



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01E-03-PCB

James River and Various Tributaries

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

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

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

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

During the 2004 cycle, a VDH Fish Consumption Restriction was issued from the fall line to Flowerdew Hundred and the segment was adjusted slightly to match the restriction. In addition, in the 2004 cycle, the Chickahominy River from Walkers Dam to Diascund Creek was assessed as not supporting of the Fish Consumption Use because the DEQ screening value for PCBs was exceeded in 3 species during sampling in 2001.

The VDH restriction was extended on 12/13/2004 to stretch from the I-95 bridge downstream to the Hampton Roads Bridge Tunnel and include the tidal portions of the following tributaries:

- Appomattox River up to Lake Chesdin Dam
- Bailey Creek up to Route 630
- Bailey Bay
- Chickahominy River up to Walkers Dam
- Skiffes Creek up to Skiffes Creek Dam
- Pagan River and its tributary Jones Creek
- Chuckatuck Creek
- Nansemond River and its tributaries Bennett Creek and Star Creek
- Hampton River
- Willoughby Bay and the Elizabeth R. system (Western, Eastern, and Southern Branches and Lafayette R.) and tributaries St. Julian Creek, Deep Creek, and Broad Creek

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

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

PCB sampling in 2012 showed exceedances in 4 species at 2-JMS087.01, 3 species at 2-JMS097.77, 4 species at 2-JMS110.00, 2 species at 2-PTH000.23, 2 species at 2-BLY000.65, 3 species at 2-JMS074.44, 2 species at 2-JMS066.88, 2 species at 2-JMS057.69, 3 species at 2-JMS052.67, among others.

James River and Various Tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:	248.079		7.51

Sources:

- | | | |
|------------------------|----------------|--|
| Contaminated Sediments | Source Unknown | Sources Outside State
Jurisdiction or Borders |
|------------------------|----------------|--|



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01L-01-DO

Falling Creek Reservoir

Location: Falling Creek Reservoir

City / County: Chesterfield Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

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

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

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

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

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

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

There was no new data for the 2014 cycle

During the 2016 cycle the segment was impaired for DO with a violation rate of 11/43 at station 2-FAC003.85.

Falling Creek Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:		88.37	

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-01-PCB Goode Creek

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

City / County: Richmond City

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Water Column / 5A

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

Goode Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Water Column - Total Impaired Size by Water Type:			1.21

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-02-PCB Almond Creek

Location: Almond Creek from its headwaters to its mouth.

City / County: Henrico Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Water Column / 5A

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

Almond Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Water Column - Total Impaired Size by Water Type:			2.10

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-02-PH

XVO and XVP - Almond Creek, UT

Location: Unnamed tributaries of Almond Creek.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

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

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

During the 2012 cycle, the exceedance rates were as follows:

2-XVO000.10 - 8/27 (2008 cycle)

2-XVO000.16 - 0/2

2-XVP000.04 - 3/5

XVO and XVP - Almond Creek, UT

Aquatic Life

Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
------------------------	----------------------	------------------

pH - Total Impaired Size by Water Type:	0.82
---	-------------

Sources:

Landfills

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-04-DO **Falling Creek**

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

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

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

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

Falling Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			0.98

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-05-PH

Kingsland Creek

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

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

During the 2006 cycle, Kingsland Creek was assessed as not supporting the Aquatic Life Use based on pH exceedances at the Route 1 bridge (2CKSL002.62). The exceedance rate was 3/11 in the 2008 cycle. No additional data has been collected.

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

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

Kingsland Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			8.54

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-06-PCB

Gillies Creek

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

City / County: Henrico Co. Richmond City

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Water Column / 5A

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

Gillies Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Water Column - Total Impaired Size by Water Type:			5.88

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-06-PH

Gillies Creek

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

City / County: Henrico Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

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

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

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

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-07-DO

Redwater Creek

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

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

Redwater Creek was assessed as impaired of the Aquatic Life Use in the 2010 cycle due to dissolved oxygen exceedances at Route 615 (Coxendale Road.)

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

Redwater Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			2.96

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-09-DO

UT to James River - XPF

Location: Ditch to James River through National Battlefield Park

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

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

2/4 at 0203853010 (James River Trib 5 at West Boundary at Bellwood, VA

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

The downstream station 020853050 (James River Trib 5 at East Boundary) was acceptable. This station is near station 2-XPF-RICH-08-NPS, which also shows acceptable DO levels.

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

Monitoring at station 20XPF-RICH-08-NPS, which is co-located with 2CXBD000.15, was acceptable during the 2016 cycle. However, when the exceedance rates are combined, the segment still fails.

UT to James River - XPF

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Oxygen, Dissolved - Total Impaired Size by Water Type:

0.39

Sources:

Natural Conditions - Water
Quality Standards Use
Attainability Analyses
Needed



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-09-PH

UT to James River - XPF

Location: Ditch to James River through National Battlefield Park

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

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

2/4 at 0203853010 (James River Trib 5 at West Boundary at Bellwood, VA

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

The downstream station 020853050 (James River Trib 5 at East Boundary) was acceptable. This station is near station 2-XPF-RICH-08-NPS, which also has acceptable pH.

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

Monitoring at station 20XPF-RICH-08-NPS, which is co-located with 2CXBD000.15, was acceptable during the 2016 cycle. However, when the exceedance rates are combined, the segment still fails.

UT to James River - XPF

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

0.39

Sources:

Natural Conditions - Water
Quality Standards Use
Attainability Analyses
Needed



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-12-PH

XYI - Coles Run, UT

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

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

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

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

XYI - Coles Run, UT

Aquatic Life

Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
------------------------	----------------------	------------------

pH - Total Impaired Size by Water Type:

0.94

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-15-BEN **Proctors Creek**

Location: The nontidal mainstem of Proctors Creek.

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

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

Benthics have been collected in 2007, 2008, and 2011.

Proctors Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.26

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-21-DO

Great Branch

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

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

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

The exceedance rate fell to 1/10 during the 2016 cycle; however, additional monitoring was conducted at 2-GTB000.46 (2/10). Monitoring at upstream Chesterfield Water Trends station 2-GTB-25-CWT is insufficient for assessment.

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

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G01R-23-PH

XFU - Pocoshock Creek, UT

Location: Headwaters to mouth at Pocoshock Creek

City / County: Chesterfield Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

During the 2016 cycle, the tributary was assessed as impaired of the Aquatic Life Use due to a pH exceedance rate of 2/7 at ACB station 2CXFU-PSC-ACB, which is located off of Walmsley Boulevard.

XFU - Pocoshock Creek, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			3.83

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G02E-04-PCB **James River**

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

City / County: Charles City Co. Chesterfield Co. Henrico Co.

Use(s): Fish Consumption Public Water Supply

Cause(s) /

VA Category: PCB in Water Column / 5A

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

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
James River Fish Consumption			
PCB in Water Column - Total Impaired Size by Water Type:	3.972		
James River Public Water Supply			
PCB in Water Column - Total Impaired Size by Water Type:	3.972		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G02R-03-DO

Johnson Creek Watershed

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

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

Johnson Creek was initially assessed as not supporting the Aquatic Life Use goal during the 2004 cycle based on dissolved oxygen exceedances at Route 827 / Allied Road (2-JOD001.19). The exceedance rate was 3/23 in the 2008 cycle.

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

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

- 0/12 at 2CXBR000.10
- 1/122 at 2CXBR000.68
- 0/12 at 2CXBR001.15
- 4/11 at 2CXBS000.62
- 1/10 at 2CXBS002.85
- 2/12 at 2-JOD001.19
- 0/15 at 2-JOD001.96
- 0/12 at 2-JOD002.69
- 0/12 at 2-JOD003.05
- 1/12 at 2-JOD004.15
- 0/12 at 2-JOD005.04

Johnson Creek Watershed

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Oxygen, Dissolved - Total Impaired Size by Water Type:

16.27

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G02R-03-PH

Johnson Creek Watershed

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

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

Johnson Creek was initially assessed as not supporting the Aquatic Life Use goal during the 2004 cycle based on pH exceedances at Route 827 / Allied Road (2-JOD001.19). During the 2008 cycle, the exceedance rate was 11/23.

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

The segment was extended during 2006 based on monitoring by Chesterfield County. Extensive monitoring was conducted by the DEQ in the 2016 cycle. pH exceedances were widespread.

- 3/12 at 2CXBR000.10
- 4/12 at 2CXBR000.68
- 4/12 at 2CXBR001.15
- 6/11 at 2CXBS000.62
- 7/10 at 2CXBS002.85
- 5/15 at 2-JOD001.19
- 4/15 at 2-JOD001.96
- 1/12 at 2-JOD002.69
- 4/12 at 2-JOD003.05
- 6/12 at 2-JOD004.15
- 2/12 at 2-JOD005.04

Johnson Creek Watershed

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

16.27

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G02R-05-DO **Crewes Channel**

Location: Crewes Channel from its headwaters to its tidal limit

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, Crewes Channel was assessed as not supporting the Aquatic Life Use goal based on dissolved oxygen exceedances at NPS station 2-CCH-RICH-06-NPS, which is located at Route 156.

In the 2016 cycle, the exceedance rate was 7/28 at 2-CCH-RICH-06-NPS; in addition, the exceedance rate was 4/12 at the co-located DEQ station 2-CCH001.54.

Crewes Channel	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			3.24

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G02R-09-DO

Roundabout Creek

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

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

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

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

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G02R-09-PH

Roundabout Creek

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

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

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

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

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G02R-10-PH

XBE - Roundabout Creek, UT

Location: Headwaters to mouth at Roundabout Creek

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

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

XBE - Roundabout Creek, UT

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Aquatic Life

pH - Total Impaired Size by Water Type:

1.43

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

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

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

City / County: Charles City Co. Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

During the 2016 cycle, the upper portion of Turkey Island Creek was assessed as not supporting of the Aquatic Life Use due to a pH violation rate of 5/12 at Carters Mill Road (2-TIC002.69).

Additional monitoring at downstream station 2-TIC002.69 (Carters Mill Road) was acceptable (0/12).

Turkey Island Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			7.03

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03E-01-PCB

Bailey Creek (tidal), Cattail Creek (tidal)

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

City / County: Hopewell City Prince George Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Water Column / 5A

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

Bailey Creek (tidal), Cattail Creek (tidal)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Water Column - Total Impaired Size by Water Type:	0.114		

Sources:

Contaminated Sediments Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03E-01-PH

Bailey Creek (tidal), Cattail Creek (tidal)

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

City / County: Hopewell City Prince George Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

Tidal Bailey Creek was initially considered impaired for pH on the 2004 303(d) list due to high pH measurements at the Hopewell Region Monitoring and Assessment Project's (HERMA) stations.

During the 2016 cycle, the pH exceedance rate at 2-BLY000.65 was 1/46; however, the segment remains listed based on the downstream HERMA stations.

Bailey Creek (tidal), Cattail Creek (tidal)

Aquatic Life

Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
------------------------	----------------------	------------------

pH - Total Impaired Size by Water Type:	0.114
---	--------------

Sources:

Industrial Point Source
Discharge

Municipal Point Source
Discharges

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03E-03-PH

James River

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

City / County: Charles City Co. Hopewell City Prince George Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

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

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

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03L-01-DO

Harrison Lake

Location: Harrison Lake in its entirety.

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

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

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

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

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

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

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

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

Sources:

Changes in Ordinary Stratification and Bottom Water Hypoxia/Anoxia

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03L-01-HG

Harrison Lake

Location: Harrison Lake in its entirety.

City / County: Charles City Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

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

VDH Fish Consumption Advisory for kepone

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

No new data for the 2014 and 2016 cycle

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

Sources:

Atmospheric Deposition -
Toxics

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03L-01-PH

Harrison Lake

Location: Harrison Lake in its entirety.

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

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

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

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

no new data during the 2010 cycle.

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

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

Harrison Lake

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

60.16

Sources:

Natural Conditions - Water
Quality Standards Use
Attainability Analyses
Needed



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03R-02-ALD **Bailey Creek**

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

City / County: Hopewell City Prince George Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: Aldrin / 5A

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

Bailey Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Aldrin - Total Impaired Size by Water Type:			6.47

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03R-02-BEN Bailey Creek

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

City / County: Hopewell City Prince George Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

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

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

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03R-02-PCB **Bailey Creek**

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

City / County: Hopewell City Prince George Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

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

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

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

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03R-03-PCB

Poythress Run

Location: Poythress Run from its headwaters to its tidal limit

City / County: Charles City Co. Hopewell City Prince George Co.

Use(s): Aquatic Life Fish Consumption Wildlife

Cause(s) /

VA Category: PCB in Water Column / 5A

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

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Poythress Run			
Fish Consumption			
PCB in Water Column - Total Impaired Size by Water Type:			1.40

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Poythress Run			
Wildlife			
PCB in Water Column - Total Impaired Size by Water Type:			0.70

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03R-04-PH **West Run**

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

City / County: Charles City Co.

Use(s): Aquatic Life

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

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

During the 2016 cycle, the segment remained impaired (7/15).

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

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03R-05-PCB

XYO - Cattail Creek, UT

Location: The tributary in its entirety.

