-F23E_MPN02A98 / Mattaponi River / From the limit of tide above the Route 360 bridge to Aylett Creek. MPNTF	4A	Escherichia coli (E. coli)	2020	L	0.159

Mattaponi River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	0.159		

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

York River Basin

Cause Group Code: F23R-01-BAC Garnetts Creek

Cause Location: The mainstem of Garnetts Creek from the confluence with Dickeys Swamp to the tidal limit.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2010 cycle, Garnetts Creek from the confluence with Dickeys Swamp downstream to the tidal limit was assessed as impaired of the Recreation Use due to E. coli violations at the Route 633 bridge (8-GNT001.54).

The exceedance rate was 6/23 during the 2014 cycle and 3/12 during the 2020 cycle.

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

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_GNT01A00 / Garnetts Creek / Dickeys Swamp to tidal limit	4A	Escherichia coli (E. coli)	2010	L	2.84

Garnetts Creek

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

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

York River Basin

Cause Group Code: F23R-03-DO Walkerton Branch

Cause Location: Watershed upstream of Walkerton Millpond

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: Walkerton Branch was initially assessed as not supporting of the Aquatic Life Use for dissolved oxygen in 2006 based on exceedances at Route 636 (8-WKN003.16).

Additional monitoring was conducted during the 2014 cycle. The segment remained impaired for dissolved oxygen with an exceedance rates of 3/11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_WKN01A00 / Walkerton Branch / Watershed above Walkerton Millpond.	5C	Dissolved Oxygen	2006	L	4.63

Walkerton Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			4.63

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

York River Basin

Cause Group Code: F23R-03-PH Walkerton Branch

Cause Location: Watershed upstream of Walkerton Millpond

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: Walkerton Branch was initially assessed as not supporting of the Aquatic Life Use goal in 2004 based on pH exceedances at Route 636 (8-WKN003.16).

Additional monitoring was conducted during the 2014 cycle. The segment remained impaired for pH with an exceedance rate of 4/11.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_WKN01A00 / Walkerton Branch / Watershed above Walkerton Millpond.	5C	pH	2004	L	4.63

Walkerton Branch

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			4.63

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

York River Basin

Cause Group Code: F23R-04-BAC Aylett Creek

Cause Location: The mainstem of Aylett Creek.

Cause City/County: King William County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, Aylett Creek was impaired of the Recreation Use due to an E. coli violation rate of 3/11 at 8-AYL002.27, which is located at the Route 600 bridge.

The exceedance rate was 6/12 during the 2020 cycle.

New bacteria criteria were implemented in the 2022 cycle. No additional data was collected. However, re-analysis of the 2020 data confirms the impairment due to two or more STV exceedances in the same 90-day period with <10 samples.

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_AYL01A12 / Aylett Creek / Headwaters to mouth at Mattaponi River	4A	Escherichia coli (E. coli)	2012	L	6.84

Aylett Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.84

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

York River Basin

Cause Group Code: F23R-05-BEN Fleets Creek

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

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: During the 2018 cycle, Fleets Creek was assessed as impaired of the Aquatic Life Use due to benthic alteration during sampling in 2015 at 8-FTS001.98.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_FTS01A10 / Fleets Creek / Headwaters to mouth at Dickeys Swamp	5A	Benthic Macroinvertebrates Bioassessments	2018	L	5.01

Fleets Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			5.01

Sources: Source Unknown

York River Basin

Cause Group Code: F23R-06-PCB Mattaponi River

Cause Location: The Mattaponi River from the Route 628 bridge downstream to the mouth at West Point.

Cause City/County: King And Queen County; King William County

Use(s): Fish Consumption

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

Cause Description: During the 1998 cycle, the Mattaponi River from Herring Creek to the tidal limit was considered fully supporting but threatened of the Fish Consumption Use due to exceedance of a PCB screening value in white perch in 1996.

During the 2006 cycle, 2003 monitoring at 8-MPN041.41 indicated exceedances of the fish tissue level for PCBs in two species. In addition, the VDH issued a fish consumption advisory on 12/13/2004 for PCBs from Herring Creek to Aylett Creek which recommends that adults eat no more than two meals/month of anadromous striped bass, white perch, and gizzard shad. The TMDL is due in 2018.

The advisory was revised on 10/7/2009. The advisory now extends from Route 628 downstream approximately 55 miles to the mouth of the Mattaponi at West Point. No more than two meals/month of anadromous (coastal) striped bass, white perch, and gizzard shad are recommended due to PCBs.

The advisory is based on the results of DEQ's fish tissue monitoring program, which has indicated PCB exceedances at 8-MPN029.08, 8-MPN014.33 and 8-MPN041.41. .

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_MPN01A06 / Mattaponi River / Segment begins at the confluence with Gravel Run and continues downstream until the confluence with Herring Creek.	5A	PCBs in Fish Tissue	2010	L	6.070
VAN-F21R_MPN01B02 / Mattaponi River / Segment begins at the Route 628 crossing and continues downstream until the confluence with Gravel Run.	5A	PCBs in Fish Tissue	2010	L	4.910
VAP-F23E_MPN02A98 / Mattaponi River / From the limit of tide above the Route 360 bridge to Aylett Creek. MPNTF	5A	PCBs in Fish Tissue	2006	L	0.159
VAP-F23E_MPN03A06 / Mattaponi River / Aylett Creek to Garnetts Creek. MPNTF	5A	PCBs in Fish Tissue	2010	L	1.756
VAP-F23R_MPN01A00 / Mattaponi River / From the watershed boundary (Herring Creek) to the limit of tide near the Route 360 bridge.	5A	PCBs in Fish Tissue	2006	L	4.720
VAP-F24E_MPN03A98 / Mattaponi River / Garnetts Creek to tidal freshwater/oligohaline boundary at approximately river mile 18 MPNTF	5A	PCBs in Fish Tissue	2010	L	1.384
VAP-F24E_MPN03B02 / Mattaponi River / Tidal freshwater/oligohaline boundary to Melrose Landing at Route 602 MPNOH	5A	PCBs in Fish Tissue	2010	L	0.423

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F24E_MPN03C06 / Mattaponi River / Melrose Landing (Route 602) to Heartquake Creek. MPNOH	5A	PCBs in Fish Tissue	2010	L	0.717
VAP-F25E_MPN05A00 / Mattaponi River / Mattaponi River from Heartquake Creek to the downstream boundary of VDH-DSS 049-004F, 7/15/2020 MPNOH	5A	PCBs in Fish Tissue	2010	L	1.292
VAP-F25E_MPN05B06 / Mattaponi River / From the upstream boundary of VDH-SFC 049-004B, 7/15/2020 downstream to the oligohaline/York mesohaline boundary. MPNOH	5A	PCBs in Fish Tissue	2010	L	0.384
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004E, 7/15/2020. YRKMH	5A	PCBs in Fish Tissue	2010	L	0.209
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 7/15/2020 within Mattaponi River mainstem. YRKMH	5A	PCBs in Fish Tissue	2010	L	0.641

Mattaponi River

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	6.965		15.7

Sources: Atmospheric Deposition - Toxics; Source Unknown

York River Basin

Cause Group Code: F23R-08-BAC Dickeys Swamp

Cause Location: Dickeys Swamp from the confluence with Dogwoods Fork downstream to the Route 620 bridge.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Dickeys Swamp from Dogwoods Fork downstream to the Route 620 bridge was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at station 8-DKW004.31. Monitoring at station 8-DKW001.12 was acceptable (0/12).

In the 2020 cycle, the segment remained impaired (3/12).

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

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_DKW01B00 / Dickeys Swamp / Dogwoods Fork to Route 620	4A	Escherichia coli (E. coli)	2014	L	4.34

Dickeys Swamp

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

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

York River Basin

Cause Group Code: F23R-09-BAC Market Swamp

Cause Location: Market Swamp from the Walker Coleman Pond dam downstream to its mouth.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Market Swamp below Walker Coleman Pond was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at station 8-MKT001.04, which is located at the Route 14 bridge. Note: monitoring at station 8-MKT001.96 was acceptable (0/12).

The exceedance rate was 4/12 at 8-MKT001.04 during the 2020 cycle.

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

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_MKT01B00 / Market Swamp / Walker Coleman Pond to mouth at Dickeys Swamp.	4A	Escherichia coli (E. coli)	2014	L	2.01

Market Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.01

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

York River Basin

Cause Group Code: F23R-10-BAC XJG - Dickeys Swamp, UT

Cause Location: Tributary XJG in its entirety.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Dickeys Swamp UT XJG was considered impaired of the Recreation Use due to an E. coli exceedance rate of 5/12 at 8-XJG000.08.

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

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_XJG01A14 / XJG - Dickeys Swamp, UT / Headwaters to mouth	4A	Escherichia coli (E. coli)	2014	L	2

XJG - Dickeys Swamp, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2

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

York River Basin

Cause Group Code: F23R-11-BAC Dogwood Fork

Cause Location: Dogwood Fork from its headwaters to its mouth at Dickeys Swamp

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2014 cycle, Dogwood Fork was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at station 8-DWD000.77, which is located at the Route 621 bridge.

The exceedance rate was 3/12 in the 2020 cycle.

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

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_DWD01A00 / Dogwood Fork / From its headwaters to its mouth at Dickeys Swamp.	4A	Escherichia coli (E. coli)	2014	L	2.92

Dogwood Fork

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.92

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

York River Basin

Cause Group Code: F23R-12-BAC XDN - Garnetts Creek, UT

Cause Location: Headwaters to mouth at Garnetts Creek

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: Based on monitoring during the 2014 cycle, tributary XDN was impaired of the Recreation Use due to an E. coli exceedance rate of 2/11 at 8-XDN000.12, which is located at the Route 620 bridge.

Unfortunately, the impairment was inadvertently left off in the 2014 cycle. Although XDN was first listed in the 2016 cycle, the TMDL due date is 2026 to reflect the initial monitoring.

The exceedance rate was 5/9 during the 2020 cycle.

New bacteria criteria were implemented in the 2022 cycle. No new data were collected, but re-analysis of the 2020 cycle data confirms that the segment remains impaired due to two or more STV exceedances in the same 90-day period with <10 samples.

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_XDN01A00 / XDN - Garnetts Creek, UT / Headwaters to mouth at Garnetts Creek.	4A	Escherichia coli (E. coli)	2016	L	2.54

XDN - Garnetts Creek, UT

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

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

York River Basin

Cause Group Code: F23R-13-BAC Dickeys Swamp

Cause Location: Dickeys Swamp from its headwaters downstream to the confluence with Dogwood Fork.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2020 cycle, Dickeys Swamp from its headwaters to the confluence with Dogwood Fork was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 8-DKW005.73.

New bacteria criteria were implemented in the 2022 cycle. No new data were collected, but re-analysis of the 2020 cycle data confirms that the segment remains impaired due to two or more STV exceedances in the same 90-day period with <10 samples.

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was not specifically addressed; however, the segment is located within the study watershed for the downstream Dickeys Swamp impairment. It 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-F23R_DKW01A00 / Dickeys Swamp / Headwaters to Dogwood Fork.	4A	Escherichia coli (E. coli)	2020	L	3.99

Dickeys Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.99

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

York River Basin

Cause Group Code: F23R-14-BAC Dickeys Swamp

Cause Location: Dickeys Swamp from Route 620 downstream to its mouth at Garnetts Creek.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2020 cycle, Dickeys Swamp from Route 620 to its mouth at Garnetts Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 4/23 at 8-DKW000.12.

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was not specifically addressed; however, the segment is located within the study watershed for the Dickeys Swamp impairment. It 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-F23R_DKW01C98 / Dickeys Swamp / Route 620 to mouth at Garnetts Creek	4A	Escherichia coli (E. coli)	2020	L	0.08

Dickeys Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			0.08

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

York River Basin

Cause Group Code: F23R-15-BAC Mattaponi River

Cause Location: From Herring Creek downstream to the limit of tide near the Route 360 bridge

Cause City/County: King And Queen County; King William County

Use(s): Recreation

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

Cause Description: During the 2022 cycle, the Mattaponi River from Herring Creek downstream to the limit of tide was impaired of the Recreation Use due to an E. coli geometric mean exceedance at station 8-MPN043.76.

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was not specifically addressed; however, the segment is located within the study watershed for the tidal Mattaponi River impairment. It 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-F23R_MPN01A00 / Mattaponi River / From the watershed boundary (Herring Creek) to the limit of tide near the Route 360 bridge.	4A	Escherichia coli (E. coli)	2022	L	4.72

Mattaponi River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			4.72

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

York River Basin

Cause Group Code: F23R-16-DO Mill Creek

Cause Location: Custis Pond to mouth at tidal limit.

Cause City/County: King William County

Use(s): Aquatic Life

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

Cause Description: In the 2022 cycle, lower Mill Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/10 at 8-MIL001.19, which is located at Route 625.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F24R_MIL01A00 / Mill Creek / Custis Pond to mouth at tidal limit.	5C	Dissolved Oxygen	2022	L	0.41

Mill Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.41

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

York River Basin

Cause Group Code: F24E-02-BAC Mattaponi River

Cause Location: The Mattaponi River from Garnetts Creek to the tidal freshwater/oligohaline boundary at approximately river mile 18

Cause City/County: King And Queen County; King William County

Use(s): Recreation

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

Cause Description: During the 2018 cycle, the Mattaponi River from Garnetts Creek to the tidal freshwater/oligohaline boundary was impaired of the Recreation Use due to an E. coli exceedance rate of 4/35 at 8-MPN017.46.

The exceedance rate was 4/34 in the 2020 cycle.

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

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F24E_MPN03A98 / Mattaponi River / Garnetts Creek to tidal freshwater/oligohaline boundary at approximately river mile 18 MPNTF	4A	Escherichia coli (E. coli)	2018	L	1.384

Mattaponi River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:	1.384		

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

York River Basin

Cause Group Code: F24R-01-BAC Heartquake Creek

Cause Location: Heartquake Creek from the confluence with the UT at approx. rivermile 4.67 downstream to the tidal limit.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2012 cycle, the segment was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at the Route 14 bridge (8-HTQ003.77).

The stream is located within the study area for the Upper York Shellfish TMDL, which was approved by the EPA on 7/28/2010; therefore, the impairment is considered nested (Category 4A).