City / County: Hopewell City

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Water Column / 5A

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

XYO - Cattail Creek, UT

Fish Consumption

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Water Column - Total Impaired Size by Water Type:			0.34

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: **G03R-06-BEN** **XUD - West Run, UT**

Location: The unnamed tributary XUD in its entirety.

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle, the unnamed tributary to West Run was assessed as not supporting the Aquatic Life Use based on an impaired benthic community at 2-XUD000.15, a freshwater probabilistic monitoring station.

XUD - West Run, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.57

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03R-06-DO

Upper West Run / East Run Watershed

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

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

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

- 0/12 (FS) at 2-ETR000.50
- 4/12 at 2-ETR003.00
- 3/12 at 2-SLM001.23
- 3/12 at 2-WER006.35
- 2/12 at 2-WER002.89
- 7/12 at 2-WER004.42
- 4/12 at 2-WER005.35
- 5/12 at 2-XUD000.35

Upper West Run / East Run Watershed	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			45.27

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G03R-06-PH

Upper West Run / East Run Watershed

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

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

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

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

- 5/12 at 2-ETR000.50
- 5/12 at 2-ETR003.00
- 6/12 at 2-SLM001.23
- 1/12 (FS) at 2-WER006.35
- 8/12 at 2-WER002.89
- 7/12 at 2-WER004.42
- 7/12 at 2-WER005.35
- 12/12 at 2-XUD000.35

Upper West Run / East Run Watershed

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

45.27

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: **G04E-02-EBEN** **James River**

Location: The mainstem of the James River within the Oligohaline Estuary.

City / County: Charles City Co. James City Co. Surry Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Estuarine Bioassessments / 5A

The oligohaline portion of the James River is impaired for benthics as determined by the Chesapeake Bay B-IBI study.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Estuarine Bioassessments - Total Impaired Size by Water Type:			20.409

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G04L-01-BAC

Sunken Meadow Pond

Location: Sunken Meadow Pond in its entirety.

City / County: Surry Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

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

Sunken Meadow Pond	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			172.85

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G04L-01-DO

Sunken Meadow Pond

Location: Sunken Meadow Pond in its entirety.

City / County: Surry Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

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

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

Sunken Meadow Pond	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			172.85

Sources:

Dam or Impoundment

Natural Conditions - Water
Quality Standards Use
Attainability Analyses
Needed



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G04R-03-MIREX Bailey Branch

Location: Bailey Branch from the headwaters to its tidal limit.

City / County: Surry Co.

Use(s): Aquatic Life Wildlife

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

During the 2010 cycle, Bailey Branch was assessed as not supporting of the Aquatic Life and Wildlife Uses due to two exceedances of the water quality standard for Mirex in SPMDs at freshwater probabilistic monitoring station 2-BLB002.04.

Bailey Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Wildlife			
Mirex - Total Impaired Size by Water Type:			11.38

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-04-PH

Chickahominy River

Location: The Chickahominy River from the confluence with UT XDD to the confluence with a UT immediately downstream of rivermile 76.59.

City / County: Hanover Co. Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

During the 2010 cycle, the Chickahominy from the headwaters downstream to tributary XDD was assessed as not supporting of the Aquatic Life Use due to a pH violation rate of 3/16 at station 2-CHK079.23, which is located at the Route 33 bridge.

The segment was extended during the 2012 cycle due to a violation rate of 5/36 at 2-CHK076.59, which is located at the Route 625 bridge.

Additional monitoring occurred in the 2014 cycle. The exceedance rates in the original segment were acceptable; however, the 2012 expansion remained impaired. The original upstream portion was partially delisted. The downstream segment remains impaired in the 2016 cycle (7/37 at 2-CHK076.59).

Chickahominy River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			2.30

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-06-DO

Grassy Swamp Creek

Location: Grassy Swamp Creek from the pond at rivermile 0.99 to its mouth.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

Grassy Swamp Creek was assessed as impaired of the Aquatic Life Use in the 2008 cycle due to dissolved oxygen exceedances at 2-GRC000.96, which is located at the Route 660 bridge. The exceedance rate was 19/61 in the 2014 cycle.

Grassy Swamp Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.02

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-07-DO

Chickahominy River, UT (XDD)

Location: The unnamed tributary XDD from its headwaters to the Tysons Foods discharge.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

The segment was initially assessed as not supporting of the Aquatic Life Use in the 2006 cycle due to dissolved oxygen exceedances at 2-XDD001.23. The impairment is suspected to be caused by low flow conditions potentially exacerbated by the excess phosphorus in the watershed. During the 2014 cycle, the segment had a DO violation rate of 14/38 at 2-XDD001.23.

Chickahominy River, UT (XDD)

Aquatic Life

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			0.56

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-07-PH

Chickahominy River, UT (XDD)

Location: The unnamed tributary XDD from its headwaters to the Tysons Foods discharge.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

The segment was initially considered impaired during the 2006 cycle due to pH exceedances at 2-XDD001.23. It was categorized as Category 4A because of the benthic/pH TMDL for the lower portion of the tributary. Since the pH at this station is low, not elevated as at the downstream stations, this impairment should not be considered addressed. Because it was initially impaired in 2006, a TMDL due date of 2018 was assigned.

The violation rate was 29/38 during the 2014 cycle.

Chickahominy River, UT (XDD)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			0.56

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-09-BEN **North Run**

Location: North Run from its headwaters to its mouth.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

North Run from its headwaters to the confluence with Hungary Creek was assessed as not supporting the Aquatic Life Use during the 2008 cycle based on an impaired benthic community at freshwater probabilistic monitoring station 2-NTR005.53, located above Mountain Road.

Additional monitoring occurred at another freshwater probabilistic monitoring station (2-NTR000.23) in 2011. That station also shows benthic impairment; therefore, the impairment was extended to the mouth of North Run.

North Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			7.90

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-09-PH North Run

Location: North Run from its headwaters to the confluence with Hungary Creek.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

North Run from its headwaters to the confluence with Hungary Creek was assessed as not supporting the Aquatic Life Use during the 2006 cycle based on a pH exceedance rate of 3/6 at station 2-NTR005.53, located above Mountain Road.

No additional data has been collected.

North Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			3.66

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-10-DO

Upham Brook

Location: Upham Brook from Flippen Creek downstream to the confluence with the UT entering above Wilkinson Road

City / County: Henrico Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The segment was assessed as not supporting the Aquatic Life Use in the 2008 cycle based on a dissolved oxygen exceedance rate of 2/12 at Route 301 (2-UPM002.41).

Upham Brook	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.16

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-11-DO

Upham Brook, UT (XXP)

Location: The unnamed tributary XXP from its headwaters to its mouth at Upham Brook.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2008 cycle, the tributary was assessed as not supporting of the Aquatic Life Use based on a dissolved oxygen violation rate of 3/12 at TMDL station 2-XXP000.23, which is located at Wilkinson Road.

The exceedance rate was 5/12 during the 2016 cycle.

Upham Brook, UT (XXP)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.46

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-14-BEN **Jordans Branch**

Location: The mainstem of Jordans Branch.

City / County: Henrico Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2016 cycle, Jordans Branch was impaired of the Aquatic Life Use due to an altered benthic community at freshwater probabilistic monitoring station 2CJOP000.34.

Jordans Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.19

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-15-DO **XCJ - North Run, UT**

Location: Ditch from Lewis Ginter Botanical Garden to North Run.

City / County: Henrico Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2016 cycle, the ditch was impaired of the Aquatic Life Use due to dissolved oxygen exceedances at citizen monitoring station 2CXCJ-LSE-LSBG, which is located at the Lewis Ginter Botanical Garden driveway.

Monitoring at 2CXCJ-LSM-LSBG was acceptable.

XCJ - North Run, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			0.42

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-15-PH X CJ - North Run, UT

Location: Ditch from Lewis Ginter Botanical Garden to North Run.

City / County: Henrico Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

During the 2016 cycle, the ditch was impaired of the Aquatic Life Use due to pH exceedances at citizen monitoring station 2CX CJ-LSE-LSBG, which is located at the Lewis Ginter Botanical Garden driveway.

Monitoring at 2CX CJ-LSM-LSBG was acceptable.

X CJ - North Run, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			0.42

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G05R-16-BEN Upham Brook

Location: The mainstem of Upham Brook.

City / County: Henrico Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2016 cycle, Upham Brook was impaired of the Aquatic Life Use due to an altered benthic community at station 2-UPM003.12.

Upham Brook	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			12.15

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G06L-04-TEMP **Westhaven Lake**

Location: The extent of Westhaven Lake

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5A

During the 2014 cycle, Westhaven Lake was impaired of the Aquatic Life Use due to a temperature exceedance rate of 3/8 at citizen monitoring station 2-BVR07.00-WH.

Westhaven Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			15.12

Sources:

Dam or Impoundment



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G06R-01-HG

Chickahominy River

Location: Segment begins at the Route 360 bridge over the Chickahominy River, and extends downstream to the Route 156 bridge.

City / County: Hanover Co. Henrico Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

During the 2010 cycle, the segment was assessed as not supporting of the Fish Consumption Use due to mercury exceedances in chain pickerel and yellow bullhead catfish during 2005 sampling.

Chickahominy River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:			7.45

Sources:

Atmospheric Deposition - Source Unknown
Toxics



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G06R-05-DO

Powwhite Creek

Location: Powwhite Creek below Gaines Millpond.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle, Powwhite Creek below Gaines Millpond was impaired of the Aquatic Life Use due to dissolved oxygen exceedances at 2-PWH002.12, which is located at Route 156. Natural conditions are suspected, however the dam should be investigated.

The exceedance rate was 2/14 in the 2016 cycle. Other stations within the segment had insufficient data for assessment.

Powwhite Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			2.14

Sources:

Dam or Impoundment

Natural Conditions - Water
Quality Standards Use
Attainability Analyses
Needed



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G06R-06-PH

Beaverdam Creek

Location: Beaverdam Creek from its headwaters to the confluence with tributary XBT.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

Beaverdam Creek was assessed as not supporting of the Aquatic Life Use based on a pH standard exceedance rate of 3/4 at USGS station 02042433.

During the 2008 cycle, monitoring at DEQ station 2-BEV002.00 at the Route 156 bridge, only slightly upstream of the USGS station, had an acceptable exceedance rate of 0/11; therefore continued monitoring was recommended.

During the 2014 cycle, monitoring was conducted at 2-BEV002.00 as well as 2-BEV-RICH01-NPS, which is a National Park Service station. The NPS station had an acceptable violation rate (0/31), however the DEQ station was 3/26; therefore, the segment remained impaired.

During the 2016 cycle, widespread monitoring was conducted by the DEQ and National Park Service. Although the majority of stations had acceptable pH, the upstream-most station, 2-BEV006.75 continues to have pH exceedances (7/13). The segment will be shortened to end at tributary XBT and the downstream portion will be partially delisted.

Beaverdam Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			2.67

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G06R-07-DO

Boatswain Creek

Location: Boatswain Creek from its headwaters to its mouth at the Chickahominy River.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2016 cycle, Boatswain Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 7/50 at National Park Service Station 2-BTS-RICH-03-NPS. The station is located 100 yards downstream of Wyatt House Road near the west boundary of Richmond National Battlefield Park.

Monitoring at upstream DEQ station 2-BTS002.62 was acceptable (0/12).

Boatswain Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			3.75

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G06R-07-PH

Boatswain Creek

Location: Boatswain Creek from its headwaters to its mouth at the Chickahominy River.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

Boatswain Creek was assessed as not supporting of the Aquatic Life Use during the 2008 cycle based on pH standard exceedance rates of 3/4 at USGS station 0204243830, 2/4 at USGS station 02043790, and 7/15 at DEQ station 2-BTS002.62.

During the 2012 cycle, the exceedance rate at 2-BTS002.62 was 4/11. Monitoring at new National Park Service station 2-BTS-RICH-03-NPS was inconclusive (1/8).

During the 2014 cycle, the pH exceedance rate was acceptable (2/31) at 2-BTS-RICH-03-NPS; however, there was no additional monitoring at any of the other stations. Boatswain Creek remained impaired in the 2014 cycle until further monitoring could be conducted.

In the 2016 cycle, the creek remains impaired due to an exceedance rate of 5/12 at 2-BTS002.62; monitoring at 2-BTS-RICH-03-NPS was acceptable (0/50).

Boatswain Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			3.75

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G06R-11-PH

Bloody Run

Location: Bloody Run from its headwaters to the its mouth at Gaines Millpond.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

Bloody Run was assessed as not supporting of the Aquatic Life Use during the 2004 cycle based on pH exceedance rates of 4/4 at USGS stations 0204243610 and 0204243650.

Additional monitoring was conducted during the 2016 cycle. Monitoring at National Park Service station 2-BDY-RICH-04-NPS, which is co-located with the previous USGS station 0204243650, had a pH violation rate of 33/51. DEQ station 2-BDY000.58 had an exceedance rate of 12/12.

Bloody Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			1.16

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07L-01-DO

Chickahominy Lake

Location: Chickahominy Lake in its entirety.