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F24R_HTQ01A00 / Heartquake Creek / From the confluence with the UT at approx. rivermile 4.67 downstream to the tidal limit.	4A	Escherichia coli (E. coli)	2012	L	2.27

Heartquake Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.27

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

York River Basin

Cause Group Code: F24R-03-BAC Courthouse Creek

Cause Location: Courthouse Creek from King and Queen Courthouse Pond to the tidal limit

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2016 cycle, Courthouse Creek downstream of King and Queen Courthouse Pond was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 8-CTH001.96, which is located at the Route 14 bridge.

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

The Mattaponi River and Tributaries Bacteria TMDL was approved by the SWCB on 12/14/2021 and by the EPA on 2/4/2022. The impairment was addressed in the TMDL and is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F24R_CTH01A00 / Courthouse Creek / From King and Queen Courthouse Pond downstream to the tidal limit.	4A	Escherichia coli (E. coli)	2016	L	0.72

Courthouse Creek

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

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

York River Basin

Cause Group Code: F24R-03-DO Courthouse Creek

Cause Location: Courthouse Creek from King and Queen Courthouse Pond to the tidal limit

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: During the 2014 cycle, Courthouse Creek downstream of King and Queen Courthouse Pond was impaired of the Aquatic Life Use due to dissolved oxygen exceedances at 8-CTH001.96, which is located at the Route 14 bridge.

The exceedance rate was 4/24 during the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F24R_CTH01A00 / Courthouse Creek / From King and Queen Courthouse Pond downstream to the tidal limit.	5A	Dissolved Oxygen	2014	L	0.72

Courthouse Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			0.72

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

York River Basin

Cause Group Code: F25E-01-BAC Mattaponi River

Cause Location: The Mattaponi River from Heartquake Creek downstream to its mouth.

Cause City/County: King And Queen County; King William County

Use(s): Recreation

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

Cause Description: The Mattaponi from Heartquake Creek downstream to its mouth was assessed as not supporting the Recreation Use based on enterococci exceedances at 8-MPN004.39 during the 2006 cycle.

The TMDL was approved by the EPA on 7/28/2010; therefore, the segment is Category 4A.

During the 2020 cycle, enterococci exceedance rates were 20/69 at 8-MPN004.39 and 5/12 at 8-MPN006.23. The exceedance rate at 8-MPN000.98 was acceptable (0/10).

New bacteria criteria were implemented in the 2022 cycle. The segment remains impaired due to two or more STV exceedances in the same 90-day period with <10 samples at 8-MPN004.39; no additional data has been collected at 8-MPN006.23.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F25E_MPN05A00 / Mattaponi River / Mattaponi River from Heartquake Creek to the downstream boundary of VDH-DSS 049-004F, 7/15/2020 MPNOH	4A	Enterococcus	2006	L	1.292
VAP-F25E_MPN05B06 / Mattaponi River / From the upstream boundary of VDH-SFC 049-004B, 7/15/2020 downstream to the oligohaline/York mesohaline boundary. MPNOH	4A	Enterococcus	2006	L	0.384
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004E, 7/15/2020. YRKMH	4A	Enterococcus	2006	L	0.209
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 7/15/2020 within Mattaponi River mainstem. YRKMH	4A	Enterococcus	2006	L	0.641

Mattaponi River

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	2.525		

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

York River Basin

Cause Group Code: F25R-01-BAC Tastine Swamp and Little Tastine Swamp

Cause Location: From the headwaters of Little Tastine Swamp down Tastine Swamp to Corbins Pond.

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: Tastine Swamp from the Route 611 bridge downstream to Corbins Pond was initially assessed in 1998 as fully supporting but threatened of the Recreation use goal.

During the year 2002 cycle the segment was downgraded and extended to incorporate Little Tastine Swamp.

In the 2004 cycle, the segment continued to be impaired based on fecal coliform exceedances at 8-TST001.81 (Route 611 bridge).

E. coli monitoring was conducted during the 2010 cycle. Although the exceedance rate was acceptable at the original listing station (1/12 at 8-TST001.81), impairment was noted at two new stations (3/12 at 8-LTS001.65 and 2/12 at 8-TST001.35). The impairment converted to E. coli but the original TMDL due date was maintained.

The stream is located within the study area for the tidal Lower Mattaponi River Bacterial TMDL, which was approved by the EPA on 7/28/2010. Implementation of the enterococci TMDL is expected to bring the riverine E. coli impairment into compliance; therefore, the impairment was considered nested (Category 4A) in the 2012 cycle.

New bacteria criteria were implemented in the 2022 cycle. There is insufficient information to assess the criteria; therefore, the impairment is carried over.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F25R_TST01A98 / Tastine Swamp, Little Tastine Swamp / From the headwaters of Little Tastine Swamp down Tastine Swamp to Corbin Pond	4A	Escherichia coli (E. coli)	2010	L	6.26

Tastine Swamp and Little Tastine Swamp

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			6.26

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

York River Basin

Cause Group Code: F25R-01-DO Tastine Swamp and Little Tastine Swamp

Cause Location: From the headwaters of Little Tastine Swamp down Tastine Swamp to Corbins Pond.

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: During the 2016 cycle, the segment was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/12 at 8-TST001.81 (Rt. 611 bridge.)

There has been no additional monitoring at 8-TST001.81. However, additional monitoring was conducted in the 2022 cycle at 8-LTS001.65 (4/10 - impaired) and 8-TST001.35 (0/11 - fully supporting.)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F25R_TST01A98 / Tastine Swamp, Little Tastine Swamp / From the headwaters of Little Tastine Swamp down Tastine Swamp to Corbin Pond	5C	Dissolved Oxygen	2016	L	6.26

Tastine Swamp and Little Tastine Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			6.26

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

York River Basin

Cause Group Code: F25R-02-DO Tastine Swamp

Cause Location: From the headwaters of Tastine Swamp downstream to the confluence with Little Tastine Swamp

Cause City/County: King And Queen County

Use(s): Aquatic Life

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

Cause Description: Tastine Swamp from its headwaters down to the confluence with Little Tastine Swamp was assessed as not supporting of the Aquatic Life Use in the 2010 cycle due to a dissolved oxygen exceedance rate of 2/12 at station 8-TST003.16.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F25R_TST01B10 / Tastine Swamp / Headwaters to confluence with Little Tastine Swamp	5C	Dissolved Oxygen	2010	L	2.16

Tastine Swamp

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:			2.16

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

York River Basin

Cause Group Code: F25R-03-BAC XIN - Tastine Swamp, UT

Cause Location: From the headwaters downstream to the mouth at Tastine Swamp

Cause City/County: King And Queen County

Use(s): Recreation

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

Cause Description: During the 2010 cycle, the tributary was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 3/12 at station 8-XIN001.00.

The stream is located within the study area for the tidal Lower Mattaponi River Bacterial TMDL, which was approved by the EPA on 7/28/2010 and by the SWCB on 12/13/2010. Implementation of the enterococci TMDL is expected to bring the riverine E. coli impairment into compliance; therefore, the impairment was considered nested during the 2012 cycle (Category 4A.)

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F25R_XIN01A10 / XIN - Tastine Swamp, UT / Headwaters to mouth at Tastine Swamp	4A	Escherichia coli (E. coli)	2010	L	2.41

XIN - Tastine Swamp, UT

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:			2.41

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

York River Basin

Cause Group Code: F26E-01-PCB York River, Queens Creek, Kings Creek, Wormley

Cause Location: This cause encompasses the area from the confluence of the Mattaponi and Pamunkey Rivers down to the mouth of the York River including King, Queens and Wormley Creek

Cause City/County: Gloucester County; James City County; King And Queen County; King William County; New Kent County; Williamsburg; York County

Use(s): Fish Consumption

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

Cause Description: The segment is included under a 12/13/2004 VDH Fish Consumption Advisory due to polychlorinated biphenyls (PCBs) in fish tissue. The advisory recommends that adults eat no more than two meals/month of croaker, gizzard shad, and spot. High risk individual

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_QEN01A02 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH. Split in 2012 cycle.	5A	PCBs in Fish Tissue	2006	L	0.296
VAT-F26E_QEN01B12 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of DSS shellfish condemnation # 051-035 (20180814). downstream to mouth. CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	0.136
VAT-F26E_YRK01A04 / York River / York River at Goalders Creek downstream to the boundary of DSS OPEN condemnation # 049-004 (effective 20200715). CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	3.962
VAT-F26E_YRK01B10 / York River / Start of York River at West Point (RM 32.0) downstream to the boundary of ADMIN COND # 049-004 A (effective 7/15/2020), approx. Goff Point . CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	1.086
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049-004 C, 7/15/2020. CB Seg - YRKMH.	5A	PCBs in Fish Tissue	2006	L	0.029
VAT-F26E_YRK01D12 / York River / Portion of York River within VDH Seasonal Cond 0049-004 effective date 20200715 YRKMH	5A	PCBs in Fish Tissue	2006	L	0.042
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 7/15/2020 . CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	0.457

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_YRK02A14 / York River (Lower Middle MSN) / Segment starts south of New Kent and James City Boundary and extends downstream to the MSN boundary near Mt. Folly/Poropotank Bay. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	5A	PCBs in Fish Tissue	2006	L	2.680
VAT-F26E_YRK02E20 / York River (lower middle) / York River from Goff Point (end of Restricted-Condemnation) to Goalders Creek. VDH new Conditionally Approved condemnation 20200715. CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	2.125
VAT-F26E_YRK03A00 / York River (Lower Middle) / Segment starts at end of MSN boundary near Mt. Folly/Poropotank Bay and extends downstream to the mesohaline/polyhaline boundary. CBP segment YRKMH. Open DSS shellfish direct harvesting condemnation present (effective date 20200715)	5A	PCBs in Fish Tissue	2006	L	20.372
VAT-F26E_YRK03B12 / York River (Lower Middle) / Portion of York River at Carter Creek north of Camp Peary. Within VDH-DSS Open condemnation-type #049-004 , 20200715. CB segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	0.023
VAT-F27E_KNG01A02 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to end of DSS condemnation # 051-035C, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	5A	PCBs in Fish Tissue	2006	L	0.128
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2002	L	0.220
VAT-F27E_KNG03A20 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to halfway through DSS Open condemnation-type # 051-035, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	5A	PCBs in Fish Tissue	2006	L	0.072
VAT-F27E_WOR01A08 / Wormley Creek / South shore York River near Amoco facility southeast of Gloucester Point. CBP segment YRKPH. Upstream portion of DSS (ADMINISTRATIVE) condemnation # 052-006 A (effective 2018-05-03).	5A	PCBs in Fish Tissue	2002	L	0.283

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_YRK01A00 / York River - Lower Middle / The polyhaline boundary downstream to line from Roosevelt Pond N to Mumfort Islands at RM 7.49, excluding otherwise segmented DSS shellfish condemnation areas. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation #049-004 (effective date 20200715). YRKPH	5A	PCBs in Fish Tissue	2006	L	10.393
VAT-F27E_YRK01B00 / York R - DSS AdminCond @ Cheatham Annex/Camp Peary / Segment adjacent to Cheatham Annex, VDH-DSS condemnation 051-035 B (effective 8/14/2018) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	0.260
VAT-F27E_YRK01C00 / York R - DSS AdminCond @ Naval Weapons Station / Segment adjacent to Yorktown Naval Weapons Sta., VDH-DSS condemnation 051-040 B (effective 20080618) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	0.236
VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation #052-006 (effective date 20180503).	5A	PCBs in Fish Tissue	2006	L	0.024
VAT-F27E_YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-052 (effective 20200915).	5A	PCBs in Fish Tissue	2006	L	0.018
VAT-F27E_YRK02A00 / York River - Lower / Segment starts at line across river from Roosevelt Pond to Mumfort Islands (RM 7.49), downstream to mouth (RM 0.0) near Thoroughfare Creek. CBP segment YRKPH. No DSS shellfish condemnation.	5A	PCBs in Fish Tissue	2006	L	11.657
VAT-F27E_YRK02B00 / York R - DSS AdminCond @ HRSD York STP/Amoco / Described in VDH-DSS (ADMINISTRATIVE) shellfish condemnation 052-006 B&C (effective 20180503) adjacent Wormley Cr., HRSD STP & power plant and refinery. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	0.508
VAT-F27E_YRK02C00 / York River - DSS AdminCond @ Wormley to USCG / Segment on Yorktown side (south shore) of river. DSS (ADMINISTRATIVE) shellfish condemnation # 052-006 A (effective 2018-05-03) (portion in York R), from Wormley Cr. to USCG Station, S shore to mid-channel. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	2.698

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_YRK02D12 / York River - Lower / Portion of York River within VDH-DSS seasonal condemnation 046-052M1, effective date 20200915. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	0.139

York River, Queens Creek, Kings Creek, Wormley

Fish Consumption	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCBs in Fish Tissue - Total Impaired Size by Water Type:	57.844		

Sources: Source Unknown

York River Basin

Cause Group Code: F26E-03-BAC Queens Creek

Cause Location: This cause encompasses the entirety of Queens Creek to the end of VDH shellfish condemnation 051-035 on the southern shore of the York River.

Cause City/County: Williamsburg; York County

Use(s): Recreation

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

Cause Description: Queens Creek was initially assessed as impaired for the Recreation Use in the 2002 cycle and remains impaired into the 2022 IR cycle.

Recreation Use is impaired based on enterococci data from station 8-QEN002.47 with 6 exc/ 33 samp due to 2 or more STV hits in the same 90-day period with < 10 samples.

The Recreation Use impairment is located within the study area for the Shellfish TMDL completed April 17, 2008; therefore it will be considered nested in 2012 (Outside of 2022 IR cycle).
NESTED: 34372, 4/17/2008 2006 00328 / 2008 F26E-03-BAC

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_QEN01A02 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH. Split in 2012 cycle.	4A	Enterococcus	2002	L	0.296
VAT-F26E_QEN01B12 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of DSS shellfish condemnation # 051-035 (20180814). downstream to mouth. CBP segment YRKMH.	4A	Enterococcus	2002	L	0.136

Queens Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.432		

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

York River Basin

Cause Group Code: F26E-06-SF Fox Creek

Cause Location: Described in VDH Notice and Description of Shellfish Direct Harvesting Condemnation #047-072A,8/15/2018.

Cause City/County: Gloucester County

Use(s): Shellfishing

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

Cause Description: The Shellfishing Use is impaired based on the VDH-DSS condemnation 047-072A (20180815).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_FOX01A06 / Fox Creek / North shore trib to York River. Located southeast of Allmondsville in Gloucester Co. From estuarine/riverine transition to mouth. CBP segment YRKMH. DSS condemnation # 047-072A (effective 20180815).	5B	Fecal Coliform	2006	L	0.016

Fox Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.016		

Sources: Source Unknown

York River Basin

Cause Group Code: F26E-10-SF Carter Creek

Cause Location: Described in VDH Notice and Description of Shellfish Direct Harvesting Condemnation # 050-087B, 8/15/2020.