City / County: Charles City Co. New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2014 cycle the segment became impaired for aquatic life with a DO pooled violation rate of 29/166 at stations 2-CHK025.15, 2-CHK026.94, 2-CHK029.54.

During the 2016 cycle there was no new data collected so the segment remains impaired for DO.

Chickahominy Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1,050.46

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07L-01-HG

Chickahominy Lake

Location: Chickahominy Lake in its entirety.

City / County: Charles City Co. New Kent Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

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

Chickahominy Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:		1,050.46	

Sources:

Atmospheric Deposition -
Toxics

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-01-DO

Collins Run

Location: Collins Run from the headwaters downstream to rivermile 0.99

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

Collins Run from its headwaters downstream to rivermile 0.99 was assessed as not supporting of the Aquatic Life Use in the 2010 cycle because of a dissolved oxygen violation rate of 4/6 at 2-CNR002.69, which is located at the Route 155 bridge.

The exceedance rate was 2/18 during the 2016 cycle. Downstream stations 2-CNR001.54 and 2-CNR001.58 were acceptable.

Collins Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			4.49

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-01-PH

Collins Run

Location: Collins Run from the headwaters downstream to rivermile 0.99

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

Collins Run from its headwaters downstream to rivermile 0.99 was assessed as not supporting of the Aquatic Life Use in the 2012 cycle because of pH violation rates of 3/12 at 2-CNR002.69 (Route 155) and 2/12 at 2-CNR001.58. Station 2-CNR001.54 was acceptable (0/12).

Additional monitoring was conducted during the 2016 cycle at 2-CNR002.69. The segment remained impaired for pH (4/18).

Collins Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			4.49

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-02-DO

Rumley Marsh

Location: Rumley Marsh from its headwaters to Old Forge Pond. Below Old Forge Pond, the stream name is Jones Run.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 4C

Oxygen, Dissolved / 5A

Special studies conducted in Rumley Marsh and Jones Run in 1994 identified summertime DO exceedances in Rumley Marsh at station 2-RUM002.46.

The segment was threatened in 1998 and downgraded in 2002. During the 2008 cycle, additional monitoring was conducted at 2-RUM004.38, which is located at the Route 617 bridge. The monitoring confirmed the impairment. In addition, station 2-RUM002.46 had a violation rate of 5/6 and station 2-RUM005.54 was 1/6 (IN).

During the 2014 cycle, the dissolved oxygen exceedance rates were as follows:

18/30 at 2-RUM002.46

11/27 at 2-RUM004.38 (2012)

3/12 at 2-RUM005.54

The Natural Conditions Assessment for Low pH and Low Dissolved Oxygen in Rumley Marsh, Pelham Swamp, and Tributaries was completed in January 2012. The report recommends that Rumley Marsh from its headwaters to its confluence with tributary XWS be reclassified as Class VII swampwater; until the WQS can be revised the upper portion will be assessed as Category 4C. However, it indicates that the nutrients in lower Rumley Marsh are too high. It is believed that the Chesapeake Bay TMDL will reduce nutrients in nonpoint source runoff.

Rumley Marsh	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.31

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-02-PH

Rumley Marsh

Location: Rumley Marsh from its headwaters to Old Forge Pond. Below Old Forge Pond, the stream name is Jones Run.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 4C

pH / 5A

During the 2010 cycle, the segment was assessed as not supporting of the Aquatic Life Use due to pH violations at 2-RUM002.46 and 2-RUM005.54. During the 2014 cycle, the pH exceedance rates were as follows:

- 6/30 at 2-RUM002.46
- 4/28 at 2-RUM004.38 (2012)
- 9/12 at 2-RUM005.54

The Natural Conditions Assessment for Low pH and Low Dissolved Oxygen in Rumley Marsh, Pelham Swamp, and Tributaries was completed in January 2012. The report recommends that Rumley Marsh from its headwaters to its confluence with tributary XWS be reclassified as Class VII swampwater; until the WQS can be revised the upper portion will be assessed as Category 4C. However, it indicates that the nutrients in lower Rumley Marsh are too high. It is believed that the Chesapeake Bay TMDL will reduce nutrients in nonpoint source runoff.

Rumley Marsh	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			1.31

Sources:

Natural Conditions - Water Quality Standards Use
Attainability Analyses Needed

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-04-DO

Schiminoe Creek

Location: Schiminoe Creek from its headwaters to its mouth at the Chickahominy River.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, Schiminoe Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/12 at 2-SMN001.42, which is located at Route 60.

Schiminoe Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			6.22

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-04-PH

Schiminoe Creek

Location: Schiminoe Creek from its headwaters to its mouth at the Chickahominy River.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

During the 2012 cycle, Schiminoe Creek was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 4/12 at 2-SMN001.42, which is located at Route 60.

Schiminoe Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			6.22

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-06-DO

XWS - Rumley Marsh, UT

Location: Unnamed tributary from its headwaters to its mouth at Rumley Marsh.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2012 cycle, XWS was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/18 at 2-XWS000.85, which is located at the Route 155 bridge.

XWS - Rumley Marsh, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			2.17

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-06-PH

XWS - Rumley Marsh, UT

Location: Unnamed tributary from its headwaters to its mouth at Rumley Marsh.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

During the 2012 cycle, XWS was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 4/18 at 2-XWS000.85, which is located at the Route 155 bridge.

XWS - Rumley Marsh, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			2.17

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G07R-07-PH

XAB - Collins Run, UT

Location: Unnamed tributary from its headwaters to its mouth at Collins Run.

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

During the 2012 cycle, XAB was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 2-XAB000.15, which is located off of Route 155.

XAB - Collins Run, UT

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

1.72

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G08E-03-BAC **Diascund Creek**

Location: The tidal Diascund Creek.

City / County: James City Co. New Kent Co.

Use(s): Recreation

Cause(s) /

VA Category: Enterococcus / 5A

Diascund Creek from the dam to its mouth was assessed as not supporting of the Recreation Use during the 2010 cycle due to an enterococci exceedance rate of 4/23 at 2-DSC003.19.

Additional monitoring in the 2016 cycle confirmed the impairment (2/11 at 2-DSC003.19 and 5/12 at 2-DSC005.38.)

The draft TMDL is currently under EPA review.

Diascund Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Enterococcus - Total Impaired Size by Water Type:			0.271

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G08E-07-EBEN XAC - Chickahominy River, UT

Location: The tidal portion of tributary XAC.

City / County: James City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Estuarine Bioassessments / 5A

Station 2CXAC000.20 is a Coastal 2000 probabilistic monitoring station. During the 2010 cycle, Weight of Evidence assessment performed by DEQ's Central Office indicated benthic alteration which was probably caused by the acute and chronic effects of sediment PAHs and possibly metals (scenario 1, category 5A).

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
XAC - Chickahominy River, UT			
Aquatic Life			
Estuarine Bioassessments - Total Impaired Size by Water Type:	0.017		

Sources:

Contaminated Sediments



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G08R-02-BAC **Mill Creek**

Location: Mill Creek from its headwaters downstream to its tidal limit

City / County: James City Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Mill Creek was initially assessed as not supporting of the Recreation Use support goal in 2004 based on a fecal coliform violation rate of 3/13 recorded at 2-MCR002.38.

Additional monitoring was conducted during the 2012 cycle. The impairment converted to E. coli due to an exceedance rate of 2/12.

The exceedance rate was 6/24 during the 2016 cycle.

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

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G08R-04-DO **Yarmouth Creek**

Location: The nontidal portion of Yarmouth Creek.

City / County: James City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, Yarmouth Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/12 at 2-YRM004.96, which is located at Rt. 632.

The violation rate was 5/36 during the 2016 cycle.

Yarmouth Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			4.09

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G08R-05-BAC Barrows Creek

Location: The nontidal portion of Barrows Creek.

City / County: Charles City Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

During the 2014 cycle, Barrows Creek was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 6/12 at 2-BRW002.50, which is located at Route 615.

Barrows Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.93

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G08R-05-DO

Barrows Creek

Location: The nontidal portion of Barrows Creek.

City / County: Charles City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle, Barrows Creek was assessed as impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 5/12 at 2-BRW002.50, which is located at Route 615.

Barrows Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			6.93

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09L-01-HG

Diascund Creek Reservoir

Location: Diascund Creek Reservoir

City / County: James City Co. New Kent Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

The 2010 cycle the segment was impaired for fish consumption use due to Mercury in fish tissue of Bass and Bowfin.

The 2012 cycle the segment was impaired for fish consumption use due to Mercury in fish tissue of Bass and Bowfin.

No new data for the 2014 and 2016 cycle.

Diascund Creek Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:		1,056.13	

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-01-BAC Beaverdam Creek

Location: All of Beaverdam Creek, a tributary to Diascund Reservoir.

City / County: New Kent Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

In the 2012 cycle, Beaverdam Creek was impaired of the Recreation Use due to the following exceedance rates:

- 3/9 at 2-BDM003.16
- 4/20 at 2-BDM004.12
- 3/9 at 2-BDM004.60
- 5/9 at 2-BDM005.70

The draft TMDL is currently under EPA review.

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

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-01-DO

Beaverdam Creek

Location: All of Beaverdam Creek, a tributary to Diascund Reservoir.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

Beaverdam Creek has been assessed as not supporting of the Aquatic Life use because of dissolved oxygen standard exceedances at the Route 632 bridge (2-BDM004.12). The segment was initially considered fully supporting but threatened in the 1998 cycle, but was downgraded to impaired in the 2002 cycle. The DO TMDL is due in 2014.

Additional monitoring has been conducted throughout the creek. The exceedance rates are as follows:

2/11 at 2-BDM003.16

13/37 at 2-BDM004.12 (2014 cycle)

14/23 at 2-BDM004.60

0/23 at 2-BDM005.70 (fully supporting)

Although the upstream station is fully supporting and is upstream of a swampy area, dark water was seen at this station, so it will remain incorporated with the downstream stations.

Beaverdam Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			4.34

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-01-PH

Beaverdam Creek

Location: All of Beaverdam Creek, a tributary to Diascund Reservoir.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

During the 2012 cycle, Beaverdam Creek was assessed as not supporting of the Aquatic Life use because of pH exceedances.

The exceedance rates in the 2016 cycle were as follows:

2/11 at 2-BDM003.16

2/37 at 2-BDM004.12 (2014 cycle - fully supporting)

5/23 at 2-BDM004.60

2/23 at 2-BDM005.70 (fully supporting)

Beaverdam Creek

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

4.34

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-02-DO

Diascund Creek

Location: All of Diascund Creek from its headwaters to the Diascund Reservoir.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2008 cycle, Diascund Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen violation rate of 4/25 at the Route 628 bridge (2-DSC012.68).

During the 2014 cycle, the exceedance rates were as follows:

5/11 at 2-DSC011.33

1/24 at 2-DSC012.67 (fully supporting)

5/11 at 2-DSC014.53

4/11 at 2-DSC015.32

Additional monitoring was conducted at 2-DSC012.67 during the 2016 cycle. The exceedance rate was acceptable (1/35). The segment will remain impaired due to the previous exceedances at the remaining stations in the stream; however, continued monitoring is recommended.

Diascund Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			6.88

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-02-PH

Diascund Creek

Location: All of Diascund Creek from its headwaters to the Diascund Reservoir.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

During the 2012 cycle, Diascund Creek was assessed as not supporting of the Aquatic Life Use due to pH exceedances. The exceedance rates during the 2014 cycle were as follows:

- 2/11 at 2-DSC011.33
- 1/24 at 2-DSC012.67 (fully supporting)
- 1/11 at 2-DSC014.53 (fully supporting)
- 2/11 at 2-DSC015.32

Additional monitoring was conducted at 2-DSC012.67 during the 2016 cycle. The exceedance rate was acceptable (1/35). The segment will remain impaired due to the previous exceedances at the remaining stations in the stream; however, continued monitoring is recommended.

Diascund Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			6.88

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-03-DO

XAL - Diascund Creek, UT

Location: Unnamed tributary from its headwaters to its mouth at Diascund Creek

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, XAL was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/11 at 2CXAL000.15.

XAL - Diascund Creek, UT

Aquatic Life

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.22

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-03-PH

XAL - Diascund Creek, UT

Location: Unnamed tributary from its headwaters to its mouth at Diascund Creek

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

During the 2012 cycle, XAL was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 2/11 at 2CXAL000.15.

XAL - Diascund Creek, UT

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

1.22

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-04-DO

XAK - Diascund Creek, UT

Location: Unnamed tributary from its headwaters to its mouth at Diascund Creek

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, XAK was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 2CXAK000.08.

XAK - Diascund Creek, UT

Aquatic Life

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

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-05-DO

XAJ - Diascund Creek, UT

Location: Unnamed tributary from its headwaters to its mouth at Diascund Creek

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle, XAJ was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 2CXAJ000.69.

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
XAJ - Diascund Creek, UT			
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			2.93

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-06-BAC

XAH - Beaverdam Creek, UT

Location: Unnamed tributary from its headwaters to its mouth at Beaverdam Creek

City / County: New Kent Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

During the 2012 cycle, XAH was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 2/6 at 2CXAH000.35.