Cause City/County: York County

Use(s): Shellfishing

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

Cause Description: Shellfishing Use is not supporting due to a VDH-DSS Restricted Condemnation #050-087B, effective 20200815 Carter Creek has been impaired since the 2004 cycle due to a VDH condemnation. During the 2012 cycle, the condemnation extends into a portion of the York River.

2006 70004 / 2008 F26E-10-SF

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_CTC01A06 / Carter Creek / Located in York County near Skimino. From estuarine/riverine transition to mouth. CBP segment YRKMH. Portion of DSS Restricted condemnation # 050-087B, 20200815.	5B	Fecal Coliform	2004	L	0.025

Carter Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.025		

Sources: Source Unknown

York River Basin

Cause Group Code: F26E-12-SF Adams Creek-Upper

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 048-128 B (effective 07/15/2020).

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired based on the VDH-DSS condemnation 048-128B, 7/15/2020. A portion of Adams Creek was listed on the 1998 303(d) list due to VDH condemnation 198B. The condemnation expanded and, during the 2010 cycle, the condemnation extended to the mouth of the creek (#048-128B, 7/6/2005). The TMDL was approved by the EPA on 6/9/2009 for most of the Creek (from upstream end of tidal waters to downstream last Unnamed Trib). During the 2014 cycle, the condemnation shrank. The open area within the TMDL study area will be partially delisted (Category 2C) and added to AU VAT-F26E_ADM01B12, the condemned area will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_ADM01A00 / Adams Creek-Upper / Eastern shore of York River near Purtan Island. CBP segment YRKMH. DSS shellfish restricted condemnation and Conditionally Approved # 048-128B (effective 07/15/2020).	4A	Fecal Coliform	1998	L	0.116

Adams Creek-Upper

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.116		

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

York River Basin

Cause Group Code: F26E-14-SF Poropotank River

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 048-128A, 7/15/2020.

Cause City/County: Gloucester County; King And Queen County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfish Use is impaired based on the VDH-DSS condemnation 048-128A, 7/15/2020. A portion of Poropotank Creek was listed on the 1998 303(d) list due to VDH condemnation 198A. The condemnation expanded and during the 2010 cycle, the condemnation extended to the mouth of the creek (#048-128A, 7/6/2005) (see 2010 fact sheet F26E-28-SF). However, the TMDL addressed the 1998 impaired area only. The TMDL was approved by the EPA on 6/9/2009. During the 2012 cycle, the condemnation shrank and is now smaller than the 1998 impairment. The downstream area will be partially delisted (Category 2A), the open area within the TMDL study area will be partially delisted (Category 2C), the condemned area is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_PTK01A00 / Poropotank River / North shore of York River near Purtan Island. Forms boundary of King and Queen/Gloucester Co. From end of tidal waters downstream to end of DSS condemnation # 048-128A, 7/15/2020. CBP segment YRKMH.	4A	Fecal Coliform	1998	L	0.451

Poropotank River

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.451		

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

York River Basin

Cause Group Code: F26E-15-SF Aberdeen Creek - Upper

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 047-078 A (7/15/2020).

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired for a portion of Aberdeen Creek has been impaired since the 1998 cycle due to VDH shellfish condemnation 4/7/1997. The condemnation had expanded and was included under 047-078A, 7/8/2010. However, the TMDL "York River: Gloucester Point to Jones Creek", which was approved by the EPA on 7/30/2007, only addressed the 1998 portion. The original condemned area will be considered Category 4A. In 2014, the downstream expansion (F26E-02-SF) will be Nested and now included with this CGC and AU. New nesting rules for 2014 allow nesting within the tidal range as long as newly impaired segments are comparable and all existing sources are accounted for in the TMDL. NESTED 2014: 33102 , 7/30/2007 from VAT-F26E_ABD02A12 from 2012.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_ABD01A00 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the end of Shellfish Restricted area. Portion of CBP segment YRKMH. Portion of DSS shellfish direct harvesting condemnation # 047-078 A (effective 7/15/2020).	4A	Fecal Coliform	1998	L	0.094

Aberdeen Creek - Upper

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.094		

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

York River Basin

Cause Group Code: F26E-16-SF Queens Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 051-035 A,8/14/2018.

Cause City/County: Williamsburg; York County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired for Queens Creek. Queens Creek was impaired of the Shellfish Use in the 1998 cycle. The TMDL was developed to address the impairment and was approved by the EPA on 4/17/2008. However, the condemnation has subsequently shortened and is currently addressed in VDH condemnation #051-035A, 8/14/2018. The open downstream area was partially delisted (Category 2C); the condemned area remains Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_QEN01A02 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH. Split in 2012 cycle.	4A	Fecal Coliform	1998	L	0.296

Queens Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.296		

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

York River Basin

Cause Group Code: F26E-17-SF Skimino Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 050-087 A (effective 20200815).

Cause City/County: James City County; York County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present 050-087A, 8/15/2020. The TMDL for Chesapeake Bay Shellfish Waters: Ware Creek, Taskinas Creek, and Skimino Creek Bacterial Impairments in York, James City, and New Kent Counties, VA, for growing area 50 - Condemnations 073 and 087 was completed during the 2012 cycle and was approved by the EPA on 3/25/2010. Skimino Creek will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_SKM01A00 / Skimino Creek / North of Skimino Farms. Boundary of James City/York Co. From estuarine/riverine transition (dam at Barlows Pond, Rt 604) to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-087 A (effective 20200815).	4A	Fecal Coliform	1998	L	0.174

Skimino Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.174		

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

York River Basin

Cause Group Code: F26E-18-SF Taskinas Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 050-073 B (effective 20200815).

Cause City/County: James City County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present 050-073B, 8/15/2020. The TMDL was completed during the 2012 cycle and was approved by the EPA on 3/25/2010. Taskinas Creek will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_TSK01A00 / Taskinas Creek / West of Purtan Island, south of Croaker Landing. From end of tidal waters downstream to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-073 B (effective 20200815).	4A	Fecal Coliform	1998	L	0.026

Taskinas Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.026		

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

York River Basin

Cause Group Code: F26E-19-SF Ware Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 050-073A (effective 20200815).

Cause City/County: James City County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present, 050-073A, 8/15/2020. The TMDL was completed during the 2012 cycle and was approved by the EPA on 3/25/2010. Ware Creek will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_WRE01A00 / Ware Creek / South of Terrapin Pt., W of Purtan Island. From end of tidal waters downstream to mouth; includes piece of York SF Cond, CBP segment YRKMH. DSS shellfish condemnation # 050-073 A (effective 20200815).	4A	Fecal Coliform	1998	L	0.133

Ware Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.133		

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

York River Basin

Cause Group Code: F26E-20-SF Baker Creek, Philbates Creek, York River at Hockley and Unsegmented SF Condemned in F26E

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 049-004 A (20200715) as well as the southern portion of VDH condemnation 049-004 A (20150803)

Cause City/County: King And Queen County; New Kent County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfish Use is impaired based on the DSS condemnation #049-004A, effective 20200715.

VAT-F26E_PHB01A00 - The Shellfishing Use is supporting due to a Open condemnation #049-004 20200715 in the 2022 IR cycle. There was a Restricted-Condemnation in Philbates Creek resulting in an impairment in the 2018 IR cycle.

Included in TMDL for Bacteria for the Upper York River EPA approved 7/28/2010. TMDL #1 for SF Condemnations in the York R Mainstem, unsegmented estuaries in F26, Philbates, Baker, Bakers Ferry, Hockley and Robinson Creeks are included.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_BKS01A08 / Baker Creek / South shore trib to York R. S of Plum Pt. & E of Davis Pond. Estuarine portion of creek with York River. CBP segment YRKMH. DSS Cond 049-004A (20200715)	4A	Fecal Coliform	2008	L	0.017
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049-004 C, 7/15/2020. CB Seg - YRKMH.	4A	Fecal Coliform	2002	L	0.029

Baker Creek, Philbates Creek, York River at Hockley and Unsegmented SF Condemned in F26E

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.046		

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

York River Basin

Cause Group Code: F26E-22-SF Hockley Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 049-004C (effective 7/15/2020). Northern portion of condemnation area.

Cause City/County: King And Queen County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: Shellfish Use is impaired based on DSS Condemnation 049-004C effective 20200715.

The impairment was addressed in the report "Bacteria Total Maximum Daily Load (TMDL) Development for the Upper York River, the Lower Pamunkey River, and the Lower Mattaponi River (Tidal) Watersheds" which was completed during the 2012 cycle and was approved by the EPA on 7/28/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_HCK01A04 / Hockley Creek / North shore York R NW of Belleview. Estuarine portion of creek. CBP segment YRKMH. Portion of DSS condemnation # 049-004C (effective 7/15/2020).	4A	Fecal Coliform	2002	L	0.055

Hockley Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.054		

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

York River Basin

Cause Group Code: F26E-29-SF York River

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 049-004 A ,7/15/2020. This is the only portion of the condemnation that is not administrative.

Cause City/County: King And Queen County; King William County; New Kent County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfish Use is impaired based on new VDH Restricted Condemnation apart of Admin Condemn 049-004 A effective date 7/15/2020. Included in the report "Bacteria Total Maximum Daily Load (TMDL) Development for the Upper York River, the Lower Pamunkey River, and the Lower Mattaponi River (Tidal) Watersheds" which was completed during the 2012 cycle and was approved by the EPA on 7/28/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 7/15/2020 . CBP segment YRKMH.	4A	Fecal Coliform	2014	L	0.457

York River

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.457		

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

York River Basin

Cause Group Code: F26L-02-HAB Woodstock Pond

Cause Location: The cause encompasses the entirety of Woodstock Pond located within York River State Park in James City County.

Cause City/County: James City County

Use(s): Recreation

Causes(s)/VA Category: Harmful Algal Blooms/5A

Cause Description: The Recreation Use is impaired based on the VDH swimming advisory that was issued in the two most recent years of the assessment window and the HAB event that persisted over a 30-day period and confirmed through follow-up monitoring.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26L_WSP01A22 / Woodstock Pond / Located within York River State Park South of Taskinas Cr, James City County	5A	Harmful Algal Blooms	2022	L	7.57

Woodstock Pond

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Harmful Algal Blooms - Total Impaired Size by Water Type:		7.57	

Sources: Source Unknown

York River Basin

Cause Group Code: F26R-01-BAC Carter Creek

Cause Location: This cause encompasses Carter Creek from the tidal limit upstream to the confluence with an unnamed tributary.

Cause City/County: York County

Use(s): Recreation

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

Cause Description: No new data to assess in the 2022 IR cycle.

Carter Creek is impaired of the Recreation Use due to fecal coliform exceedances at 8-CTC003.78. The exceedance rate was 2/3 during the 2006 cycle. No additional monitoring has been conducted.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26R_CTC01A04 / Carter Creek / NW & SE of Skimino, N of Camp Peary area. Riverine portion of Carter Creek, extends upstream to branches SW of Skimino area.	5A	Fecal Coliform	2004	L	3.39

Carter Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			3.39

Sources: Source Unknown

York River Basin

Cause Group Code: F26R-01-BEN Carter Creek

Cause Location: This cause encompasses Carter Creek from the tidal limit upstream to the confluence with an unnamed tributary.

Cause City/County: York County

Use(s): Aquatic Life

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

Cause Description: No new data to assess in the 2022 IR cycle.

Benthic biological monitoring previously conducted at station 8-CTC003.78 (located at State Route 604) indicated the stream's benthic community was moderately impaired (Benthic MI: 1999, SI S&F 2000, MI F 2001]. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use. Impairment retained as no more recent data available since 2001.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26R_CTC01A04 / Carter Creek / NW & SE of Skimino, N of Camp Peary area. Riverine portion of Carter Creek, extends upstream to branches SW of Skimino area.	5A	Benthic Macroinvertebrates Bioassessments	2004	L	3.39

Carter Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			3.39

Sources: Source Unknown

York River Basin

Cause Group Code: F26R-02-BEN XEA - Bland Creek, UT

Cause Location: This cause encompasses the tributary XEA from its headwater to its mouth at Bland Creek.

Cause City/County: Gloucester County

Use(s): Aquatic Life

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

Cause Description: No new data to assess in the 2022 IR cycle.

The Aquatic life use is not supporting based on benthic population diversity and abundance measures at this Freshwater Probabilistic Monitoring (FPM) station. The Aquatic Life Use is not supporting based on benthic population diversity and abundance measures at this Freshwater Probabilistic Monitoring (FPM) station, IM-carried forward as no data in cycle. The Aquatic Life Use is not supported based on the benthic data collected in 2001 (Benthic ProbMon-Benthic IM [MI: S&F-01]. Benthic biological monitoring at station 8-XEA000.12 (FPM) indicated the stream's benthic community was moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26R_XEA01A08 / Unnamed Tributary to Bland Creek / Located northwest of Sassafras area, in Gloucester County. From headwaters downstream to confluence with Bland Creek. Downstream (west) of Rt. 606 7 Rt 615, NE of Stubbs Pond	5A	Benthic Macroinvertebrates Bioassessments	2008	L	1.23

XEA - Bland Creek, UT

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			1.23

Sources: Source Unknown

York River Basin

Cause Group Code: F26R-04-BEN Bird Creek

Cause Location: This cause encompasses Bird Creek from its headwater to its mouth at Ware Creek.

Cause City/County: James City County

Use(s): Aquatic Life

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

Cause Description: No new data to assess in the 2022 IR cycle.

During the 2012 cycle, Byrd Creek was impaired of the Aquatic Use due to a slightly impaired benthic community at freshwater probabilistic monitoring station 8-BRD000.43.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26R_BRD01A12 / Bird Swamp / Headwaters to mouth at Ware Creek	5A	Benthic Macroinvertebrates Bioassessments	2012	L	2.47

Bird Creek

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:			2.47

Sources: Source Unknown

York River Basin

Cause Group Code: F26R-05-BAC France Swamp

Cause Location: This cause encompasses the Trib to Ware Creek. NW of Croaker, NE of Toano.