XAH - Beaverdam Creek, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.23

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-06-DO

XAH - Beaverdam Creek, UT

Location: Unnamed tributary from its headwaters to its mouth at Beaverdam Creek

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2012 cycle, XAH was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances at 2CXAH000.35. The exceedance rate was 4/9 during the 2014 cycle.

XAH - Beaverdam Creek, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			2.23

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-07-DO

Wahrani Swamp

Location: Wahrani Swamp from its headwaters to the upstream limit of Diascund Creek Reservoir.

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle, Wahrani Swamp was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/12 at 2-WAS002.69, which is located at Route 632.

Wahrani Swamp	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			3.66

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G09R-08-DO

XBY - Beaverdam Creek, UT

Location: Unnamed tributary from its headwaters to its mouth at Beaverdam Creek

City / County: New Kent Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2016 cycle, tributary XBY was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 6/12 at 2CXBY000.19.

XBY - Beaverdam Creek, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.08

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G10E-05-EBEN James River (Oligohaline)

Location: This cause encompasses a portion of the James River Oligohaline segment from Sandy Bay to Hog Island Creek

City / County: Isle Of Wight Co. James City Co. Newport News City Surry Co. Williamsburg City

Use(s): Aquatic Life

Cause(s) /

VA Category: Estuarine Bioassessments / 5A

The Aquatic Life Use is impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis. The source/stressor tool yielded an unknown source for the impairment.
Powhatan C

James River (Oligohaline)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Estuarine Bioassessments - Total Impaired Size by Water Type:	28.118		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G10R-01-BAC College Run

Location: This cause encompasses College Run, from the convergence of the two upstream branches downstream to the confluence with the James River at Cobham Bay. Located north of Chippokes Plantation State Park, tributary to Cobham Bay (Surry County, PRO station).

City / County: Surry Co.

Use(s): Recreation

Cause(s) /

VA Category: Fecal Coliform / 5A

The Recreation Use impairment is retained from previous assessments '02-'08 (2 violates / 8 obs. collected for 2006 IR at station 2-CGE001.41) due to exceedance of the criteria for Fecal Coliform bacteria. No further bacteria data has been collected. Need E.coli data to confirm previous FC impairment.

College Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			2.61

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G10R-02-BEN **Powhatan Creek**

Location: This cause encompasses Powhatan Creek, from the confluence with Long Hill Swamp and Chisel Run downstream to the beginning of tidal waters. Located west of the Five Forks area. North of Jamestown Island, north shore tributary to the James River.

City / County: James City Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use impairment is retained for the stream's benthic population as measured by DEQ's Benthic-Macroinvertebrate Bioassessments program at station 2-POW006.77. Benthic data assessment (Spring - 2000 and Fall - 2000) resulted in a moderate impairment rating for this station.

Powhatan Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.36

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G10R-03-BAC Dark Swamp, UT (XHC)

Location: The unnamed tributary XHC in its entirety.

City / County: Surry Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

During the 2012 cycle, the unnamed tributary to Dark Swamp was impaired of the Recreation Use due to an E. coli exceedance rate of 4/17 at 2-XHC000.12, which is located approx. 0.6 miles downstream of the Surry WWTF.

Dark Swamp, UT (XHC)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			1.30

Sources:

Agriculture

Municipal Point Source
Discharges

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G10R-03-DO **Dark Swamp, UT (XHC)**

Location: The unnamed tributary XHC in its entirety.

City / County: Surry Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2010 cycle, the unnamed tributary to Dark Swamp was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances at 2-XHC000.12, which is located approx. 0.6 miles downstream of the Surry WWTF. The exceedance rate was 5/22 during the 2012 cycle.

Dark Swamp, UT (XHC)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.30

Sources:

Agriculture

Municipal Point Source
Discharges

Natural Conditions - Water
Quality Standards Use
Attainability Analyses
Needed

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G10R-04-BAC

Unnamed tributary to Mill Creek

Location: This cause encompasses the Unnamed tributary to Mill Creek. Located N of Lake Powell, between Jamestown Isl. and City of Williamsburg.

City / County: James City Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on E.coli data from Station 2-XZK000.06 with 11 viol / 12 obs.

Unnamed tributary to Mill Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			1.22

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: **G10R-05-BAC** **Dark Swamp**

Location: The nontidal portion of Dark Swamp

City / County: Surry Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

During the 2014 cycle, Dark Swamp was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 4/12 at 2-DRK000.31, which is located at the Route 626 bridge.

Dark Swamp	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			3.15

Sources:

Municipal Point Source
Discharges

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11E-20-BAC

James River - Hilton Beach Area

Location: This cause encompasses the area of north shore James R. NW of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH.

City / County: Newport News City

Use(s): Recreation

Cause(s) /

VA Category: Enterococcus / 5A

The Recreation Use is impaired based on Enterococcus bacteria data from the VDH-Beach station VA747818 (3 viol. / 20 Geomean obs.) along with multiple swimming advisories between the years 2007-2012.

James River - Hilton Beach Area	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Enterococcus - Total Impaired Size by Water Type:	0.110		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11E-21-BAC

James River - Huntington Beach Area

Location: This cause encompasses the area north shore James R. near foot of James R. Bridge. Mainstem along north shoreline beach in Hilton Village area. CBP segment JMSMH.

City / County: Newport News City

Use(s): Recreation

Cause(s) /

VA Category: Enterococcus / 5A

The Recreation Use is impaired based on Enterococcus bacteria data from the VDH-Beach station VA747813 (2 viol. / 21 Geomean obs.) and multiple short term swimming advisories.

James River - Huntington Beach Area

Recreation

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	0.008		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11L-01-HG

Lee Hall Reservoir

Location: This cause encompasses the entirety of Lee Hall Reservoir. Located southeast of Lee Hall area. Northeast of Fort Eustis. Lee Hall is split by I-64. Newport News PWS.

City / County: Newport News City

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

The Fish Consumption Use is impaired based on fish tissue metals data collected from 2005. The Mercury impairment was found in Largemouth Bass.

Lee Hall Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:		292.14	

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11L-01-PCB Lee Hall Reservoir

Location: This cause encompasses the entirety of Lee Hall Reservoir. Located southeast of Lee Hall area. Northeast of Fort Eustis. Lee Hall is split by I-64. Newport News PWS.

City / County: Newport News City

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

The Fish Consumption Use is impaired based on fish tissue data collected from 2005. The PCB impairment was found in Carp and Largemouth Bass.

Lee Hall Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			292.14

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11L-05-DO

Lee Hall Reservoir

Location: This cause encompasses the entirety of Lee Hall Reservoir. Located southeast of Lee Hall area. Northeast of Fort Eustis. Lee Hall is split by I-64. Newport News PWS.

City / County: Newport News City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

Dissolved oxygen is not supporting ALUS based on data at stations 2-LHR001.76 (7 viol/ 40 obs) and 2-LHR002.56 (5 viol/ 32 obs).

Lee Hall Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			292.14

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11L-06-DO

Scotts Factory Pond

Location: This cause encompasses the pond in its entirety.

City / County: Isle Of Wight Co. James City Co. Newport News City Surry Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

Dissolved oxygen is impaired based on level III data at station 2ECL-1-IRC with 3 viol/ 12 obs.

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

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11R-02-BEN **Chuckatuck Creek**

Location: This cause encompasses Chuckatuck Creek, from the confluence of unnamed tributary (downstream of Rt 600) downstream to confluence of unnamed tributary (downstream of Rt 602, below BIO station @ 2-CKT005.72). Riverine portion southwest of Longview.

City / County: Isle Of Wight Co. Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use impairment is retained from previous assessments (2004 - 2006) based on a moderately impaired rating for freshwater benthic bioassessment monitored at DEQ (BIO) benthic assessment monitoring station @ 2-CKT005.72 during Spring & Fall of 1998 - 2000. No more recent benthic monitoring has been conducted with which to revise assessment.

Chuckatuck Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.53

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11R-03-BAC Champion Swamp

Location: This cause encompasses a portion of Champion Swamp. Located southwest of Town of Smithfield. Western tributary to Cypress Creek. Portion of lower Champion Swamp, from split of stream upstream of State Hwy 620 downstream to the start of tidal waters in downstream Cypress Creek past pipeline marker on topo

City / County: Isle Of Wight Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The Recreation Use is impairment is retained (2 violates / 2 observations) based on exceedance of the DEQ E.coli bacteria instantaneous maximum criteria measured at DEQ biomonitoring station 2-CPN004.81 and 2CPN-1-IRC (1 / 7) .

Champion Swamp	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			3.16

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G11R-04-BAC

Pagan River (including Wrenns Millpond)

Location: This cause encompasses Riverine portion of Pagan River beginning at the confluence of Warren Creek and in eastern trib. Proceeding downstream (including Wrenns Millpond) and downstream of pond to confluence with tidal waters.

City / County: Isle Of Wight Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on (10 viol / 36 obs.) based on E.coli bacteria data meeting the applicable criteria monitored at DEQ (AQM) monitoring station 2-PGN010.07.

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

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G12L-01-DO

Lake Cahoon

Location: This cause encompasses the entirety of Lake Cahoon. Southeast of Myrtle. West and upstream of Lake Meade, (portion of the headwater impoundment system of the Nansemond River). Portion of Portsmouth PWS system.

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. DEQ Monitoring Stations 2-LCN000.20, 2-LMD004.35, and 2-LMD005.55. Pooled DO data violation rate 20 % (15 violates/ 75 obs).

Lake Cahoon	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:		454.16	

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G12L-02-DO

Lake Meade

Location: This cause encompasses the entirety of Lake Meade. Northwest of City of Suffolk. Headwater impoundments of Nansemond River. Downstream receptor of Lakes Cohoon & Kilby. Portion of Portsmouth PWS system.

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. Pooled DO data is impaired with a violation rate of 16.8 % (38 violates/ 225 obs.).

Lake Meade	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			489.49

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G12L-02-TP

Lake Meade

Location: This cause encompasses the entirety of Lake Meade. Northwest of City of Suffolk. Headwater impoundments of Nansemond River. Downstream receptor of Lakes Cohoon & Kilby. Portion of Portsmouth PWS system.

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Phosphorus (Total) / 5A

The Aquatic Life Use is impaired based on the Lake Meade pooled nutrient results: 2 viol / 2 obs TP 2009, 2012 (IM); Nutrients Impaired -Assess TP since algaecide application.

Lake Meade	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Phosphorus (Total) - Total Impaired Size by Water Type:			489.49

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G12L-03-CHLA Speights Run Lake

Location: This cause encompasses the entirety of Speights Run Lake. Northwest of Suffolk Municipal Airport. Southwest of Lake Kilby. Most southwest branch and upstream of Lake Kilby/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Chlorophyll-a / 5A

ALUS is impaired for nutrients - Chla. Speights Run pooled nutrients results: 2 viol / 3 obs Chla 2012, 2009, 2008 (IM); Chla Assessed IM -no algaecide application.

Speights Run Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Chlorophyll-a - Total Impaired Size by Water Type:		120.87	

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G12L-03-DO

Speights Run Lake

Location: This cause encompasses the entirety of Speights Run Lake. Northwest of Suffolk Municipal Airport. Southwest of Lake Kilby. Most southwest branch and upstream of Lake Kilby/Lake Meade system (headwater impoundments of Nansemond River). Portion of Portsmouth PWS system

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. Pooled DO violation rate is 42.8% (21 violates/88 obs.).

Speights Run Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			120.87

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G12L-04-DO

Lake Kilby

Location: This cause encompasses the entirety of Lake Kilby. Northwest of Suffolk Municipal Airport. South of Pitchkettle Creek. Most southwest branch of Lake Kilby/Pitchkettle Creek/Lake Meade system (headwater impoundments of Nansemond River).
Portion of Portsmouth PWS system

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. Pooled DO data violation rate is 69.4 % (25 violates/ 36 obs.).

Lake Kilby	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			200.03

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G12L-04-TP

Lake Kilby

Location: This cause encompasses the entirety of Lake Kilby. Northwest of Suffolk Municipal Airport. South of Pitchkettle Creek. Most southwest branch of Lake Kilby/Pitchkettle Creek/Lake Meade system (headwater impoundments of Nansemond River).
Portion of Portsmouth PWS system

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Phosphorus (Total) / 5A

Aquatic Life Use is impaired for nutrients - TP. Lake Kilby pooled nutrient results: 2 viol/ 2 obs TP 2009, 2012 (IM).

Lake Kilby	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Phosphorus (Total) - Total Impaired Size by Water Type:			200.03

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G13E-07-PH

Shingle Creek - Tributary to Nansemond R.

Location: This cause encompasses the area NE of Suffolk, near Rt 642. From end of tidal waters (0.2 mi upstream of Portsmouth Blvd) downstream to confluence with Nansemond River. CBP segment JMSMH.

City / County: Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

The Aquatic Life Use is impaired (TMDL ID = VAT-G13E-07) based on a site specific failure to meet the minimum pH criteria.(4.0 SU) at station 2-SGL001.00 (8/36). Connection of upstream portions with canals associated with the Dismal Swamp may impart low pH waters into this segment.