Cause City/County: James City County

Use(s): Recreation

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

Cause Description: No new data to assess in the 2022 IR cycle

Recreation Use is not supporting based on E.coli data at station 8-FRS001.17, with 4 exc/ 22 samples. Previously was supporting with 0 exc/ 11 samples. In 2018 nested new recreation use impairment in EPA approved Ware, Taskinas and Skimino Creeks Fecal Coliform TMDL. New impairment is contained in TMDL watershed with similar land uses. Reductions in the TMDL apply to entire TMDL and are adequate.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26R_FRS01A00 / France Swamp (Upper) / Trib to Ware Creek. NW of Croaker, NE of Toano.	4A	Escherichia coli (E. coli)	2018	L	4.53

France Swamp

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

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

York River Basin

Cause Group Code: F27E-05-BAC King Creek

Cause Location: This cause encompasses all of King Creek, at South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility.

Cause City/County: York County

Use(s): Recreation

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

Cause Description: The segment is impaired for Recreation Use due to an enterococci violation rate of 12 exc/ 33 samples at 8-KNG004.46. The impaired status is given due to 2 or more STV hits in the same 90-day period with < 10 samples. The Recreation Use is nested within the Shellfish Use TMDL, EPA approved 4/8/2008.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_KNG01A02 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to end of DSS condemnation # 051-035C, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	4A	Enterococcus	1998	L	0.128
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.	4A	Enterococcus	1998	L	0.220
VAT-F27E_KNG03A20 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to halfway through DSS Open condemnation-type # 051-035, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	4A	Enterococcus	1998	L	0.072

King Creek

Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.42		

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

York River Basin

Cause Group Code: F27E-13-SF King Creek - Upper

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 051-035C, 8/14/2018.

Cause City/County: York County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfish Use is impaired based on VDH-DSS Restricted Condemnation 051-035C, 8/14/2018. King Creek was impaired in the 1998 cycle due to a VDH-DSS condemnation. The TMDL was approved by the EPA on 4/17/2008 and addressed King Creek to the mouth at the York River. During the 2012 cycle, the condemnation shortened. The condemned area remains Category 4A; the open downstream area will be Category 2C.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_KNG01A02 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to end of DSS condemnation # 051-035C, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	4A	Fecal Coliform	1998	L	0.128

King Creek - Upper

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.128		

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

York River Basin

Cause Group Code: F27E-15-SF Northwest and Northeast Branch Sarah Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 046-052 A, C,E, M1 as well as the non-administratively condemned region of 046-052 B (effective 20200915).

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfish Use is impaired for a portion of VDH-DSS condemnation 046-052 Seasonal M1 and Restricted A, B, C,E 10/11/2016.

Sarah Creek was impaired of the Shellfish Use in the 1998 cycle. The TMDL for Sarah Creek from Tidemill Road downstream to the extent of the 1998 impairment was approved by the EPA on 6/4/2006. The condemned areas will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_SRH01B10 / Sarah Creek - Northeast Branch, Upper / North shore trib to York River near Gloucester Point. Segment includes north branch off of the northeast branch of Sarah Creek. CBP segment YRKPH. Part of DSS condemnation # 046-052 B, 20200915.	4A	Fecal Coliform	1998	L	0.029
VAT-F27E_SRW01A14 / Northwest Branch Sarah Creek / North shore York River near Gloucester Point. Segment extends from headwaters north of Rt 641 downstream to mouth of Northwest Br. DSS Restricted condemnation # 046-052 A (effective 20200915). CBP segment YRKPH.	4A	Fecal Coliform	1998	L	0.193

Northwest and Northeast Branch Sarah Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.222		

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

York River Basin

Cause Group Code: F27E-16-SF Timberneck Creek - Upper [TMDL-bact]

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number # 047-003 A (effective 7/22/2016).

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present, 047-003A 7/22/2016. Covered under TMDL "York River: Gloucester Point to Jones Creek" VAT-F26E-13, 15-18, EPA approved 7/30/2007.

VAT-F27E_TMB01A00 - Shellfishing Use not supporting based on VDH-DSS shellfish direct harvesting condemnation #047-003 A (effective 20200715) and conditionally approved #047-003 S16 (effective date 20200715). Previous (2006 IR) TMDL ID = VAT-F26E-16. Covered under TMDL "York River: Gloucester Point to Jones Creek VAT-F26E-13, 15-18 EPA approved 7/30/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_TMB01A00 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of tidal waters downstream to the end of VDH-DSS shellfish direct harvesting Restricted condemnation #047-003 A (effective 20200715) and conditionally approved #047-003 S16 (effective date 20200715).	4A	Fecal Coliform	1998	L	0.139

Timberneck Creek - Upper [TMDL-bact]

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Shellfishing			
Fecal Coliform - Total Impaired Size by Water Type:	0.138		

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

York River Basin

Cause Group Code: F27E-17-SF Cedarbush Creek - Upper [TMDL-bact]

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 047-078 C (effective 20200715).

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing Use is impaired due to the restricted DSS shellfish direct harvesting condemnation which is present, 047-078C (20200715). Covered under TMDL "York River: Gloucester Point to Jones Creek" VAT-F26E-13, 15-18, EPA approved 7/30/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_CDB01A00 / Cedarbush Creek - Upper [TMDL-bact] / North shore York River, NW of Catlett Islands. From the end of tidal waters downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH. DSS shellfish direct harvesting condemnation # 047-078 C (effective 20200715).	4A	Fecal Coliform	1998	L	0.078

Cedarbush Creek - Upper [TMDL-bact]

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.078		

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

York River Basin

Cause Group Code: F27E-18-SF Carter Cr. (Gloucester Co.) - Upper portion [TMDL-bact]

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 047-078B (20150804).

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The shellfish use is impaired for Carter Creek. Carter Creek has been impaired since the 1998 cycle due to VDH-DSS condemnations. The impairment was addressed in the TMDL "York River: Gloucester Point to Jones Creek VAT-F26E-13, 15-18, which was approved by the EPA on 7/30/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_CRT01A00 / Carter Cr. (Gloucester Co.) - Upper portion [TMDL-bact] / North shore York River, north of Catlett Islands. From the end of tidal waters downstream to the end of DSS condemnation 047-078B, 20180815 . Portion of CBP segment YRKPH. Split in 2012 cycle	4A	Fecal Coliform	1998	L	0.18

Carter Cr. (Gloucester Co.) - Upper portion [TMDL-bact]

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.18		

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

York River Basin

Cause Group Code: F27E-20-SF Water Name Cedarbush Creek - Mouth

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 047-078 C (effective 20200715).

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: The Shellfishing use is not supporting due to a restricted condemnation #047-078C (20200715) in this AU. The Shellfishing use was partially delisted in the 2020 IR cycle due to a Conditional Approval #047-078C (20180804) in this AU. The Shellfishing Use was previously impaired due to a Restricted Condemnation # 047-078C (effective date 20150804). Cedarbush Creek is under the TMDL project York River shellfish waters (growing area 47) (0765).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_CDB02A00 / Cedarbush Creek - Mouth / North shore York River, NW of Catlett Islands. CBP segment YRKPH. Restricted DSS shellfish condemnation # 047-078 C (20200715)	4A	Fecal Coliform	2010	L	0.015

Water Name Cedarbush Creek - Mouth

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.015		

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

York River Basin

Cause Group Code: F27E-28-SF Jones Creek

Cause Location: Described in the VDH Notice and Description of Shellfish Condemnation number 047-072B (20180815) and conditionally approved condemnation #047-072 (effective date 20180815)

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: Shellfishing Use is restricted for all of Jones Creek based on VDH-DSS Restricted-Condemnation #047-072B (20180815) and conditionally approved condemnation #047-072 (effective date 20180815) Covered under TMDL "York River: Gloucester Point to Jones Creek" VAT-F26E-13, 15-18, EPA approved 7/30/2007.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_JNS01A00 / Jones Creek / NW of Clay Bank, between Rts 618 & 616. Portion of CBP segment YRKMH. Described in DSS shellfish direct harvesting condemnation # 047-072B (effective 20180815) and conditionally approved condemnation #047-072 (effective date 20180815).	4A	Fecal Coliform	2002	L	0.051

Jones Creek

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.051		

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

York River Basin

Cause Group Code: F27E-29-SF Perrin River - Upper

Cause Location: Described in the VDH Notice and Description of Shellfish Condemnation number 046-081 B and C (20200915)

Cause City/County: Gloucester County

Use(s): Shellfishing

Causes(s)/VA Category: Fecal Coliform/4A

Cause Description: Shellfish Use is impaired for Upper Perrin River based on Restricted Condemnation for Shellfish Use based on VDH-DSS condemnation #046-081 B and C(effective date 20200915).

VAT-F27E_SRH03A20 - The Shellfishing use is impaired #046-052 C (20200915) due to a Restricted-Condemnation in the 2022 IR cycle.

VAT-F27E_SRH01D14 - Portion of VDH-DSS Restricted condemnation 046-052 A (effective 20200915).

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_PRN01A00 / Perrin River - Upper / North shore York River near Cuba Island. Described in DSS Restricted condemnation # 046-081 B and C (effective 20200915). CBP segment YRKPH.	4A	Fecal Coliform	2002	L	0.052
VAT-F27E_SRH01D14 / Sarah Creek / North shore trib of York River near Gloucester Point. Segment extends from end of Restricted SF Cond 046-052 to end of TMDL area near Rt 642. CBP segment YRKPH. DSS restricted condemnation # 046-052 A (effective 20200915).	4A	Fecal Coliform	2022	L	0.062
VAT-F27E_SRH03A20 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northern branch of Sarah Creek near Guinea Neck. DSS Restricted-Condemnation #046-052 C (20200915). CBP segment YRKPH.	4A	Fecal Coliform	2020	L	0.003

Perrin River - Upper

Shellfishing	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.116		

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

York River Basin

Cause Group Code: MPNOH-DO-BAY Mattaponi River

Cause Location: The oligohaline Mattaponi estuary.

Cause City/County: King And Queen County; King William County

Use(s): Aquatic Life; Migratory Fish Spawning and Nursery; Open-Water Aquatic Life

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

Cause Description: The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. This included the entire tidal portion of the Mattaponi River. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. During the 2002 cycle, dissolved oxygen and chlorophyll A violation rates at multiple monitoring stations were all acceptable. Since the listing was based solely on the EPA overlist, the impairment was considered Nutrients/Eutrophication Biological Indicators.

However, during the 2006 cycle, the Chesapeake Bay water quality standards were implemented. The area failed both the Open Water (OW) default summer criteria and the rest-of-year criteria of 5 mg/L.

Water quality standards specific for the Pamunkey and Mattaponi Rivers were adopted in the 2008 cycle. The specific criteria recognize that DO is naturally depressed in the rivers due to their extensive marsh systems. Since the 2016 cycle, MPNOH has failed the OW summer criteria. The Rest-of-Year criteria is met. The TMDL was approved by the EPA on 12/29/2010; therefore, the estuary is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F24E_MPN03B02 / Mattaponi River / Tidal freshwater/oligohaline boundary to Melrose Landing at Route 602 MPNOH	4A	Dissolved Oxygen	2006	L	0.423
VAP-F24E_MPN03C06 / Mattaponi River / Melrose Landing (Route 602) to Heartquake Creek. MPNOH	4A	Dissolved Oxygen	2006	L	0.717
VAP-F24E_ZZZ02A06 / Unsegmented estuaries in F24 / Unsegmented portion of the watershed within MPNOH	4A	Dissolved Oxygen	2006	L	0.102
VAP-F25E_BMC01A08 / Burnt Mill Creek / Tidal limit to mouth at Mattaponi River MPNOH	4A	Dissolved Oxygen	2006	L	0.054
VAP-F25E_CBN01A00 / Corbin Creek / Corbin Pond to tidal limit MPNOH	4A	Dissolved Oxygen	2006	L	0.037
VAP-F25E_MPN05A00 / Mattaponi River / Mattaponi River from Heartquake Creek to the downstream boundary of VDH-DSS 049-004F, 7/15/2020 MPNOH	4A	Dissolved Oxygen	2006	L	1.292
VAP-F25E_MPN05B06 / Mattaponi River / From the upstream boundary of VDH-SFC 049-004B, 7/15/2020 downstream to the oligohaline/York mesohaline boundary. MPNOH	4A	Dissolved Oxygen	2006	L	0.384
VAP-F25E_ZZZ01A00 / Unsegmented estuaries in F25 / Unsegmented portion of the watershed. MPNOH	4A	Dissolved Oxygen	2006	L	0.067

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F25E_ZZZ02A06 / Unsegmented estuaries in F25 / Unsegmented portion of the watershed within SFC 049-004B, 7/15/2020. MPNOH	4A	Dissolved Oxygen	2006	L	0.006

Mattaponi River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	3.081		

Mattaponi River

Migratory Fish Spawning and Nursery	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	3.081		

Mattaponi River

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	3.081		

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)

York River Basin

Cause Group Code: MPNTF-DO-BAY Mattaponi River

Cause Location: The tidal freshwater Mattaponi mainstem.

Cause City/County: King And Queen County; King William County

Use(s): Aquatic Life; Migratory Fish Spawning and Nursery; Open-Water Aquatic Life

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

Cause Description: The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. This included the entire tidal mainstem of the Mattaponi River. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. During the 2002 cycle, dissolved oxygen and chlorophyll a exceedance rates at multiple monitoring stations were all acceptable (see below). Since the listing was based solely on the EPA overlist, the impairment was considered Nutrients/Eutrophication Biological Indicators.

During the 2006 cycle, the Chesapeake Bay water quality standards were implemented. The area failed the default CB 30-day open water summer criteria of 5.5 mg/L.

Water quality standards specific for the Pamunkey and Mattaponi Rivers were adopted in the 2008 cycle. The specific criteria recognize that dissolved oxygen is naturally depressed in the rivers due to their extensive marsh systems. The Mattaponi Tidal Freshwater segment is in attainment of both the site-specific 30-day open water summer DO criteria and the 30-day Rest of Year DO criteria.

Although the Mattaponi Tidal Freshwater segment is in attainment of every Chesapeake Bay criteria which is measured, there is insufficient information to assess the Migratory Spawning Use or the other Open Water Use's dissolved oxygen frequency criteria; therefore, the mainstem must remain impaired due to EPA's overlisting (nutrients/eutrophication biological indicators). The TMDL is was approved on 12/29/2010, so the mainstem Mattaponi is considered Category 4D.

Note: The tributaries are considered Category 2C because they were not included in the overlist.

Previously MPNTF-BNUT-BAY

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23E_MPN02A98 / Mattaponi River / From the limit of tide above the Route 360 bridge to Aylett Creek. MPNTF	4D	Dissolved Oxygen	1998	L	0.159
VAP-F23E_MPN03A06 / Mattaponi River / Aylett Creek to Garnetts Creek. MPNTF	4D	Dissolved Oxygen	1998	L	1.756
VAP-F24E_MPN03A98 / Mattaponi River / Garnetts Creek to tidal freshwater/oligohaline boundary at approximately river mile 18 MPNTF	4D	Dissolved Oxygen	1998	L	1.384

Mattaponi River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	3.3		

Mattaponi River

Migratory Fish Spawning and Nursery	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	3.3		

Mattaponi River

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	3.3		

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)

York River Basin

Cause Group Code: PMKOH-DO-BAY Pamunkey River Oligohaline Estuary

Cause Location: The oligohaline Pamunkey estuary.

Cause City/County: King William County; New Kent County

Use(s): Aquatic Life; Migratory Fish Spawning and Nursery; Open-Water Aquatic Life

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

Cause Description: The Pamunkey River was initially listed on the 1998 303(d) list as fully supporting but threatened of the Aquatic Life Use goal because a 1995 special study showed river subject to 33% violation rate of daily mean DO standard during warm weather conditions (May through October). The estuarine Pamunkey was considered fully allocated relative to dissolved oxygen and new discharges cannot result in further DO depression.

The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. This listing included the entire mainstem estuarine Pamunkey River.

However, during the 2006 cycle, the new Chesapeake Bay water quality standards were adopted. The oligohaline Pamunkey segment failed the default CB 30-day open water summer dissolved oxygen criteria of 5 mg/L.

During the 2008 cycle, Water Quality Standards specific for the Pamunkey and Mattaponi Rivers were adopted; the specific criteria recognize that dissolved oxygen is naturally depressed below the default criteria in the rivers due to their extensive marsh systems.

The TMDL was approved by the EPA on 12/29/2010.

In the 2018 cycle, the segment met all criteria that could be measured. The Pamunkey mainstem remained listed due to EPA's overlisting (Category 4D.) The tributaries were considered fully supporting (Category 2C.)

During the 2020 and 2022 cycles, the Pamunkey Oligohaline estuary failed the site-specific 30-day open water summer DO criteria. The 30-day Rest of Year DO criteria is met. In addition, the Open Water Subuse and the Migratory Spawning and Nursery (MSN) Subuse both failed the instantaneous minimum DO criteria. The MSN Subuse met the 7-day mean criteria. The mainstem and tributaries are all considered impaired (Category 4A.)

Previously PMKOH-BNUT-BAY

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK05A18 / Pamunkey River / 0.5 miles above station 8-PMK017.90 downstream to Sweet Hall Landing. PMKOH	4A	Dissolved Oxygen	1998	L	0.113
VAP-F14E_PMK05B00 / Pamunkey River / Tidal freshwater/oligohaline boundary at approximately river mile 23.6 downstream to 0.5 mile above station 8-PMK017.90 PMKOH	4A	Dissolved Oxygen	1998	L	1.193
VAP-F14E_PMK06A00 / Pamunkey River / Sweet Hall Landing to upstream boundary of VDH-DSS SFC 049-004A, 7/15/2020 PMKOH	4A	Dissolved Oxygen	1998	L	3.382
VAP-F14E_PMK06B06 / Pamunkey River / VDH-DSS SFC 049-004A, 7/15/2020 to mesohaline boundary PMKOH	4A	Dissolved Oxygen	1998	L	0.584

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_ZZZ02A06 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within PMKOH	4A	Dissolved Oxygen	2020	L	0.265
VAP-F14E_ZZZ02B06 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within SFC 004A & PMKOH	4A	Dissolved Oxygen	2020	L	0.060

Pamunkey River Oligohaline Estuary

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	5.597		

Pamunkey River Oligohaline Estuary

Migratory Fish Spawning and Nursery	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	5.597		

Pamunkey River Oligohaline Estuary

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	5.597		

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

York River Basin

Cause Group Code: PMKTF-DO-BAY Pamunkey River Tidal Freshwater Estuary

Cause Location: The tidal freshwater Pamunkey River estuary.

Cause City/County: Hanover County; King William County; New Kent County

Use(s): Aquatic Life; Migratory Fish Spawning and Nursery; Open-Water Aquatic Life

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

Cause Description: The tidal Pamunkey River was initially listed on the 1998 303(d) list as fully supporting but threatened of the Aquatic Life Use goal because a 1995 special study showed river subject to 33% violation rate of daily mean DO standard during warm weather conditions May through October. The estuarine Pamunkey River was considered fully allocated relative to dissolved oxygen and new discharges could not result in further DO depression.

The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. This listing included the entire mainstem estuarine Pamunkey River.

During the 2006 cycle, the new Chesapeake Bay water quality standards were adopted. The tidal freshwater Pamunkey segment failed the default CB 30-day open water summer dissolved oxygen criteria of 5.5 mg/L. Water quality standards specific for the Pamunkey and Mattaponi Rivers were adopted and the new criteria were used in the 2008 cycle. The specific criteria recognize that dissolved oxygen is naturally depressed in the rivers due to their extensive marsh systems. The Pamunkey Tidal Freshwater segment is in attainment of both the site-specific 30-day open water summer DO criteria and the 30-day Rest of Year DO criteria. The Shallow Water Use is fully supporting the SAV acreage criteria.

Previously, the mainstem Pamunkey remained impaired even though the segment met every criteria that was monitored due to EPA's overlisting because there was insufficient information to assess the Migratory Spawning and Nursery subuse as well as some other Open Water frequency criteria (Category 4D). However, in the 2020 cycle, the Migratory Spawning and Nursery Use failed the instantaneous minimum dissolved oxygen criteria; therefore, the impairment converted to Category 4A and the tributaries were added to the impairment. The 7-day mean criterion is met.

The Chesapeake Bay TMDL was approved by the EPA on 12/31/2010. The Pamunkey River and tributaries are considered Cat 4A waters.

Previously PMKTF-BNUT-BAY

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_PMK01A98 / Pamunkey River / Extent of tide near Totopotomoy Creek to Pampatike Landing. PMKTF	4A	Dissolved Oxygen	1998	L	0.307
VAP-F13E_PMK02A98 / Pamunkey River / Pampatike Landing downstream to Jacks Creek. PMKTF	4A	Dissolved Oxygen	1998	L	0.783
VAP-F13E_PMK03A06 / Pamunkey River / Jacks Creek downstream to Macon Creek. PMKTF	4A	Dissolved Oxygen	1998	L	0.115
VAP-F13E_ZZZ01C14 / Unsegmented estuaries in F13 / Unsegmented portion of watershed YO31. PMKTF	4A	Dissolved Oxygen	2020	L	0.009

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_ZZZ01D14 / Unsegmented estuaries in F13 / Unsegmented portion of watershed YO32. PMKTF	4A	Dissolved Oxygen	2020	L	0.016
VAP-F13E_ZZZ01E14 / Unsegmented estuaries in F13 / Unsegmented portion of watershed YO33. PMKTF	4A	Dissolved Oxygen	2020	L	0.009
VAP-F13E_ZZZ01F14 / Unsegmented estuaries in F13 / Unsegmented portion of watershed YO34. PMKTF	4A	Dissolved Oxygen	2020	L	0.213
VAP-F13E_ZZZ01G14 / Unsegmented estuaries in F13 / Unsegmented portion of watershed YO35. PMKTF	4A	Dissolved Oxygen	2020	L	0.047
VAP-F14E_CMC01A06 / Cohoke Mill Creek / Tidal limit at Cohoke Millpond to mouth at Pamunkey River PMKTF	4A	Dissolved Oxygen	2020	L	0.026
VAP-F14E_HSN01A12 / Harrison Creek / Tidal portion of Harrison Creek PMKTF	4A	Dissolved Oxygen	2020	L	0.044
VAP-F14E_PMK02A00 / Pamunkey River / Macon Creek to downstream extent of tidal freshwater segment at approximately river mile 23.6 PMKTF	4A	Dissolved Oxygen	1998	L	3.638
VAP-F14E_ZZZ01A00 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within PMKTF	4A	Dissolved Oxygen	2020	L	0.697

Pamunkey River Tidal Freshwater Estuary

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	5.904		

Pamunkey River Tidal Freshwater Estuary

Migratory Fish Spawning and Nursery	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	5.904		

Pamunkey River Tidal Freshwater Estuary

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	5.904		

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)

York River Basin

Cause Group Code: YRKMH-DO-BAY York Mesohaline

Cause Location: The York mesohaline segment, including the applicable portions of the Pamunkey and Mattaponi Rivers.

Cause City/County: Gloucester County; James City County; King And Queen County; King William County; New Kent County; Williamsburg; York County

Use(s): Aquatic Life; Migratory Fish Spawning and Nursery; Open-Water Aquatic Life

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

Cause Description: The Pamunkey River was initially listed on the 1998 303(d) list as fully supporting but threatened of the aquatic life use goal because a 1995 special study showed river subject to 33% exceedance rate of daily mean dissolved oxygen (DO) standard during warm weather conditions May through October. The estuarine Pamunkey River is considered fully allocated relative to dissolved oxygen; new discharges cannot result in further DO depression.

The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. This listing included the entire mainstem estuarine York, Pamunkey, and Mattaponi Rivers.

New Chesapeake Bay water quality standards have since been adopted. In the 2022 cycle, the mesohaline York segment (which includes the mouths of the Pamunkey and Mattaponi Rivers) fails the 30-day mean open water summer dissolved oxygen criteria. The rest-of-year criteria was met.

The Chesapeake Bay TMDL was approved by the EPA on 12/29/2010. 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-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth YRKMH	4A	Dissolved Oxygen	1998	L	0.398
VAP-F14E_ZZZ03A06 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within YRKMH	4A	Dissolved Oxygen	2006	L	0.077
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004E, 7/15/2020. YRKMH	4A	Dissolved Oxygen	2006	L	0.209
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 7/15/2020 within Mattaponi River mainstem. YRKMH	4A	Dissolved Oxygen	2006	L	0.641
VAP-F25E_ZZZ03A06 / Unsegmented estuaries in F25 / Unsegmented portion of the watershed within SFC 049-004E, 7/15/2020. YRKMH	4A	Dissolved Oxygen	2006	L	0.031
VAT-F26E_ABD01A00 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the end of Shellfish Restricted area. Portion of CBP segment YRKMH. Portion of DSS shellfish direct harvesting condemnation # 047-078 A (effective 7/15/2020).	4A	Dissolved Oxygen	2006	L	0.094

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_ABD01B08 / Aberdeen Creek - Mouth / Southeast of Clay Bank, south of Rt. 631. From the end of TMDL (07) coverage downstream to the mouth. Portion of CBP segment YRKMH. Conditionally Approved shellfish direct harvesting condemnation # 047-078S18 7/15/2020).	4A	Dissolved Oxygen	2006	L	0.010
VAT-F26E_ABD02A20 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the start of Shellfish Admin-Cond. Portion of CBP segment YRKMH. Portion of DSS shellfish Admin-Condemn # 047-078 A (effective 7/15/2020).	4A	Dissolved Oxygen	2006	L	0.011
VAT-F26E_ADM01A00 / Adams Creek-Upper / Eastern shore of York River near Purtan Island. CBP segment YRKMH. DSS shellfish restricted condemnation and Conditionally Approved # 048-128B (effective 07/15/2020).	4A	Dissolved Oxygen	2006	L	0.116
VAT-F26E_ADM01B12 / Adams Creek / Eastern shore of York River near Purtan Island. CBP segment YRKMH. Portion of 1998 impairment open in DSS shellfish condemnation # 048-128 (effective 7/15/2020).	4A	Dissolved Oxygen	2006	L	0.072
VAT-F26E_BAK01A00 / Bakers Creek / North shore York R SE of West Point Municipal Airport & NW of Hockley Cr. Estuarine portion of creek. CBP segment YRKMH. DSS Admin-Condemnation.	4A	Dissolved Oxygen	2006	L	0.039
VAT-F26E_BKS01A08 / Baker Creek / South shore trib to York R. S of Plum Pt. & E of Davis Pond. Estuarine portion of creek with York River. CBP segment YRKMH. DSS Cond 049-004A (20200715)	4A	Dissolved Oxygen	2006	L	0.017
VAT-F26E_BND01A06 / Bland Creek / North shore York R west of Sassafras. Estuarine portion of creek, from the tidal limit to mouth. CBP segment YRKMH. Conditionally approved condemnation #048-128S90 20200715.	4A	Dissolved Oxygen	2006	L	0.051
VAT-F26E_CTC01A06 / Carter Creek / Located in York County near Skimino. From estuarine/riverine transition to mouth. CBP segment YRKMH. Portion of DSS Restricted condemnation # 050-087B, 20200815.	4A	Dissolved Oxygen	2006	L	0.025
VAT-F26E_FER01A08 / Ferry Creek / South shore trib to York R. SW of West Point. Estuarine portion of creek. From dam to confluence with York River. CBP segment YRKMH. Portion of DSS shellfish ADMIN condemnation # 049-004 A (effective 7/15/2020).	4A	Dissolved Oxygen	2006	L	0.004

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_FOX01A06 / Fox Creek / North shore trib to York River. Located southeast of Allmondsville in Gloucester Co. From estuarine/riverine transition to mouth. CBP segment YRKMH. DSS condemnation # 047-072A (effective 20180815).	4A	Dissolved Oxygen	2006	L	0.016
VAT-F26E_HCK01A04 / Hockley Creek / North shore York R NW of Belleview. Estuarine portion of creek. CBP segment YRKMH. Portion of DSS condemnation # 049-004C (effective 7/15/2020).	4A	Dissolved Oxygen	2006	L	0.055
VAT-F26E_JNS01A00 / Jones Creek / NW of Clay Bank, between Rts 618 & 616. Portion of CBP segment YRKMH. Described in DSS shellfish direct harvesting condemnation # 047-072B (effective 20180815) and conditionally approved condemnation #047-072 (effective date 20180815).	4A	Dissolved Oxygen	2006	L	0.051
VAT-F26E_PHB01A00 / Philbates Creek / South shore trib to York R. NW of Belleview. Estuarine portion of creek. From dam to confluence with York River. CBP segment YRKMH. VDH-DSS #049-009 shellfish Conditional Approval (effective 20200715).	4A	Dissolved Oxygen	2006	L	0.013
VAT-F26E_PTK01A00 / Poropotank River / North shore of York River near Purtan Island. Forms boundary of King and Queen/Gloucester Co. From end of tidal waters downstream to end of DSS condemnation # 048-128A, 7/15/2020. CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	0.451
VAT-F26E_PTK02A08 / Morris Bay at mouth of Poropotank River / From end of the upstream DSS condemnation downstream to the mouth. CBP segment YRKMH. DSS shellfish direct harvesting OPEN condemnation # 048-128 (effective date 20200715).	4A	Dissolved Oxygen	2006	L	0.474
VAT-F26E_PTN01A08 / Purtan & Leigh Creeks / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay. CBP segment YRKMH. DSS shellfish Open condemnation # 048-128 (effective 20200715).	4A	Dissolved Oxygen	2006	L	0.098
VAT-F26E_PTN02A20 / Purtan Creek / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay just prior to the formation of the mouth. CBP segment YRKMH. DSS shellfish Conditionally Approved -Condemnation # 048-128 S164 (effective 20200715).	4A	Dissolved Oxygen	2006	L	0.089
VAT-F26E_QEN01A02 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH. Split in 2012 cycle.	4A	Dissolved Oxygen	1998	L	0.296