Shingle Creek - Tributary to Nansemond R.

Aquatic Life

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
--	------------------------	----------------------	------------------

pH - Total Impaired Size by Water Type:	0.040		
---	--------------	--	--

Sources:

Natural Sources

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G14L-01-DO

Lake Burnt Mills

Location: This cause encompasses the entirety of Lake Burnt Mills. West of Chuckatuck. Upper northwest portion of Western Branch Reservoir system. Upstream of Rt 603. Impounded headwaters tributary of the Nansemond River. Portion of Norfolk water supply reservoirs.

City / County: Isle Of Wight Co. Norfolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. Pooled DO exceedance rate 16.2% (40 violates/ 247 obs.).

Lake Burnt Mills	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			637.99

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G14L-01-PH

Lake Burnt Mills

Location: This cause encompasses the entirety of Lake Burnt Mills. West of Chuckatuck. Upper northwest portion of Western Branch Reservoir system. Upstream of Rt 603. Impounded headwaters tributary of the Nansemond River. Portion of Norfolk water supply reservoirs.

City / County: Isle Of Wight Co. Norfolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

Pooled pH for Lake Burnt Mills is impaired for Aquatic Life Use with a violation rate of 13.4 % (79 viol/ 588 obs). Individual station exceedances include 2-NWB007.04 (27 viol/ 130 obs), BM1 (29 viol/ 264 obs), and BM2 (23 viol/ 173 obs). Insufficient Level II data at station 2GRW-3-IRC has an observed effect with 2 viol/ 9 obs.

Lake Burnt Mills	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			637.99

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G14L-02-DO

Western Branch Reservoir

Location: This cause encompasses the entirety of Western Branch Reservoir. West of Chuckatuck. Impounded headwaters tributary of the Nansemond River. Portion of Norfolk water supply reservoirs.

City / County: Isle Of Wight Co. Norfolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. Pooled DO violation rate is 13.8 % (216 violates/ 1558 obs.).

Western Branch Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:		1,209.67	

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G14L-02-TP

Western Branch Reservoir

Location: This cause encompasses the entirety of Western Branch Reservoir. West of Chuckatuck. Impounded headwaters tributary of the Nansemond River. Portion of Norfolk water supply reservoirs.

City / County: Isle Of Wight Co. Norfolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Phosphorus (Total) / 5A

The Aquatic Life Use is impaired based on pooled nutrient results: 2 viol/ 2 obs Chla & TP 2009,2012 (IM); (algaecide application).

Western Branch Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Phosphorus (Total) - Total Impaired Size by Water Type:		1,209.67	

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G14L-03-DO

Lake Prince Reservoir

Location: This cause encompasses the entirety of Lake Prince Reservoir. Northwest of Suffolk, south of Town of Indika. Southwest branch of Western Branch Reservoir system. Upstream of Western Branch Reservoir. Portion of Norfolk water supply reservoirs.

City / County: Isle Of Wight Co. Norfolk City Suffolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The Aquatic Life Use is impaired based on dissolved oxygen concentrations below the DEQ minimum allowable instantaneous criteria. Pooled DO exceedance rate is 17.2% (219 violates / 1269 obs.).

Lake Prince Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			715.37

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G14R-01-PH

Carbell Swamp - Upper

Location: This cause encompasses the upper portion of Carbell Swamp. Upstream tributary to the northwest branch of Lake Prince (near Holly Grove Church). Entire watershed is portion of PWS for City of Norfolk.

City / County: Isle Of Wight Co. Norfolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

The Aquatic Life Use is impaired based on pH concentrations below the DEQ minimum criteria (6.0 SU). DEQ freshwater benthic bioassessment monitoring station @ 2-CRL004.04 (1 violates / 4 observations).

Carbell Swamp - Upper

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

2.95

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G14R-02-BAC Carbell Swamp - Lower

Location: This cause encompasses the lower portion of Carbell Swamp. Upstream tributary to the northwest branch of Lake Prince (near Holly Grove Church), including confluent trib. at station originating from the NW. Begins at Branch & Joyner Millpond downstream to joining Lake Prince. Within PWS for City of Norfolk

City / County: Isle Of Wight Co. Norfolk City

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on exceedance of the E.coli bacteria instantaneous criteria (5 violates / 35 obs.) as monitored at the DEQ monitoring station 2-CRL001.83.

Carbell Swamp - Lower	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.88

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G14R-02-DO

Carbell Swamp - Lower

Location: This cause encompasses the lower portion of Carbell Swamp. Upstream tributary to the northwest branch of Lake Prince (near Holly Grove Church). Lower segment of swamp. Entire watershed is portion of PWS for City of Norfolk.

City / County: Isle Of Wight Co. Norfolk City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The Aquatic Life Use is impaired based on DO concentrations below the DEQ minimum criteria (9 violates /34 obs.) at station 2-CRL001.83.

Carbell Swamp - Lower

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Oxygen, Dissolved - Total Impaired Size by Water Type:

2.88

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G15E-01-01-TCDD Elizabeth River Southern Branch and its tidal tributaries. CBP segment SBEMH.

Location: This cause encompasses the entirety of the Southern Branch Elizabeth River and its tidal tributaries.

City / County: Chesapeake City Norfolk City Portsmouth City

Use(s): Fish Consumption

Cause(s) /

VA Category: Dioxin (including 2,3,7,8-TCDD) / 5A

The Fish Consumption Use is impaired based on the VDH fish consumption advisory within the Southern Branch Elizabeth River and its tidal tributaries for Dioxin in Blue Crab hepatopancreas contamination, issued by the VDH 1/23/09.

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Elizabeth River Southern Branch and its tidal tributaries. CBP segment SBEMH.			
Fish Consumption			
Dioxin (including 2,3,7,8-TCDD) - Total Impaired Size by Water Type:	3.147		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G15E-02-04-EBEN Eastern Branch Elizabeth River, Broad Creek and Unsegmented estuaries in EBEMH

Location: This cause encompasses the entirety of the Eastern Branch Elizabeth River and Broad Creek. Located between Carolanne Farms and Tanglewood areas. Upper Eastern Branch, from headwaters to confluence of Broad Creek (RM 4.0). CBP segment EBEMH.

City / County: Chesapeake City Norfolk City Virginia Beach City

Use(s): Aquatic Life

Cause(s) /

VA Category: Estuarine Bioassessments / 5A

For 2014 there is insufficient data to assess benthics, therefore the 2010 impairment will be retained. 2010- The Aquatic Life Use was impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis (VERSAR-2005). The benthic source/stressor tool yielded sediment contaminants as the suspected source for the impairment. This segment was previously included (2004 IR) in TMDL ID: VAT-G15E-01-03. The TMDL due date is carried from the previous 2004 IR impairment identification date."

Eastern Branch Elizabeth River, Broad Creek and Unsegmented estuaries in EBEMH	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.350		

Sources:

Contaminated Sediments Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G15E-03-01-EBEN Elizabeth River Mainstem

Location: This cause encompasses the entirety of the Elizabeth River Mainstem. CBP segment SBEMH. BIBI segment ELIMHa.

City / County: Norfolk City Portsmouth City

Use(s): Aquatic Life

Cause(s) /

VA Category: Estuarine Bioassessments / 5A

The Aquatic Life Use is impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis. The source/stressor tool yielded an unknown source for the impairment.

Elizabeth River Mainstem	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Estuarine Bioassessments - Total Impaired Size by Water Type:	7.917		

Sources:

Contaminated Sediments Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G15E-03-03-EBEN Scott Creek

Location: This cause encompasses the entirety of Scott Creek

City / County: Norfolk City Portsmouth City

Use(s): Aquatic Life

Cause(s) /

VA Category: Estuarine Bioassessments / 5A

The Aquatic Life Use - Estuarine Bioassessment impairment based on failure to meet a statistical evaluation constituting an unimpacted benthic organism population per CBP (Benthic-BIBI) analysis. The Elizabeth River mainstem segment BIBI-ELIPHa was assessed as impaired of the Clean Water Act's Aquatic Life Use Support Goal due to the results of benthic BIBI probabilistic station surveys. The BIBI stressor tool yielded "unknown" as the probable impairment source.

Scott Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Estuarine Bioassessments - Total Impaired Size by Water Type:			0.194

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G15E-04-02-EBEN Western Branch Elizabeth River and Unsegmented estuaries in WBEMH

Location: This cause encompasses the entirety of the Western Branch Elizabeth River and its tributaries. CBP segment WBEMH. BIBI segment WBEMHa.

City / County: Chesapeake City Portsmouth City

Use(s): Aquatic Life

Cause(s) /

VA Category: Estuarine Bioassessments / 5A

For 2014 there is insufficient data to assess benthics, therefore the 2010 impairment will be retained. 2010- The Aquatic Life Use was impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis (VERSAR-2005). The benthic source/stressor tool yielded sediment contaminants as the suspected source for the impairment.

Western Branch Elizabeth River and Unsegmented estuaries in WBEMH	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Estuarine Bioassessments - Total Impaired Size by Water Type:	2.725		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G15E-06-01-BAC James River - King/Lincoln Park Beach Area

Location: Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH.

City / County: Hampton City Newport News City Norfolk City Portsmouth City

Use(s): Recreation

Cause(s) /

VA Category: Enterococcus / 5A

The Recreation Use is impaired based on the Enterococcus bacteria data from the VDH-Beach station VA722627 (1 viol. / 20 Geo-mean obs.) in addition to several swimming advisories. Previous Use ID = VAT-G15E-06-01.

James River - King/Lincoln Park Beach Area	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Enterococcus - Total Impaired Size by Water Type:	0.009		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G15E-06-02-BAC **James River - Anderson Park Beach Area**

Location: Located NE of Newport News Point, along the northern shore of Hampton Roads Harbor. CBP segment JMSPH.

City / County: Hampton City Newport News City Norfolk City Portsmouth City

Use(s): Recreation

Cause(s) /

VA Category: Enterococcus / 5A

The Recreation Use is impaired based on the Enterococcus bacteria data from the VDH-Beach station VA523358 (2 viol. /19 Geo-mean obs.) and swimming advisories.

James River - Anderson Park Beach Area	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Enterococcus - Total Impaired Size by Water Type:	0.011		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: G15E-06-04-BAC **Willoughby Bay - Beach Area**

Location: This cause encompasses the area located along the northern shore portion of Willoughby Bay along Willoughby Spit. CBP segment JMSPH.

City / County: Norfolk City

Use(s): Recreation

Cause(s) /

VA Category: Enterococcus / 5A

The Recreation Use is assessed as impaired based on the data from the VDH Beach Monitoring Program geometric mean violation, swimming advisories and joint VDH-DEQ assessment review at Captains Quarters VDH station. The station VA862384 exceeds the monthly geometric mean 9/2011 (1 geomean viol / 6 obs).

Willoughby Bay - Beach Area	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Enterococcus - Total Impaired Size by Water Type:	0.142		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H01R-01-HG

James River

Location: James River from Balcony Falls Dam downstream to Holcomb Rock Dam

City / County: Amherst Co. Bedford Co. Rockbridge Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

This initial 2010 303(d) Listing is based on 2005 fish tissue collections and new Water Quality Standards effective 2/01/2010. Mercury (Hg) exceedances of the DEQ 0.3 parts per million (ppm) tissue value cause impairment of the Fish Consumption Use. No VDH Fish Consumption or Drinking Water Advisories are issued for mercury for these waters. The Virginia Department of Health (VDH) level of concern is 0.5 ppm. Please visit <http://www.deq.virginia.gov/> for more information about mercury contamination and <http://www.vdh.virginia.gov> for VDH Advisories or Bans.

2-JMS279.41 (Blue Ridge Parkway Bridge) - The initial 2010 303(d) Listing is based on 2005 fish tissue analysis where mercury (Hg) is found in two species; smallmouth bass at 0.46 ppm and largemouth bass at 0.40 ppm; each in excess of the new WQS TV based 0.3 ppm. There are no additional data within the 2012, 2014 or 2016 data windows.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:			15.83

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H01R-02-BAC

James River

Location: James River mainstem from the Balcony Falls Dam downstream to the mouth of Peters Creek (JM01).

City / County: Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

These waters were previously Listed in 1998 and subsequently de-listed with the 2002 assessment. The Recreational Use impairment returns with the 2014 Integrated Report (IR) due to escherichia coli (E/coli) exceedances of the WQS instantaneous criterion.

2-JMS282.28 (Rt. 501 Bridge - S.E. of Glasgow) There are no additional data beyond the 2014 IR. The 2014 IR finds six of 36 E.coli observations exceeding the 235 cfu/100 ml instantaneous criterion. Values in excess of the criterion range from 325 to 1225 cfu/100 ml.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			7.42
Escherichia coli - Total Impaired Size by Water Type:			

Sources:

Livestock (Grazing or Feeding Operations)

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

Unspecified Domestic Waste

Wastes from Pets

Wet Weather Discharges (Non-Point Source)

Wildlife Other than Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H01R-03-BAC

James River

Location: James River from the mouth of Reed Creek downstream to Holcomb Rock Dam.

City / County: Amherst Co. Bedford Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

These waters were previously 303(d) Listed in 1998 and de-listed with the 2002 assessment. These waters return to impaired waters status with the 2016 Integrated Report (IR).

2-JMS275.75 (Below Big Island) The 2016 IR finds five of 36 escherichia coli (E.coli) samples exceed the WQS instantaneous criterion of 235 cfu/100 ml. Excessive values range from 355 to 1750 cfu/100 ml.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.36

Sources:

Livestock (Grazing or Feeding Operations)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Unspecified Domestic Waste	Wastes from Pets
Wet Weather Discharges (Non-Point Source)	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	Wildlife Other than Waterfowl	



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H03R-01-BEN

Blackwater Creek

Location: Blackwater Creek from the confluence of Tomahawk and Burton Creeks to the mouth at the James River.

City / County: Lynchburg City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-BKW000.40

2007 Bio - IM

Habitat assessment scores at this site were low for epifaunal substrate, sediment deposition, bank stability and bank vegetative protection. Blackwater Creek is an urban stream with many non-point sources of pollution, in addition to scouring and high sediment loads during rain events. It has a uniform stream bottom with little instream habitat.

2-BKW004.87

2007, 2009-2010 Bio - IM

This section of Blackwater Creek has an excellent riparian zone for an urban area, but has poor bank stability, increased embeddedness and sediment deposition, and marginal epifaunal substrate.

Blackwater Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			10.54

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H03R-03-BEN **Ivy Creek**

Location: Ivy Creek mainstem from its headwaters downstream to its confluence with Blackwater Creek.

City / County: Lynchburg City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station IDs:

2-IVA000.05

2007 - IM - Ivy Creek had very low flow during the spring 2007 sampling event. Ivy Creek is an urban stream with obvious dumping of trash and debris, including bricks, tires, and metal objects. The upstream portion of the sample reach has homes, lawns, and construction present up to the edges of the banks.

2-IVA005.75

2007 - FS

Ivy Creek flows through a city park and has high sediment deposition, however, satellite imagery shows that much of the upstream riparian zone is wooded or consists of fields and low intensity residential areas. Additional development will threaten the biological integrity of this stream.

2-IVA012.13

2007 - IM

Heavy, fresh sediment deposition noted in stream at time of sampling. Available habitat was heavily embedded in sediment. This watershed is being rapidly developed and will likely degrade further due to increased runoff from new neighborhoods.

Ivy Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			21.44

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H03R-04-PCB **James River**

Location: The James River from Big Island dam (below Blue Ridge Parkway) downstream to the I-95 bridge James River Bridge in Richmond including its tributaries Hardware River up to Rt. 6 bridge and Slate River up the Rt. 676 bridge.

City / County:	Albemarle Co.	Amherst Co.	Appomattox Co.	Bedford Co.	Buckingham Co.
	Campbell Co.	Chesterfield Co.	Cumberland Co.	Fluvanna Co.	Goochland Co.
	Henrico Co.	Lynchburg City	Nelson Co.	Powhatan Co.	Richmond City

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

The rivers are considered impaired of the Fish Consumption Use due to a 12/13/2004 VDH fish consumption restriction for PCBs. No more than two meals/month of gizzard shad, carp, American eel, flathead catfish, and quillback carpsucker are recommended.

A portion of the segment was first listed in the 2004 cycle but was expanded during the 2006 cycle based on the condemnation. The original 2016 TMDL due date was maintained.

The impairment is based on the results of DEQ's fish tissue monitoring program which has indicated PCB exceedances at multiple stations including 2-JMS157.28, 2BJMS118.99, 2-JMS127.50, 2CJMS110.00, et al.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			199.28
PCB in Fish Tissue - Total Impaired Size by Water Type:			199.28

Sources:

Contaminated Sediments Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H03R-05-BEN Burton Creek

Location: Burton Creek from its headwaters to its mouth on Tomahawk Creek.

City / County: Lynchburg City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-BUN000.04 - 2007 Bio Station

Burton Creek suffers from heavy algal growth in addition to fine sediments covering the stream bottom. Habitat assessment scores were low for bank stability and bank vegetative protection. An abundance of trash was noted in the stream at the time of sampling.

Burton Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.47

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H03R-06-BEN **Judith Creek**

Location: Judith Creek from its headwaters to the confluence with the James River.

City / County: Bedford Co. Lynchburg City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-JTH001.52 - 2008-2010 Bio - FS

2-JTH006.53 - 2008 Bio - IM

This stream is small and has unstable banks with little vegetative protection.

Judith Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			11.08

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H03R-07-BEN

Tomahawk Creek

Location: Tomahawk Creek from its headwaters to its confluence with Burton Creek.

City / County: Lynchburg City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-THK000.03 - 2007, 2009 Bio - IM

Tomahawk Creek is an urban stream with highly embedded substrate and unstable banks.

Tomahawk Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.06

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H05R-01-BAC **James River**

Location: The confluence with Wreck Island Creek to Tye River

City / County: Amherst Co. Appomattox Co. Buckingham Co. Campbell Co. Nelson Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2-JMS229.14 (Ambient, Trend)

E. coli - 3/12 Violation Rate

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			15.93

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H05R-03-BAC

Beaver Creek

Location: Beaver Creek mainstem from its mouth on the James River upstream to an unnamed tributaries mouth at the Rt. 501 Bridge.

City / County: Campbell Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2-BCR000.20 (Ambient)

E. coli - 3/24 Violation Rate

Beaver Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			8.67

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H05R-06-BAC

Little Beaver Creek

Location: Little Beaver Creek from its headwaters to its mouth on the James River.

City / County: Campbell Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2-LTJ000.16 (James River TMDL Site)

E. coli - 3/12 Violation Rate

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Little Beaver Creek			
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.13

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H05R-08-BAC

Beck Creek

Location: Beck Creek from the confluence of the North and South Forks of Stovall Creek to its mouth.

City / County: Amherst Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2-BEK000.10 (Ambient)

E. coli - 6/12 Violation Rate

Beck Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.28

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H05R-09-BAC **Partridge Creek**

Location: Partridge Creek from its headwaters to the mouth.

City / County: Amherst Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2-PDG000.12 (Ambient)

E. coli - 5/15 Violation Rate

Partridge Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			10.40

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H05R-10-BAC **Archer Creek**

Location: Archer Creek from its headwaters to its mouth on the James River

City / County: Campbell Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2BACH000.09 (Ambient)

E. coli - 5/12 Violation Rate

Archer Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.46

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H05R-11-BAC

Allens Creek

Location: Allens Creek from its headwaters to its mouth on the James River

City / County: Campbell Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2BANC000.09 (Ambient)

E. coli - 5/12 Violation Rate

Allens Creek

Recreation

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Escherichia coli - Total Impaired Size by Water Type:

7.18

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: **H08R-01-BAC** **Davids Creek**

Location: David Creek from the confluence with Stevens Run to the mouth.

City / County: Appomattox Co. Buckingham Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2-DVD000.23 (Ambient)

E. coli - 4/12 Violation Rate

Davids Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.18

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H09R-01-PH

Montebello Spring Branch

Location: Montebello Spring Branch from the spring downstream to its confluence with Mill Creek. (Start Mile: .13 End Mile: 0.00 Total Impaired Size: .13 Miles)

City / County: Nelson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: 2-XXM000.01 (2 violations of 3 samples for pH in 2008. This site was not monitored in the 2016 cycle and the assessment will carry forward to the 2016 cycle). Initial Listing Date: 2004.

Montebello Spring Branch

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Aquatic Life

pH - Total Impaired Size by Water Type:

0.13

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H09R-02-BEN Hat Creek

Location: Hat Creek from the headwaters downstream to its confluence with the Tye River. (Start Mile: 9.52 End Mile: 0.00 Total Impaired Size: 9.52 Miles)

City / County: Nelson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-HAT000.14 (Impaired for VSCI).
Initial Listing Date: 2012.

Hat Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			9.51

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H09R-04-BEN **Tye River**

Location: Tye River from its confluence with Silver Creek downstream to its confluence with Hat Creek. (Start Mile: 31.99 End Mile: 24.29 Total Impaired Size: 7.70 Miles)

City / County: Nelson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-TYE028.94 (Impaired for VSCI).
Initial Listing Date: 2012

Tye River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			7.70

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H09R-05-BEN Black Creek

Location: Black Creek from the headwaters downstream to its confluence with the Tye River. (Start Mile: 1.96 End Mile: 0.00 Total Impaired Size: 1.96 Miles)

City / County: Nelson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station 2-BKC001.43 and 2-BKC001.55 (Impaired for VSCI). Initial Listing Date: 2014

Black Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.95

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H11L-01-DO

Stonehouse Creek Reservoir

Location: Stonehouse Creek Reservoir from its impounding structure upstream to its backwaters.

City / County: Amherst Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

Station ID:

2-SHS001.00 (Lake Station)

DO - 5/38 Violation Rate

Stonehouse Creek Reservoir

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Oxygen, Dissolved - Total Impaired Size by Water Type:

33.53

Sources:

Dam or Impoundment



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H11L-01-PH

Stonehouse Creek Reservoir

Location: Stonehouse Creek Reservoir from its impounding structure upstream to its backwaters.

City / County: Amherst Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

Station ID:

2-SHS001.00 (Lake Station)

pH - 12/80 Violation Rate

Stonehouse Creek Reservoir

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

33.53

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H11L-02-CHLA Thrashers Creek Reservoir

Location: Thrashers Creek Reservoir from its impounding structure upstream to its backwaters.

City / County: Amherst Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Chlorophyll-a / 5A

Station ID:

2-TRH000.40 (Lake Station)

Chlorophyll a - 2/2 Samples (90% Calculated over 2 Sample Yrs)

Total Phosphorus not assessed since no algaecide used

Thrashers Creek Reservoir

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Chlorophyll-a - Total Impaired Size by Water Type:

31.95

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H11L-02-PH

Thrashers Creek Reservoir

Location: Thrashers Creek Reservoir from its impounding structure upstream to its backwaters.

City / County: Amherst Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

Station ID:

2-TRH000.40 (Lake Station)

pH - 24/99 Violation Rate

Thrashers Creek Reservoir

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

31.95

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H11L-03-PH

Mill Creek Reservoir

Location: Mill Creek Reservoir

City / County: Amherst Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

Station ID:

2-MIN000.98 (2011/2012 Lake Station)

pH - 16/117

Mill Creek Reservoir

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

186.40

Sources:

Dam or Impoundment

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H12R-01-BEN **Rutledge Creek**

Location: Rutledge Creek mainstem from the Town of Amherst outfall downstream to its mouth on the Buffalo River.

City / County: Amherst Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-RTD003.08 (Bio)

IM - 2007/2011 Bio

This site was highly embedded with unstable banks and poor bank vegetative protection. Available habitat was covered with periphyton and filamentous algae.

Rutledge Creek

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:

3.32

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H13L-01-DO

Lake Nelson

Location: Lake Nelson (40.62 Acres)

City / County: Nelson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

This lake is impaired due to violations of the dissolved oxygen WQS at station: 2-XLU000.10 (12 violations of 52 samples for dissolved oxygen) Initial Listing Date: 2016.

Lake Nelson	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			40.62

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H14R-01-BEN

Mallorys Creek

Location: Mallorys Creek from its headwaters to its mouth on the James River.

City / County: Buckingham Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-MLY005.39 (2012/20140 Bio)

IM - This site had optimal habitat but satellite imagery shows considerable clearcutting in the watershed. Sediment metrics were rated high suboptimal, indicating that sedimentation may not be the primary problem.

Mallorys Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.75

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H14R-01-HG **James River**

Location: James River from the Tye River to the Rockfish River

City / County: Buckingham Co. Nelson Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

Station ID:

2-JMS213.00 (2005 FT/Sediment)

Hg 2 Species

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:			18.57

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H15R-03-BEN **Taylor Creek**

Location: Taylor Creek from the headwaters downstream to its confluence with Perry Creek. (Start Mile: 4.99 End Mile: 0.00 Total Impaired Size: 4.99 Miles)

City / County: Nelson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-TLR000.03 (Impaired for VSCI) and 2-TLR000.52 (Impaired for VSCI in 2014) Initial Listing Date: 2008. This impairment was lengthened slightly in 2016 to correct a previous segmentation error.

Taylor Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.99

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H16R-02-BAC **Beaver Creek**

Location: Beaver Creek from the confluence of its two headwater branches downstream to its confluence with the Rockfish River.
(Start Mile 7.41 End Mile: 0.00 Total Impaired Size: 7.41 Miles)

City / County: Nelson Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-BVR000.83 (2 violations of 12 samples for e-coli). Initial Listing Date: 2012.

Beaver Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.41

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H16R-03-BAC **Cove Creek**

Location: Cove Creek from the headwaters downstream to its confluence with the Rockfish River. (Start Mile: 10.47 End Mile: 0.00
Total Impaired Size: 10.47 Miles)

City / County: Albemarle Co. Nelson Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-COV003.44 (7 violations of 12 samples for e-coli).
Initial Listing Date: 2012.