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_QEN01B12 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of DSS shellfish condemnation # 051-035 (20180814). downstream to mouth. CBP segment YRKMH.	4A	Dissolved Oxygen	1998	L	0.136
VAT-F26E_RBN01A08 / Robinson Creek / North shore York R SE of West Point Municipal Airport. Estuarine portion of creek. CBP segment YRKMH. Part of VDH-DSS Open condemnation 049-004 (effective 20200715)	4A	Dissolved Oxygen	2006	L	0.012
VAT-F26E_SKM01A00 / Skimino Creek / North of Skimino Farms. Boundary of James City/York Co. From estuarine/riverine transition (dam at Barlows Pond, Rt 604) to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-087 A (effective 20200815).	4A	Dissolved Oxygen	2006	L	0.174
VAT-F26E_SND01A08 / Sandy Creek / North shore York R near Allmondsville. Estuarine portion of creek, from the tidal limit to mouth. CBP segment YRKMH. DSS (OPEN) shellfish direct harvesting condemnation # 049-004, 20200715.	4A	Dissolved Oxygen	2006	L	0.007
VAT-F26E_TSK01A00 / Taskinas Creek / West of Purtan Island, south of Croaker Landing. From end of tidal waters downstream to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-073 B (effective 20200815).	4A	Dissolved Oxygen	2006	L	0.026
VAT-F26E_WRE01A00 / Ware Creek / South of Terrapin Pt., W of Purtan Island. From end of tidal waters downstream to mouth; includes piece of York SF Cond, CBP segment YRKMH. DSS shellfish condemnation # 050-073 A (effective 20200815).	4A	Dissolved Oxygen	2006	L	0.133
VAT-F26E_YRK01A04 / York River / York River at Goalders Creek downstream to the boundary of DSS OPEN condemnation # 049-004 (effective 20200715). CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	3.962
VAT-F26E_YRK01B10 / York River / Start of York River at West Point (RM 32.0) downstream to the boundary of ADMIN COND # 049-004 A (effective 7/15/2020), approx. Goff Point . CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	1.086
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049-004 C, 7/15/2020. CB Seg - YRKMH.	4A	Dissolved Oxygen	2006	L	0.029
VAT-F26E_YRK01D12 / York River / Portion of York River within VDH Seasonal Cond 0049-004 effective date 20200715 YRKMH	4A	Dissolved Oxygen	2006	L	0.042

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 7/15/2020 . CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	0.457
VAT-F26E_YRK02A14 / York River (Lower Middle MSN) / Segment starts south of New Kent and James City Boundary and extends downstream to the MSN boundary near Mt. Folly/Poropotank Bay. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	4A	Dissolved Oxygen	2006	L	2.680
VAT-F26E_YRK02E20 / York River (lower middle) / York River from Goff Point (end of Restricted-Condemnation) to Goalders Creek. VDH new Conditionally Approved condemnation 20200715. CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	2.125
VAT-F26E_YRK03A00 / York River (Lower Middle) / Segment starts at end of MSN boundary near Mt. Folly/Poropotank Bay and extends downstream to the mesohaline/polyhaline boundary. CBP segment YRKMH. Open DSS shellfish direct harvesting condemnation present (effective date 20200715)	4A	Dissolved Oxygen	2006	L	20.372
VAT-F26E_YRK03B12 / York River (Lower Middle) / Portion of York River at Carter Creek north of Camp Peary. Within VDH-DSS Open condemnation-type #049-004 , 20200715. CB segment YRKMH.	4A	Dissolved Oxygen	2006	L	0.023
VAT-F26E_ZZZ01A00 / Unsegmented estuaries in F26E / Non-segmented areas of F26E (N shore York R. trib SW of Gressit) within MSN area. CBP segment YRKMH. DSS (OPEN) shellfish direct harvesting condemnation # 049-004 (effective 20200715)	4A	Dissolved Oxygen	2006	L	0.008
VAT-F26E_ZZZ01B06 / Unsegmented estuaries in F26E / Non-segmented areas of F26E (N shore York R. tribs, upstream of Poropotank R.) below MSN boundary. CBP segment YRKMH. DSS shellfish direct harvesting Open condemnation #049-004 (effective date 20200715).	4A	Dissolved Oxygen	2006	L	0.072
VAT-F26E_ZZZ02A06 / Unsegmented estuaries in F26E / Non-segmented areas within VDH-DSS OPEN condemnation 049-004 (effective 20200715). Includes Goalders Creek. CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	0.038
VAT-F26E_ZZZ02B18 / Unsegmented SF Condemned estuaries in F26E / Non-segmented areas within VDH-DSS Admin-Condemnation 049-004 A (effective 20200715). CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	0.043

York Mesohaline

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	34.76		

York Mesohaline

Migratory Fish Spawning and Nursery	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	12.085		

York Mesohaline

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	34.76		

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); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

York River Basin

Cause Group Code: YRKMH-EBEN-BAY Adams Creek - Upper and the lower York River

Cause Location: This cause encompasses upper portions of Adams Creek and a portion of the lower York River.

Cause City/County: Gloucester County; King And Queen County; King William County; New Kent County

Use(s): Aquatic Life

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

Cause Description: The Aquatic Life Use is impaired for the benthic BIBI assessment for the YRKMHa in the 2022 IR. The 2020 IR cycle is the initial list date for the estuarine bioassessment.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_ADM01A00 / Adams Creek-Upper / Eastern shore of York River near Purtan Island. CBP segment YRKMH. DSS shellfish restricted condemnation and Conditionally Approved # 048-128B (effective 07/15/2020).	5A	Estuarine Bioassessments	2020	L	0.116
VAT-F26E_ADM01B12 / Adams Creek / Eastern shore of York River near Purtan Island. CBP segment YRKMH. Portion of 1998 impairment open in DSS shellfish condemnation # 048-128 (effective 7/15/2020).	5A	Estuarine Bioassessments	2022	L	0.072
VAT-F26E_PTN01A08 / Purtan & Leigh Creeks / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay. CBP segment YRKMH. DSS shellfish Open condemnation # 048-128 (effective 20200715).	5A	Estuarine Bioassessments	2022	L	0.098
VAT-F26E_YRK02E20 / York River (lower middle) / York River from Goff Point (end of Restricted-Condemnation) to Goalders Creek. VDH new Conditionally Approved condemnation 20200715. CBP segment YRKMH.	5A	Estuarine Bioassessments	2018	L	2.125

Adams Creek - Upper and the lower York River

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.41		

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); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

York River Basin

Cause Group Code: YRKMH-SAV-BAY York Mesohaline

Cause Location: The York mesohaline segment, including the applicable portions of the Pamunkey and Mattaponi Rivers.

Cause City/County: Gloucester County; James City County; King And Queen County; King William County; New Kent County; Williamsburg; York County

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

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

Cause Description: During the 2006 cycle, the Chesapeake Bay water quality standards were adopted. The mesohaline York segment (which includes the mouths of the Pamunkey and Mattaponi Rivers) fails the Shallow Water Subuse's submerged aquatic vegetation (SAV) acreage requirements. There is insufficient data to assess the water clarity acreage criteria.

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

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth YRKMH	4A	Aquatic Plants (Macrophytes)	2006	L	0.398
VAP-F14E_ZZZ03A06 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within YRKMH	4A	Aquatic Plants (Macrophytes)	2006	L	0.077
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004E, 7/15/2020. YRKMH	4A	Aquatic Plants (Macrophytes)	2006	L	0.209
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 7/15/2020 within Mattaponi River mainstem. YRKMH	4A	Aquatic Plants (Macrophytes)	2006	L	0.641
VAP-F25E_ZZZ03A06 / Unsegmented estuaries in F25 / Unsegmented portion of the watershed within SFC 049-004E, 7/15/2020. YRKMH	4A	Aquatic Plants (Macrophytes)	2006	L	0.031
VAT-F26E_ABD01A00 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the end of Shellfish Restricted area. Portion of CBP segment YRKMH. Portion of DSS shellfish direct harvesting condemnation # 047-078 A (effective 7/15/2020).	4A	Aquatic Plants (Macrophytes)	2006	L	0.094
VAT-F26E_ABD01B08 / Aberdeen Creek - Mouth / Southeast of Clay Bank, south of Rt. 631. From the end of TMDL (07) coverage downstream to the mouth. Portion of CBP segment YRKMH. Conditionally Approved shellfish direct harvesting condemnation # 047-078S18 7/15/2020).	4A	Aquatic Plants (Macrophytes)	2006	L	0.010

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_ABD02A20 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the start of Shellfish Admin-Cond. Portion of CBP segment YRKMH. Portion of DSS shellfish Admin-Condemn # 047-078 A (effective 7/15/2020).	4A	Aquatic Plants (Macrophytes)	2006	L	0.011
VAT-F26E_ADM01A00 / Adams Creek-Upper / Eastern shore of York River near Purtan Island. CBP segment YRKMH. DSS shellfish restricted condemnation and Conditionally Approved # 048-128B (effective 07/15/2020).	4A	Aquatic Plants (Macrophytes)	2006	L	0.116
VAT-F26E_ADM01B12 / Adams Creek / Eastern shore of York River near Purtan Island. CBP segment YRKMH. Portion of 1998 impairment open in DSS shellfish condemnation # 048-128 (effective 7/15/2020).	4A	Aquatic Plants (Macrophytes)	2006	L	0.072
VAT-F26E_BAK01A00 / Bakers Creek / North shore York R SE of West Point Municipal Airport & NW of Hockley Cr. Estuarine portion of creek. CBP segment YRKMH. DSS Admin-Condemnation.	4A	Aquatic Plants (Macrophytes)	2006	L	0.039
VAT-F26E_BKS01A08 / Baker Creek / South shore trib to York R. S of Plum Pt. & E of Davis Pond. Estuarine portion of creek with York River. CBP segment YRKMH. DSS Cond 049-004A (20200715)	4A	Aquatic Plants (Macrophytes)	2006	L	0.017
VAT-F26E_BND01A06 / Bland Creek / North shore York R west of Sassafras. Estuarine portion of creek, from the tidal limit to mouth. CBP segment YRKMH. Conditionally approved condemnation #048-128S90 20200715.	4A	Aquatic Plants (Macrophytes)	2006	L	0.051
VAT-F26E_CTC01A06 / Carter Creek / Located in York County near Skimino. From estuarine/riverine transition to mouth. CBP segment YRKMH. Portion of DSS Restricted condemnation # 050-087B, 20200815.	4A	Aquatic Plants (Macrophytes)	2006	L	0.025
VAT-F26E_FER01A08 / Ferry Creek / South shore trib to York R. SW of West Point. Estuarine portion of creek. From dam to confluence with York River. CBP segment YRKMH. Portion of DSS shellfish ADMIN condemnation # 049-004 A (effective 7/15/2020).	4A	Aquatic Plants (Macrophytes)	2006	L	0.004
VAT-F26E_FOX01A06 / Fox Creek / North shore trib to York River. Located southeast of Allmondsville in Gloucester Co. From estuarine/riverine transition to mouth. CBP segment YRKMH. DSS condemnation # 047-072A (effective 20180815).	4A	Aquatic Plants (Macrophytes)	2006	L	0.016
VAT-F26E_HCK01A04 / Hockley Creek / North shore York R NW of Belleview. Estuarine portion of creek. CBP segment YRKMH. Portion of DSS condemnation # 049-004C (effective 7/15/2020).	4A	Aquatic Plants (Macrophytes)	2006	L	0.055

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_JNS01A00 / Jones Creek / NW of Clay Bank, between Rts 618 & 616. Portion of CBP segment YRKMH. Described in DSS shellfish direct harvesting condemnation # 047-072B (effective 20180815) and conditionally approved condemnation #047-072 (effective date 20180815).	4A	Aquatic Plants (Macrophytes)	2006	L	0.051
VAT-F26E_PHB01A00 / Philbates Creek / South shore trib to York R. NW of Belleview. Estuarine portion of creek. From dam to confluence with York River. CBP segment YRKMH. VDH-DSS #049-009 shellfish Conditional Approval (effective 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.013
VAT-F26E_PTK01A00 / Poropotank River / North shore of York River near Purtan Island. Forms boundary of King and Queen/Gloucester Co. From end of tidal waters downstream to end of DSS condemnation # 048-128A, 7/15/2020. CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.451
VAT-F26E_PTK02A08 / Morris Bay at mouth of Poropotank River / From end of the upstream DSS condemnation downstream to the mouth. CBP segment YRKMH. DSS shellfish direct harvesting OPEN condemnation # 048-128 (effective date 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.474
VAT-F26E_PTN01A08 / Purtan & Leigh Creeks / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay. CBP segment YRKMH. DSS shellfish Open condemnation # 048-128 (effective 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.098
VAT-F26E_PTN02A20 / Purtan Creek / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay just prior to the formation of the mouth. CBP segment YRKMH. DSS shellfish Conditionally Approved -Condemnation # 048-128 S164 (effective 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.089
VAT-F26E_QEN01A02 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH. Split in 2012 cycle.	4A	Aquatic Plants (Macrophytes)	2006	L	0.296
VAT-F26E_QEN01B12 / Queen Creek / South shore York River, south of Camp Peary Naval Reservation. From end of DSS shellfish condemnation # 051-035 (20180814). downstream to mouth. CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.136
VAT-F26E_RBN01A08 / Robinson Creek / North shore York R SE of West Point Municipal Airport. Estuarine portion of creek. CBP segment YRKMH. Part of VDH-DSS Open condemnation 049-004 (effective 20200715)	4A	Aquatic Plants (Macrophytes)	2006	L	0.012