Cove Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			10.46

Sources:

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H16R-04-BAC

Rockfish River

Location: Rockfish River from its confluence with Davis Creek downstream to its confluence with Hog Creek. (Start Mile: 23.36 End Mile: 6.06 Total Impaired Size: 17.3 Miles)

City / County: Nelson Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at stations: 2-RKF007.28 (2 violations of 12 samples for e-coli) and 2-RKF014.71 (2 violations of 12 samples for e-coli). Initial Listing Date: 2012

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

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H16R-05-BAC

Rockfish River UT

Location: Rockfish River UT (Lower Rockfish River watershed) from the headwaters downstream to its confluence with the Rockfish River. (Start Mile: 2.69 End Mile: 0.00 Total Impaired Size: 2.69 Miles)

City / County: Nelson Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-XRK001.64 (2 violations of 13 samples for e-coli)
Initial Listing Date: 2016.

Rockfish River UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.69

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H17L-01-DO

Totier Creek Reservoir

Location: Totier Creek Reservoir (37.23 Acres)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

This lake is impaired due to violations of the dissolved oxygen WQS in the Epilimnion at station: 2-TOT001.01 (5 violations of 30 samples for dissolved oxygen). Initial Listing Date: 2012.

Totier Creek Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			37.23

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H17R-02-BAC **James River**

Location: Rockfish River to Rivanna River.
 *Segment smaller in 2014 due to creation of single channel impaired segment.

City / County: Albemarle Co. Buckingham Co. Cumberland Co. Fluvanna Co.

Use(s): Recreation

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

- Station ID:
- 2BJMS195.54 (Probabilistic Ambient)
- E. coli - 2/12 violation rate
- 2-JMS189.31 (Ambient)
- E. coli - 6/36 Violation Rate
- James River Association Co-located Monitoring
- E. coli - 4/15 Violation Rate
- 2-JMS176.63 (Ambient)
- E. coli - 11/36 Violation Rate

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			35.01

Sources:
 Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H17R-05-BEN **Totier Creek**

Location: Totier Creek from the RWSA-Scottsville Public Water Intake downstream to its confluence with the James River. (Start Mile: .79 End Mile: 0.00 Total Impaired Size: .79 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthic at station: 2-TOT000.08 (Impaired for VSCI).
Carries forward from 2008 Initial Listing Date: 2006.

Totier Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			0.71

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H20R-02-BAC **South Creek**

Location: South Creek from its headwaters to its mouth on the James River

City / County: Fluvanna Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station ID:

2-SSX001.39 (Ambient)

E. coli - 4/12 Violation Rate

South Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.66

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H21L-01-DO

Troublesome Reservoir

Location: Troublesome Reservoir

City / County: Buckingham Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

Station ID:

2-TBM000.92 (Lake Station)

2013/2014 Troublesome Creek Reservoir

Dissolved Oxygen - 8/65 Violation Rate

Chlorophyll a - 0/2 Samples (90% Calculated over 1 Sample Yr)

Total Phosphorus - 0/2 Samples (Median Calculated over 1 Sample Yr)

Troublesome Reservoir

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Oxygen, Dissolved - Total Impaired Size by Water Type:

52.68

Sources:

Changes in Ordinary
Stratification and Bottom
Water Hypoxia/Anoxia

Dam or Impoundment



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H21R-01-BEN **Horsepen Creek**

Location: Horsepen Creek from its headwaters to its mouth on the Slate River

City / County: Buckingham Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2BHOX000.62 (2009/2012 BIO)

IM - Biologist notes from 2009 indicated that the riffles were highly embedded and unstable, which was likely a result of relatively unstable stream banks and heavy local watershed erosion. Sediment is a likely stressor in this stream.

Horsepen Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.86

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H21R-02-BEN **Walton Fork**

Location: Walton Fork from its confluence with Ripley Creek to its mouth on the Slate River

City / County: Buckingham Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-WTN002.50 (Bio)

2013 Bio - IM - This stream had riffles consisting of mostly gravel and a little cobble. There was excessive sedimentation throughout the stream and an abundance of periphyton.

Walton Fork	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.99

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23L-01-CHLA **Lake Albemarle**

Location: Lake Albemarle (Total Impaired Size: 37.01 Acres)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Chlorophyll-a / 5A

This lake is impaired due to violations of the chlorophyll a (nutrients) Lake Nutrient Criteria at station : 2-SIN000.44 (>35 ug/l two for two years. Initial Listing Date: 2016

Lake Albemarle	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Chlorophyll-a - Total Impaired Size by Water Type:			37.01

Sources:

Dam or Impoundment

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23L-01-DO **Lake Albemarle**

Location: Lake Albemarle (Total Impaired Size: 37.01 Acres)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

This lake is impaired due to violations of the dissolved oxygen WQS at station: 2-SIN000.44 (6 violations of 39 samples for DO) Initial Listing Date: 2016

Lake Albemarle	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			37.01

Sources:

Dam or Impoundment

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23R-01-BEN Broad Axe Run

Location: Broad Axe Run and tributaries from the headwaters downstream to its confluence with the Mechums River. (Start Mile: 8.32
End Mile: 0.00 Total Impaired Size: 8.32 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-BRX000.66 (Impaired for VSCI).
Initial Listing Date: 2004.

Broad Axe Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.31

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23R-02-BEN **Lickinghole Creek**

Location: Lickinghole Creek from the headwaters downstream to its confluence with the Mechums River. (Start Mile: 8.94 End Mile: 0.00 Total Impaired Size: 8.94 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-LKN000.02 (Impaired for VSCI) and 2-LKN-LKN01-SW (Impaired for VSCI based on Level III benthic data from StreamWatch). Initial Listing Date: 2010.

Lickinghole Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.93

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23R-03-BEN Mechums River

Location: Mechums River from the headwaters downstream to its confluence with Lickinghole Creek. (Start Mile: 26.36 End Mile: 11.19 Total Impaired Size: 15.17 Miles)

City / County: Albemarle Co. Nelson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-MCM018.92 (Impaired for VSCI).
Initial Listing Date: 2004.

Mechums River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			15.16

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23R-04-BEN Slabtown Branch

Location: Slabtown Branch and tribs from the headwaters downstream to its confluence with Lickinghole Creek. (Start Mile: 4.92 End Mile: 0.00 Total Impaired Size: 4.92 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-SLB-SLB01-SW (Impaired for VSCI based on Level III benthic data from StreamWatch). There are no new data available for assessment in 2016, thus the impairment carries forward to 2016. Initial Listing Date: 2010

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

Sources:

Golf Courses

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23R-06-BEN

Parrott Branch X-trib

Location: Parrott Branch X-trib from the headwaters downstream to its confluence with Parrott Branch. (Start Mile: 1.15 End Mile: 0.00
Total Impaired Size: 1.15 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-XPT-XPT01-SW (Impaired for VSCI based on Level III benthic data from StreamWatch). Initial Listing Date: 2010

Parrott Branch X-trib	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.15

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23R-07-BEN **Spring Creek**

Location: Spring Creek from the headwaters downstream to the upper end of Lake Albemarle. (Start Mile 3.49 End Mile: 0.00 Total Impaired Size: 3.49 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-XSI-XSI01-SW (Impaired for VSCI). Initial Listing Date: 2012

Spring Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.48

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H23R-08-BAC **Stockton Creek**

Location: Stockton Creek from the headwaters downstream to its confluence with the Mechums River. (Start Mile: 12.06 End Mile: 0.00 Total Impaired Size: 12.06 Miles)

City / County: Albemarle Co. Nelson Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-SKM001.47 (8 violations of 12 samples for e-coli).
Initial Listing Date: 2014.

Stockton Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			12.06

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H24R-01-TEMP

Moormans River North Fork/Pond Ridge Branch

Location: North Fork Moormans River and tributaries (including Pond Ridge Branch) from the headwaters downstream to the Charlottesville Reservoir. (Start Mile: 21.11 End Mile: 0.00 Total Impaired Size: 21.11 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS at station: 2BMNF000.10 (2 violations of 6 samples for temperature). Initial Listing Date: 2014

Moormans River North Fork/Pond Ridge Branch

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Aquatic Life

Temperature, water - Total Impaired Size by Water Type:

21.10

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H24R-02-BEN X-trib to Doyles River

Location: X-trib to Doyles River from the headwaters downstream to its confluence with the Doyles River. (Start Mile: 4.74 End Mile: 0.00 Total Impaired Size: 4.74 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-XDL-XDY01-SW (Impaired for VSCI). Initial Listing Date: 2012

X-trib to Doyles River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.74

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H25R-01-BAC

Buck Mountain Creek

Location: Buck Mountain Creek from the headwaters downstream to its confluence with the South Fork Rivanna River. (Start Mile: 10.59 End Mile 0.00 Total Impaired Size: 10.59 Miles)

City / County: Albemarle Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-BKM002.01 (2 violations of 12 samples for e-coli). Initial Listing Date: 2010

Buck Mountain Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			10.59

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H25R-02-BEN Piney Creek X-trib

Location: Piney Creek X-trib from its headwaters downstream to its confluence with Piney Creek. (Start Mile: 3.23 End Mile: 0.00
Total Impaired Size: 3.23 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-XPY-XPY01 -SW (Impaired for VSCI) and 2-XPY-XPY02-SW (Impaired for VSCI). Initial Listing Date: 2012.

Piney Creek X-trib	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.22

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-01-BAC **Ivy Creek**

Location: Ivy Creek from the headwaters downstream to the 5 mile upper limit of the PWS designation for the S. F. Rivanna Reservoir Intake. (Start Mile: 12.08 End Mile 2.57 Total Impaired Size: 9.51 Miles)

City / County: Albemarle Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-IVC008.09 (4 violations of 12 samples for e-coli).
Initial Listing Date: 2014

Ivy Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			9.51

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-02-PH

Ivy Creek

Location: Ivy Creek from the headwaters downstream to its confluence with Little Ivy Creek. (Start Mile: 12.08 End Mile: 6.59 Total Impaired Size: 5.49 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: 2-IVC010.20 (2 violations of 6 samples for pH in 2010, 0 of 6 in 2014, no new data in 2016, thus impairment carries forward to 2016). Initial Listing Date: 2006.

Ivy Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			5.49

Sources:

Atmospheric Deposition -
Acidity



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-03-BEN **Ivy Creek**

Location: Ivy Creek from the headwaters downstream to its confluence with the South Fork Rivanna River Reservoir. (Start Mile: 12.08
End Mile: 0.00 Total Impaired Size: 12.08 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 2-IVC005.19 (Impaired for VSCI) and 2-IVC010.20 (Impaired for VSCI). Initial Listing Date: 2008. (This segment was lengthened in 2010)

Ivy Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			12.07

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-04-BEN

South Fork Rivanna River

Location: South Fork Rivanna River from the RWSA SF Rivanna River Public Water Intake downstream to its confluence with the Rivanna River. (Start Mile: 3.47 End Mile: 0.00 Total Impaired Size: 3.47 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 2-RRS001.81 (Impaired for VSCI) and 2-RRS-RVN31-SW (Impaired for VSCI). Initial Listing Date: 2010.

South Fork Rivanna River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.47

Sources:

Dam or Impoundment

Municipal (Urbanized High
Density Area)

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-05-BEN **Powell Creek**

Location: Powell Creek (including all tributaries) from the headwaters downstream to its confluence with the South Fork Rivanna River. (Start Mile: 10.36 End Mile: 0.00 Total Impaired Size: 10.36 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-PLC001.49 (Impaired for VSCI), 2-PLC-PWL01-SW (Impaired for VSCI) and 2-PWC-PWL03-SW (Impaired for VSCI). Initial Listing Date; 2010

Powell Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			10.36

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-06-BEN Naked Creek

Location: Naked Creek (including all tributaries) from the headwaters downstream to its confluence with the South Fork Rivanna Reservoir. (Start Mile: 9.82 End Mile 0.00 Total Impaired Size: 9.82 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-NKD-NKD02-SW (Impaired for VSCI). Initial Listing Date: 2010.

Naked Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			9.82

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-07-BEN

South Fork Rivanna River X-trib

Location: South Fork Rivanna River X-trib from the headwaters downstream to its confluence with the South Fork Rivanna River.
(Start Mile: 3.21 End Mile: 0.00 Total Impaired Size: 3.21 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-XRV-XZW01-SW (Impaired for VSCI). Initial Listing Date: 2010

South Fork Rivanna River X-trib	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.20

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-08-BEN Fishing Creek

Location: Fishing Creek and tributaries from the headwaters downstream to its confluence with the South Fork Rivanna Reservoir.
(Start Mile: 12.54 End Mile: 0.00 Total Impaired Size: 12.54 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-FSH-FSH01-SW (Impaired for VSCI). Initial Listing Date: 2012.

Fishing Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			12.53

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H26R-09-BEN **Little Ivy Creek X-trib**

Location: Little Ivy Creek X-trib from the headwaters downstream to its confluence with Little Ivy Creek. (Start Mile: 4.44 End Mile: 0.00 Total Impaired Size: 4.44 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-XLI-XLI01-SW (Impaired for VSCI). Initial Listing Date: 2016.