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_SKM01A00 / Skimino Creek / North of Skimino Farms. Boundary of James City/York Co. From estuarine/riverine transition (dam at Barlows Pond, Rt 604) to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-087 A (effective 20200815).	4A	Aquatic Plants (Macrophytes)	2006	L	0.174
VAT-F26E_SND01A08 / Sandy Creek / North shore York R near Allmondsville. Estuarine portion of creek, from the tidal limit to mouth. CBP segment YRKMH. DSS (OPEN) shellfish direct harvesting condemnation # 049-004, 20200715.	4A	Aquatic Plants (Macrophytes)	2006	L	0.007
VAT-F26E_TSK01A00 / Taskinas Creek / West of Purtan Island, south of Croaker Landing. From end of tidal waters downstream to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-073 B (effective 20200815).	4A	Aquatic Plants (Macrophytes)	2006	L	0.026
VAT-F26E_WRE01A00 / Ware Creek / South of Terrapin Pt., W of Purtan Island. From end of tidal waters downstream to mouth; includes piece of York SF Cond, CBP segment YRKMH. DSS shellfish condemnation # 050-073 A (effective 20200815).	4A	Aquatic Plants (Macrophytes)	2006	L	0.133
VAT-F26E_YRK01A04 / York River / York River at Goalders Creek downstream to the boundary of DSS OPEN condemnation # 049-004 (effective 20200715). CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	3.962
VAT-F26E_YRK01B10 / York River / Start of York River at West Point (RM 32.0) downstream to the boundary of ADMIN COND # 049-004 A (effective 7/15/2020), approx. Goff Point . CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	1.086
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049-004 C, 7/15/2020. CB Seg - YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.029
VAT-F26E_YRK01D12 / York River / Portion of York River within VDH Seasonal Cond 0049-004 effective date 20200715 YRKMH	4A	Aquatic Plants (Macrophytes)	2006	L	0.042
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 7/15/2020 . CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.457
VAT-F26E_YRK02A14 / York River (Lower Middle MSN) / Segment starts south of New Kent and James City Boundary and extends downstream to the MSN boundary near Mt. Folly/Poropotank Bay. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	4A	Aquatic Plants (Macrophytes)	2006	L	2.680

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_YRK02E20 / York River (lower middle) / York River from Goff Point (end of Restricted-Condemnation) to Goalders Creek. VDH new Conditionally Approved condemnation 20200715. CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	2.125
VAT-F26E_YRK03A00 / York River (Lower Middle) / Segment starts at end of MSN boundary near Mt. Folly/Poropotank Bay and extends downstream to the mesohaline/polyhaline boundary. CBP segment YRKMH. Open DSS shellfish direct harvesting condemnation present (effective date 20200715)	4A	Aquatic Plants (Macrophytes)	2006	L	20.372
VAT-F26E_YRK03B12 / York River (Lower Middle) / Portion of York River at Carter Creek north of Camp Peary. Within VDH-DSS Open condemnation-type #049-004 , 20200715. CB segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.023
VAT-F26E_ZZZ01A00 / Unsegmented estuaries in F26E / Non-segmented areas of F26E (N shore York R. trib SW of Gressit) within MSN area. CBP segment YRKMH. DSS (OPEN) shellfish direct harvesting condemnation # 049-004 (effective 20200715)	4A	Aquatic Plants (Macrophytes)	2006	L	0.008
VAT-F26E_ZZZ01B06 / Unsegmented estuaries in F26E / Non-segmented areas of F26E (N shore York R. tribs, upstream of Poropotank R.) below MSN boundary. CBP segment YRKMH. DSS shellfish direct harvesting Open condemnation #049-004 (effective date 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.072
VAT-F26E_ZZZ02A06 / Unsegmented estuaries in F26E / Non-segmented areas within VDH-DSS OPEN condemnation 049-004 (effective 20200715). Includes Goalders Creek. CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.038
VAT-F26E_ZZZ02B18 / Unsegmented SF Condemned estuaries in F26E / Non-segmented areas within VDH-DSS Admin-Condemnation 049-004 A (effective 20200715). CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.043

York Mesohaline

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	34.76		

York Mesohaline

Shallow-Water Submerged Aquatic Vegetation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	34.76		

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); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

York River Basin

Cause Group Code: YRKPH-DO-BAY Chesapeake Bay segment YRKPH

Cause Location: This cause encompasses the polyhaline portion of the York.

Cause City/County: Gloucester County; York County

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

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

Cause Description: The Aquatic Life and Open-Water Aquatic Life Use is impaired based on failure to meet the dissolved oxygen criteria for Open Water. There is insufficient data to assess the remaining shorter-term dissolved oxygen criteria for these uses. EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_CDB01A00 / Cedarbush Creek - Upper [TMDL-bact] / North shore York River, NW of Catlett Islands. From the end of tidal waters downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH. DSS shellfish direct harvesting condemnation # 047-078 C (effective 20200715).	4A	Dissolved Oxygen	2006	L	0.078
VAT-F27E_CDB02A00 / Cedarbush Creek - Mouth / North shore York River, NW of Catlett Islands. CBP segment YRKPH. Restricted DSS shellfish condemnation # 047-078 C (20200715)	4A	Dissolved Oxygen	2006	L	0.015
VAT-F27E_CDB03A16 / Cedarbush Creek (Mouth) / Mouth of Cedarbush Creek. CBP segment YRKPH. DSS OPEN condemnation # 047-078 (effective 20200715).	4A	Dissolved Oxygen	2006	L	0.090
VAT-F27E_CDB04A18 / UT to Cedarbush Creek / UT at Mouth of Cedarbush Creek. CBP segment YRKPH. Open condemnation # 047-078 (effective 20200715).	4A	Dissolved Oxygen	2006	L	0.029
VAT-F27E_CRT01A00 / Carter Cr. (Gloucester Co.) - Upper portion [TMDL-bact] / North shore York River, north of Catlett Islands. From the end of tidal waters downstream to the end of DSS condemnation 047-078B, 20180815 . Portion of CBP segment YRKPH. Split in 2012 cycle	4A	Dissolved Oxygen	2006	L	0.180
VAT-F27E_CRT02A00 / Carter Cr. (Gloucester Co.) - Mouth / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS OPEN shellfish direct harvesting 047-078 (effective date 20200715).	4A	Dissolved Oxygen	2006	L	0.177
VAT-F27E_FEL01A00 / Felgates Creek / South of Pennimon Spit, within Naval Weapons Station. Segment extends from headwaters downstream to mouth. CBP segment YRKPH. DSS Admin condemnation # 051-035 D (effective 8/14/2018)	4A	Dissolved Oxygen	2006	L	0.236

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_IFC01A00 / Indian Field Creek / Southeast of Pennimon Spit, within Naval Weapons Station. CBP segment YRKPH. DSS condemnation (ADMINISTRATIVE) # 051-040 A (effective 20080618).	4A	Dissolved Oxygen	2006	L	0.108
VAT-F27E_KNG01A02 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to end of DSS condemnation # 051-035C, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	4A	Dissolved Oxygen	2006	L	0.128
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.220
VAT-F27E_KNG03A20 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to halfway through DSS Open condemnation-type # 051-035, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	4A	Dissolved Oxygen	2006	L	0.072
VAT-F27E_POP01A16 / Poplar Creek / Entirety of Poplar Creek. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.146
VAT-F27E_PRN01A00 / Perrin River - Upper / North shore York River near Cuba Island. Described in DSS Restricted condemnation # 046-081 B and C (effective 20200915). CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.052
VAT-F27E_PRN01C12 / Perrin River - Upper / North shore York River near Cuba Island. Portion of DSS Restricted-Condemnation 046-081, 20180906. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.030
VAT-F27E_PRN02A00 / Perrin River - Lower / North shore York River near Cuba Island. CBP segment YRKPH. Shellfishing Use Not Applicable - Admin. Condemned - DSS Cond # 046-081A, 20200915	4A	Dissolved Oxygen	2006	L	0.057
VAT-F27E_PRN02B12 / Perrin River - Lower / North shore York River near Cuba Island. CBP segment YRKPH. Shellfishing Use Not Applicable - Admin. Condemned - DSS Cond # 046-081A, 20200915	4A	Dissolved Oxygen	2006	L	0.048
VAT-F27E_PRN03A22 / Eastern tributary of Perrin River / Eastern tributary of Perrin River, Shellfish Admin Restricted cond #046-081 (effective 20200915)	4A	Dissolved Oxygen	2006	L	0.050

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_SRH01A00 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northeast branch of Sarah Creek near Guinea Neck. DSS OPEN #046-052 (20200915). CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.110
VAT-F27E_SRH01B10 / Sarah Creek - Northeast Branch, Upper / North shore trib to York River near Gloucester Point. Segment includes north branch off of the northeast branch of Sarah Creek. CBP segment YRKPH. Part of DSS condemnation # 046-052 B, 20200915.	4A	Dissolved Oxygen	2010	L	0.029
VAT-F27E_SRH01D14 / Sarah Creek / North shore trib of York River near Gloucester Point. Segment extends from end of Restricted SF Cond 046-052 to end of TMDL area near Rt 642. CBP segment YRKPH. DSS restricted condemnation # 046-052 A (effective 20200915).	4A	Dissolved Oxygen	2010	L	0.062
VAT-F27E_SRH02A08 / Sarah Creek - Lower / North shore trib to York River near Gloucester Point. End of TMDL study area to mouth. CBP segment YRKPH. DSS seasonal condemnation # 046-052 M1 (effective 20200915).	4A	Dissolved Oxygen	2008	L	0.026
VAT-F27E_SRH02B16 / Sarah Creek - Northeast Branch, Middle / North shore York River near Gloucester Point. Mainstem and tribs to the Northeast Branch. CBP segment YRKPH. DSS Open condemnation # 046-052 D (effective 09/15/2020).	4A	Dissolved Oxygen	2010	L	0.021
VAT-F27E_SRH03A20 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northern branch of Sarah Creek near Guinea Neck. DSS Restricted-Condemnation #046-052 C (20200915). CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.003
VAT-F27E_SRW01A14 / Northwest Branch Sarah Creek / North shore York River near Gloucester Point. Segment extends from headwaters north of Rt 641 downstream to mouth of Northwest Br. DSS Restricted condemnation # 046-052 A (effective 20200915). CBP segment YRKPH.	4A	Dissolved Oxygen	2010	L	0.193
VAT-F27E_TMB01A00 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of tidal waters downstream to the end of VDH-DSS shellfish direct harvesting Restricted condemnation #047-003 A (effective 20200715) and conditionally approved #047-003 S16 (effective date 20200715).	4A	Dissolved Oxygen	2006	L	0.139

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_TMB01B12 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of DSS shellfish Open condemnation # 047-003 (effective 20200715). downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.077
VAT-F27E_TMB02A08 / Timberneck Creek - Middle / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS (OPEN) shellfish direct harvesting condemnation # 047-003 (effective 20200715).	4A	Dissolved Oxygen	2008	L	0.034
VAT-F27E_TMB03A08 / Timberneck Creek - Mouth / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation (effective date 20200715).	4A	Dissolved Oxygen	2008	L	0.188
VAT-F27E_WOR01A08 / Wormley Creek / South shore York River near Amoco facility southeast of Gloucester Point. CBP segment YRKPH. Upstream portion of DSS (ADMINISTRATIVE) condemnation # 052-006 A (effective 2018-05-03).	4A	Dissolved Oxygen	2008	L	0.283
VAT-F27E_YRK01A00 / York River - Lower Middle / The polyhaline boundary downstream to line from Roosevelt Pond N to Mumfort Islands at RM 7.49, excluding otherwise segmented DSS shellfish condemnation areas. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation #049-004 (effective date 20200715). YRKPH	4A	Dissolved Oxygen	2006	L	10.393
VAT-F27E_YRK01B00 / York R - DSS AdminCond @ Cheatham Annex/Camp Peary / Segment adjacent to Cheatham Annex, VDH-DSS condemnation 051-035 B (effective 8/14/2018) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.260
VAT-F27E_YRK01C00 / York R - DSS AdminCond @ Naval Weapons Station / Segment adjacent to Yorktown Naval Weapons Sta., VDH-DSS condemnation 051-040 B (effective 20080618) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.236
VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation #052-006 (effective date 20180503).	4A	Dissolved Oxygen	2006	L	0.024
VAT-F27E_YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-052 (effective 20200915).	4A	Dissolved Oxygen	2006	L	0.018

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_YRK02A00 / York River - Lower / Segment starts at line across river from Roosevelt Pond to Mumfort Islands (RM 7.49), downstream to mouth (RM 0.0) near Thoroughfare Creek. CBP segment YRKPH. No DSS shellfish condemnation.	4A	Dissolved Oxygen	2004	L	11.657
VAT-F27E_YRK02B00 / York R - DSS AdminCond @ HRSD York STP/Amoco / Described in VDH-DSS (ADMINISTRATIVE) shellfish condemnation 052-006 B&C (effective 20180503) adjacent Wormley Cr., HRSD STP & power plant and refinery. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.508
VAT-F27E_YRK02C00 / York River - DSS AdminCond @ Wormley to USCG / Segment on Yorktown side (south shore) of river. DSS (ADMINISTRATIVE) shellfish condemnation # 052-006 A (effective 2018-05-03) (portion in York R), from Wormley Cr. to USCG Station, S shore to mid-channel. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	2.698
VAT-F27E_YRK02D12 / York River - Lower / Portion of York River within VDH-DSS seasonal condemnation 046-052M1, effective date 20200915. CBP segment YRKPH.	4A	Dissolved Oxygen	2004	L	0.139
VAT-F27E_ZZZ01A00 / Unsegmented estuaries in F27E / Non-segmented estuarine areas of F27E - Lower York River. Primarily north shore tribs between Cedarbush and Timberneck Creeks. CBP segment YRKPH. DSS shellfish harvesting Open condemnations 046-081 (effective date 20200915) and 049-004 (effective date 20200715)	4A	Dissolved Oxygen	2006	L	0.062

Chesapeake Bay segment YRKPH

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	28.874		

Chesapeake Bay segment YRKPH

Deep-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	27.814		

Chesapeake Bay segment YRKPH

Open-Water Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Water Type:	28.874		

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); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

York River Basin

Cause Group Code: YRKPH-EBEN-BAY York River - BIBI YRKPHa segments

Cause Location: This cause encompasses the polyhaline BIBI segment YRKPHa portions of the mainstem York River.

Cause City/County: Gloucester County; York County

Use(s): Aquatic Life

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

Cause Description: During the 2010 cycle, the York Polyhaline estuary failed the Aquatic Life Use due to the Chesapeake Bay B-IBI. The TMDL was due in 2022. The benthics are acceptable during the 2012 cycle, therefore it was delisted. There was insufficient data for benthics in 2014 and 2016. In the 2018/2020 IR cycle, the Benthic assessment was impaired for YRKPHa. YRKPHa is impaired for the 2022 IR cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.	5A	Estuarine Bioassessments	2010	L	0.220
VAT-F27E_PRN03A22 / Eastern tributary of Perrin River / Eastern tributary of Perrin River, Shellfish Admin Restricted cond #046-081 (effective 20200915)	5A	Estuarine Bioassessments	2022	L	0.050
VAT-F27E_SRH02A08 / Sarah Creek - Lower / North shore trib to York River near Gloucester Point. End of TMDL study area to mouth. CBP segment YRKPH. DSS seasonal condemnation # 046-052 M1 (effective 20200915).	5A	Estuarine Bioassessments	2022	L	0.026
VAT-F27E_TMB03A08 / Timberneck Creek - Mouth / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation (effective date 20200715).	5A	Estuarine Bioassessments	2010	L	0.188
VAT-F27E_YRK01A00 / York River - Lower Middle / The polyhaline boundary downstream to line from Roosevelt Pond N to Mumfort Islands at RM 7.49, excluding otherwise segmented DSS shellfish condemnation areas. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation #049-004 (effective date 20200715). YRKPH	5A	Estuarine Bioassessments	2004	L	10.393
VAT-F27E_YRK01B00 / York R - DSS AdminCond @ Cheatham Annex/Camp Peary / Segment adjacent to Cheatham Annex, VDH-DSS condemnation 051-035 B (effective 8/14/2018) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	5A	Estuarine Bioassessments	2004	L	0.260

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_YRK01C00 / York R - DSS AdminCond @ Naval Weapons Station / Segment adjacent to Yorktown Naval Weapons Sta., VDH-DSS condemnation 051-040 B (effective 20080618) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	5A	Estuarine Bioassessments	2004	L	0.236
VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation #052-006 (effective date 20180503).	5A	Estuarine Bioassessments	2006	L	0.024
VAT-F27E_YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-052 (effective 20200915).	5A	Estuarine Bioassessments	2006	L	0.018
VAT-F27E_YRK02A00 / York River - Lower / Segment starts at line across river from Roosevelt Pond to Mumfort Islands (RM 7.49), downstream to mouth (RM 0.0) near Thoroughfare Creek. CBP segment YRKPH. No DSS shellfish condemnation.	5A	Estuarine Bioassessments	2004	L	11.657
VAT-F27E_YRK02B00 / York R - DSS AdminCond @ HRSD York STP/Amoco / Described in VDH-DSS (ADMINISTRATIVE) shellfish condemnation 052-006 B&C (effective 20180503) adjacent Wormley Cr., HRSD STP & power plant and refinery. CBP segment YRKPH.	5A	Estuarine Bioassessments	2004	L	0.508
VAT-F27E_YRK02C00 / York River - DSS AdminCond @ Wormley to USCG / Segment on Yorktown side (south shore) of river. DSS (ADMINISTRATIVE) shellfish condemnation # 052-006 A (effective 2018-05-03) (portion in York R), from Wormley Cr. to USCG Station, S shore to mid-channel. CBP segment YRKPH.	5A	Estuarine Bioassessments	2004	L	2.698
VAT-F27E_YRK02D12 / York River - Lower / Portion of York River within VDH-DSS seasonal condemnation 046-052M1, effective date 20200915. CBP segment YRKPH.	5A	Estuarine Bioassessments	2018	L	0.139
VAT-F27E_ZZZ01A00 / Unsegmented estuaries in F27E / Non-segmented estuarine areas of F27E - Lower York River. Primarily north shore tribs between Cedarbush and Timberneck Creeks. CBP segment YRKPH. DSS shellfish harvesting Open condemnations 046-081 (effective date 20200915) and 049-004 (effective date 20200715)	5A	Estuarine Bioassessments	2018	L	0.062

York River - BIBI YRKPHa segments

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	26.478		

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); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

York River Basin

Cause Group Code: YRKPH-SAV-BAY Chesapeake Bay segment YRKPH

Cause Location: This cause encompasses the polyhaline portion of the York.

Cause City/County: Gloucester County; York County

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

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

Cause Description: The Aquatic Life Use Aquatic Plants [Macrophytes] use is impaired for the 2016 cycle based on not meeting the SAV criteria. EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_CDB01A00 / Cedarbush Creek - Upper [TMDL-bact] / North shore York River, NW of Catlett Islands. From the end of tidal waters downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH. DSS shellfish direct harvesting condemnation # 047-078 C (effective 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.078
VAT-F27E_CDB02A00 / Cedarbush Creek - Mouth / North shore York River, NW of Catlett Islands. CBP segment YRKPH. Restricted DSS shellfish condemnation # 047-078 C (20200715)	4A	Aquatic Plants (Macrophytes)	2006	L	0.015
VAT-F27E_CDB03A16 / Cedarbush Creek (Mouth) / Mouth of Cedarbush Creek. CBP segment YRKPH. DSS OPEN condemnation # 047-078 (effective 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.090
VAT-F27E_CDB04A18 / UT to Cedarbush Creek / UT at Mouth of Cedarbush Creek. CBP segment YRKPH. Open condemnation # 047-078 (effective 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.029
VAT-F27E_CRT01A00 / Carter Cr. (Gloucester Co.) - Upper portion [TMDL-bact] / North shore York River, north of Catlett Islands. From the end of tidal waters downstream to the end of DSS condemnation 047-078B, 20180815 . Portion of CBP segment YRKPH. Split in 2012 cycle	4A	Aquatic Plants (Macrophytes)	2006	L	0.180
VAT-F27E_CRT02A00 / Carter Cr. (Gloucester Co.) - Mouth / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS OPEN shellfish direct harvesting 047-078 (effective date 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.177
VAT-F27E_FEL01A00 / Felgates Creek / South of Pennimon Spit, within Naval Weapons Station. Segment extends from headwaters downstream to mouth. CBP segment YRKPH. DSS Admin condemnation # 051-035 D (effective 8/14/2018)	4A	Aquatic Plants (Macrophytes)	2006	L	0.236
VAT-F27E_IFC01A00 / Indian Field Creek / Southeast of Pennimon Spit, within Naval Weapons Station. CBP segment YRKPH. DSS condemnation (ADMINISTRATIVE) # 051-040 A (effective 20080618).	4A	Aquatic Plants (Macrophytes)	2006	L	0.108

(continued)

Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_KNG01A02 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to end of DSS condemnation # 051-035C, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	4A	Aquatic Plants (Macrophytes)	2006	L	0.128
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.220
VAT-F27E_KNG03A20 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to halfway through DSS Open condemnation-type # 051-035, 8/14/2018. CBP segment YRKPH. Shortened in 2012 cycle.	4A	Aquatic Plants (Macrophytes)	2006	L	0.072
VAT-F27E_POP01A16 / Poplar Creek / Entirety of Poplar Creek. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.146
VAT-F27E_PRN01A00 / Perrin River - Upper / North shore York River near Cuba Island. Described in DSS Restricted condemnation # 046-081 B and C (effective 20200915). CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.052
VAT-F27E_PRN01C12 / Perrin River - Upper / North shore York River near Cuba Island. Portion of DSS Restricted-Condemnation 046-081, 20180906. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.030
VAT-F27E_PRN02A00 / Perrin River - Lower / North shore York River near Cuba Island. CBP segment YRKPH. Shellfishing Use Not Applicable - Admin. Condemned - DSS Cond # 046-081A, 20200915	4A	Aquatic Plants (Macrophytes)	2006	L	0.057
VAT-F27E_PRN02B12 / Perrin River - Lower / North shore York River near Cuba Island. CBP segment YRKPH. Shellfishing Use Not Applicable - Admin. Condemned - DSS Cond # 046-081A, 20200915	4A	Aquatic Plants (Macrophytes)	2006	L	0.048
VAT-F27E_PRN03A22 / Eastern tributary of Perrin River / Eastern tributary of Perrin River, Shellfish Admin Restricted cond #046-081 (effective 20200915)	4A	Aquatic Plants (Macrophytes)	2006	L	0.050
VAT-F27E_SRH01A00 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northeast branch of Sarah Creek near Guinea Neck. DSS OPEN #046-052 (20200915). CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.110

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_SRH01B10 / Sarah Creek - Northeast Branch, Upper / North shore trib to York River near Gloucester Point. Segment includes north branch off of the northeast branch of Sarah Creek. CBP segment YRKPH. Part of DSS condemnation # 046-052 B, 20200915.	4A	Aquatic Plants (Macrophytes)	2006	L	0.029
VAT-F27E_SRH01D14 / Sarah Creek / North shore trib of York River near Gloucester Point. Segment extends from end of Restricted SF Cond 046-052 to end of TMDL area near Rt 642. CBP segment YRKPH. DSS restricted condemnation # 046-052 A (effective 20200915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.062
VAT-F27E_SRH02A08 / Sarah Creek - Lower / North shore trib to York River near Gloucester Point. End of TMDL study area to mouth. CBP segment YRKPH. DSS seasonal condemnation # 046-052 M1 (effective 20200915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.026
VAT-F27E_SRH02B16 / Sarah Creek - Northeast Branch, Middle / North shore York River near Gloucester Point. Mainstem and tribs to the Northeast Branch. CBP segment YRKPH. DSS Open condemnation # 046-052 D (effective 09/15/2020).	4A	Aquatic Plants (Macrophytes)	2006	L	0.021
VAT-F27E_SRH03A20 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northern branch of Sarah Creek near Guinea Neck. DSS Restricted-Condemnation #046-052 C (20200915). CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.003
VAT-F27E_SRW01A14 / Northwest Branch Sarah Creek / North shore York River near Gloucester Point. Segment extends from headwaters north of Rt 641 downstream to mouth of Northwest Br. DSS Restricted condemnation # 046-052 A (effective 20200915). CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.193
VAT-F27E_TMB01A00 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of tidal waters downstream to the end of VDH-DSS shellfish direct harvesting Restricted condemnation #047-003 A (effective 20200715) and conditionally approved #047-003 S16 (effective date 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.139
VAT-F27E_TMB01B12 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of DSS shellfish Open condemnation # 047-003 (effective 20200715). downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.077

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_TMB02A08 / Timberneck Creek - Middle / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS (OPEN) shellfish direct harvesting condemnation # 047-003 (effective 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.034
VAT-F27E_TMB03A08 / Timberneck Creek - Mouth / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation (effective date 20200715).	4A	Aquatic Plants (Macrophytes)	2006	L	0.188
VAT-F27E_WOR01A08 / Wormley Creek / South shore York River near Amoco facility southeast of Gloucester Point. CBP segment YRKPH. Upstream portion of DSS (ADMINISTRATIVE) condemnation # 052-006 A (effective 2018-05-03).	4A	Aquatic Plants (Macrophytes)	2006	L	0.283
VAT-F27E_YRK01A00 / York River - Lower Middle / The polyhaline boundary downstream to line from Roosevelt Pond N to Mumfort Islands at RM 7.49, excluding otherwise segmented DSS shellfish condemnation areas. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation #049-004 (effective date 20200715). YRKPH	4A	Aquatic Plants (Macrophytes)	2006	L	10.393
VAT-F27E_YRK01B00 / York R - DSS AdminCond @ Cheatham Annex/Camp Peary / Segment adjacent to Cheatham Annex, VDH-DSS condemnation 051-035 B (effective 8/14/2018) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.260
VAT-F27E_YRK01C00 / York R - DSS AdminCond @ Naval Weapons Station / Segment adjacent to Yorktown Naval Weapons Sta., VDH-DSS condemnation 051-040 B (effective 20080618) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.236
VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. DSS shellfish direct harvesting Open condemnation #052-006 (effective date 20180503).	4A	Aquatic Plants (Macrophytes)	2006	L	0.024
VAT-F27E_YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-052 (effective 20200915).	4A	Aquatic Plants (Macrophytes)	2006	L	0.018
VAT-F27E_YRK02A00 / York River - Lower / Segment starts at line across river from Roosevelt Pond to Mumfort Islands (RM 7.49), downstream to mouth (RM 0.0) near Thoroughfare Creek. CBP segment YRKPH. No DSS shellfish condemnation.	4A	Aquatic Plants (Macrophytes)	2006	L	11.657

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Assessment Unit / Water Name / Location Desc.	Cause Category	Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_YRK02B00 / York R - DSS AdminCond @ HRSD York STP/Amoco / Described in VDH-DSS (ADMINISTRATIVE) shellfish condemnation 052-006 B&C (effective 20180503) adjacent Wormley Cr., HRSD STP & power plant and refinery. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.508
VAT-F27E_YRK02C00 / York River - DSS AdminCond @ Wormley to USCG / Segment on Yorktown side (south shore) of river. DSS (ADMINISTRATIVE) shellfish condemnation # 052-006 A (effective 2018-05-03) (portion in York R), from Wormley Cr. to USCG Station, S shore to mid-channel. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	2.698
VAT-F27E_YRK02D12 / York River - Lower / Portion of York River within VDH-DSS seasonal condemnation 046-052M1, effective date 20200915. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.139
VAT-F27E_ZZZ01A00 / Unsegmented estuaries in F27E / Non-segmented estuarine areas of F27E - Lower York River. Primarily north shore tribs between Cedarbush and Timberneck Creeks. CBP segment YRKPH. DSS shellfish harvesting Open condemnations 046-081 (effective date 20200915) and 049-004 (effective date 20200715)	4A	Aquatic Plants (Macrophytes)	2006	L	0.062

Chesapeake Bay segment YRKPH

Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	28.874		

Chesapeake Bay segment YRKPH

Shallow-Water Submerged Aquatic Vegetation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	28.874		

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); Source Unknown; Sources Outside State Jurisdiction or Borders; Wet Weather Discharges (Non-Point Source); Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)