Little Ivy Creek X-trib	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.44

Sources:

Agriculture

Non-Point Source

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

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-01-BEN

Flat Branch X-trib

Location: Flat Branch X-trib from the headwaters downstream to its confluence with Flat Branch. (Start Mile: 2.03 End Mile: 0.00 Total Impaired Size: 2.03 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 2-XKL000.37 (Impaired for VSCI).
Initial List Date: 2010.

Flat Branch X-trib	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.03

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-02-BAC Swift Run

Location: Swift Run from its confluence with Welsh Run downstream to its confluence with the North Fork Rivanna River. (Start Mile: 1.91 End Mile: 0.00 Total Impaired Size: 1.91 Miles)

City / County: Albemarle Co. Greene Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-SFR000.60 (2 violations of 12 samples for e-coli). Initial Listing Date: 2010

Swift Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			1.91

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-02-BEN **Swift Run**

Location: Swift Run from its confluence with Welsh Run downstream to its confluence with the North Fork Rivanna River. (Start Mile: 1.91 End Mile: 0.00 Total Impaired Size: 1.91 Miles)

City / County: Albemarle Co. Greene Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-SFR000.60 (Impaired for VSCI)
Initial Listing Date: 2012

Swift Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.91

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-03-BEN

Preddy Creek North Branch

Location: Preddy Creek North Branch from the headwaters downstream to its confluence with Preddy Creek. (Start Mile: 6.24 End Mile: 0.00 Total Impaired Size: 6.24)

City / County: Albemarle Co. Greene Co. Orange Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 2-PRD004.42 (Impaired for VSCI), 2-PRD006.35 (Impaired for VSCI) and 2-PRD-PRD01-SW (Impaired for VSCI). Initial Listing Date: 2010

Preddy Creek North Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.24

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-05-BEN Marsh Run

Location: Marsh Run from the headwaters downstream to its confluence with the North Fork Rivanna River. (Start Mile: 3.65 End Mile: 0.00 Total Impaired Size: 3.65 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-MAR-XZY01-SW (Impaired for VSCI). Initial Listing Date: 2010

Marsh Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.65

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-06-BEN Blue Run

Location: Blue Run from the headwaters downstream to its confluence with Swift Run. (Start Mile: 8.72 End Mile: 0.00 Total Impaired Size: 8.72 Miles)

City / County: Greene Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-BLU-BLU02-SW (Impaired for VSCI). Initial Listing Date: 2012.

Blue Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.72

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-07-BEN

Stanardsville Run

Location: Stanardsville Run and tributaries from the headwaters downstream to its confluence with Blue Run. (Start Mile: 5.71 End Mile: 0.00 Total Impaired Size: 5.71 Miles)

City / County: Greene Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-SDV001.02 (Impaired for VSCI) and 2-SDV-SDV01-SW (Impaired for VSCI). Initial Listing Date: 2014.

Stanardsville Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.70

Sources:

Agriculture

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-08-BEN **Preddy Creek**

Location: Preddy Creek from the headwaters downstream to its confluence with the North Fork Rivanna River. (Start Mile: 7.48 End Mile: 0.00 Total Impaired Size: 7.48 Miles)

City / County: Albemarle Co. Orange Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-PRD-BRN01-SW (Impaired for VSCI). Initial Listing Date: 2016

Preddy Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			7.48

Sources:

Agriculture

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-09-BEN

North Fork Rivanna River

Location: North Fork Rivanna River from its confluence with the Lynch River downstream to the RWSA - North Fork Rivanna River Public Water Intake. (Start Mile: 17.87 End Mile: 10.68 Total Impaired Size: 7.19 Miles)

City / County: Albemarle Co. Greene Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-RRN012.89 (Impaired for VSCI) and 2-RRN-RRN06-SW (Impaired for VSCI). Initial Listing Date: 2016

North Fork Rivanna River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			7.33

Sources:

Agriculture

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H27R-10-BEN **Quarter Creek**

Location: Quarter Creek from the dam outfall at Jonquil Road downstream to its confluence with Swift Run. (Start Mile: 1.58 End Mile: 0.00 Total Impaired Size: 1.58 Miles)

City / County: Greene Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-QTR-QTR03-SW (Impaired for VSCI). Initial Listing Date: 2016

Quarter Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.58

Sources:

Non-Point Source

Upstream Impoundments
(e.g., PI-566 NRCS
Structures)



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-02-BEN Moores Creek

Location: Moores Creek from its confluence with the Ragged Mountain Dam receiving stream downstream to the RWSA Moores Creek STP bridge. (Start Mile: 6.86 End Mile: 0..54 Total Impaired Size: 6.32 Miles)

City / County: Albemarle Co. Charlottesville City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-MS000.60 (Impaired for VSCI); 2-MS004-SW (Impaired for VSCI) and 2-MS012-SW (Impaired for VSCI). Initial Listing Date: 2008.

Moores Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.32

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-04-BEN

Moore's Creek X-trib

Location: Moore's Creek X-trib from the headwaters downstream to its confluence with Moore's Creek. (Start Mile: 1.67 End Mile: 0.00
Total Impaired Size: 1.67 Miles)

City / County: Charlottesville City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-XRC001.15 (Impaired for VSCI) and 2-XRC-XRC01-SW (Impaired for VSCI). Initial Listing Date: 2006.

Moore's Creek X-trib	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.66

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-05-BEN

Meadow Creek

Location: Meadow Creek from where it becomes a perennial stream downstream to its confluence with Moores Creek. (Start Mile: 4.98 End Mile: 0.00 Total Impaired Size: 4.98 Miles)

City / County: Albemarle Co. Charlottesville City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-MWC000.60 (Impaired for VSCI); 2-MWC-MWC03-SW (Impaired for VSCI) 2-MWC-MWC07-SW (Impaired for VSCI); 2-MWC-MWC05-SW (Impaired for VSCI); 2-MWC-MWC06-SW (Impaired for VSCI); 2-MWC-MWC08-SW (Impaired for VSCI); 2-MWC-MWC09-SW (Impaired for VSCI); 2-MWC-MWC10-SW Impaired for VSCI). Initial Listing Date: 2006.

Meadow Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.98

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-07-BAC

Schenks Branch

Location: Schenks Branch and tributaries from the headwaters downstream to its confluence with Meadow Creek. (Start Mile: 2.92
End Mile: 0.00 Total Impaired Size: 2.92 Miles)

City / County: Charlottesville City

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at stations: 2-SNK000.88 (3 violations of 3 samples for e-coli) and 2-XSN000.08 (6 violations of 6 samples for e-coli). Initial Listing Date: 2010.

Schenks Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.91

Sources:

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-07-BEN Schenks Branch

Location: Schenks Branch and tributaries from the headwaters downstream to its confluence with Meadow Creek. (Start Mile: 2.92
End Mile: 0.00 Total Impaired Size: 2.92 Miles)

City / County: Charlottesville City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 2-SNK000.88 (Impaired for VSCI); 2-XSN000.08 (Impaired for VSCI) and 2-SNK-SHV01-SW (Impaired for VSCI). Initial Listing Date: 2008.

Schenks Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.91

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-08-BEN Biscuit Run

Location: Biscuit Run and tributaries from the tributary at the mobile home park downstream to its confluence with Moores Creek.
(Start Mile 6.60 End Mile: 0.00 Total Impaired Size 6.60 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-BSC-BSC01-SW (Impaired for VSCI). Initial Listing Date: 2010

Biscuit Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.59

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-09-BEN Morey Creek

Location: Morey Creek from the headwaters downstream to its confluence with Moores Creek. (Start Mile: 2.93 End Mile: 0.00 Total Impaired Size: 2.93 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-MOY-MRY01-SW (Impaired for VSCI). Initial Listing Date: 2010.

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

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-10-BEN Town Branch

Location: Town Branch and tributary from the headwaters downstream to its confluence with the Rivanna River. (Start Mile: 1.20 End Mile: 0.00 Total Impaired Size: 1.20 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-TWN-TWN01-SW (Impaired for VSCI). Initial Listing Date: 2010.

Town Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.19

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-11-BEN Meadow Creek X-trib

Location: Meadow Creek X-trib beginning near Rothery Street downstream to its confluence with Meadow Creek. (Start Mile: 1.78 End Mile 0.00 Total Impaired Size: 1.78 Miles)

City / County: Charlottesville City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-XMW-XMW01-SW (Impaired for VSCI). Initial Listing Date: 2010.

Meadow Creek X-trib	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.78

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H28R-12-BEN X-trib to Moores Creek

Location: X-trib to Moores Creek from the outfall of the Ragged Mountain Reservoir downstream to Moores Creek. (Start Mile: 2.23
End Mile: 0.00 Total Impaired Size: 2.23 Miles)

City / County: Albemarle Co. Charlottesville City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-XMR-XMR01-SW (Impaired for VSCI). Initial Listing Date: 2012.

X-trib to Moores Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.23

Sources:

Dam or Impoundment Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H29R-03-BAC **Buck Island Creek**

Location: Buck Island Creek from the headwaters downstream to its confluence with the Rivanna River. (Start Mile: 9.17 End Mile: 0.00 Total Impaired Size: 9.17 Miles)

City / County: Albemarle Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-BID002.11 (2 violations of 12 samples for e-coli) and 2-BID005.83 (6 violations of 9 samples for e-coli in 2012, no new data in 2016). Initial Listing Date: 2008.

Buck Island Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			9.16

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H29R-03-BEN

Buck Island Creek

Location: Buck Island Creek from the 5 mile upper limit of the PWS designation for the Lake Monticello Service Authority Public Water Intake downstream to its confluence with the Rivanna River. (Start Mile: 2.66 End Mile: 0.00 Total Impaired Size: 2.66 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-BID-BKI01-SW (Impaired for VSCI). Initial Listing Date: 2010

Buck Island Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.65

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H29R-04-BEN **Carroll Creek**

Location: Carroll Creek and tributaries from the headwaters downstream to its confluence with the Rivanna River. (Start Mile: 18.46
End Mile: 0.00 Total Impaired Size: 18.46 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 2-CRR000.27 (Impaired for VSCI) and 2-CRR-CRL01-SW (Impaired for VSCI). Initial Listing Date: 2010.

Carroll Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			18.45

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H30R-01-BEN Mechunk Creek

Location: Mechunk Creek from the headwaters downstream to the DOC water intake near the Route 250 bridge crossing. (Start Mile: 19.87 End Mile: 7.27 Total Impaired Size: 12.60 Miles)

City / County: Albemarle Co. Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at stations: 2-MCK007.47 (Impaired for VSCI) and 2-MCK-MCK02-SW (Impaired for VSCI). Initial Listing Date: 2012.

Mechunk Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			12.60

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H30R-02-BEN

East Prong Beaverdam Creek

Location: East Prong Beaverdam Creek and tributary from the headwaters downstream to its confluence with Beaverdam Creek.
(Start Mile: 4.70 End Mile: 0.00 Total Impaired Size: 4.70 Miles)

City / County: Fluvanna Co. Louisa Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-BEP-BVE01-SW (Impaired for VSCI). Initial Listing Date: 2012.

East Prong Beaverdam Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.69

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H30R-03-BEN Jacks Branch

Location: Jacks Branch and tributary from the headwaters downstream to its confluence with Mechunk Creek. (Start Mile 7.17 End Mile 0.00 Total Impaired Size: 7.17 Miles)

City / County: Albemarle Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 2-JAK-JCK01-SW (Impaired for VSCI). Initial Listing Date: 2012.

Jacks Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			7.16

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H31R-02-BEN Carys Creek

Location: Carys Creek from the headwaters downstream to the confluence with a major tributary upstream of the Rivanna River. (Start Mile: 1.80 End Mile: 0.00 Total Impaired Size: 1.80 Miles)

City / County: Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-CRY000.69 (Impaired for VSCI) and 2-CRY-CYC01-SW (Impaired for VSCI). Initial Listing Date: 2010.

Carys Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.79

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H31R-03-BEN X-trib to Boston Creek

Location: X-trib to Boston Creek from the headwaters downstream to its confluence with Boston Creek. (Lake Monticello) (Start Mile: 2.30 End Mile: 0.00 Total Impaired Size: 2.30 Miles)

City / County: Albemarle Co. Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-XYX-XYX01-SW (Impaired for VSCI). Initial Listing Date: 2010.

X-trib to Boston Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.29

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H31R-04-BEN X-trib to Rivanna River

Location: X-trib to the Rivanna River from the headwaters downstream to its confluence with the Rivanna River. (Start Mile: 1.00 End Mile: 0.00 Total Impaired Size 1.00 Mile)

City / County: Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-XRN-XZZ01-SW (Impaired for VSCI). Initial Listing Date: 2010

X-trib to Rivanna River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.00

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H31R-05-BAC Rivanna River

Location: Rivanna River from its confluence with Mechunk Creek downstream to its confluence with Cunningham Creek. (Start Mile: 23.72 End Mile: 15.34 Total Impaired Size: 8.38 Miles)

City / County: Fluvanna Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-RVN015.97 (10 violations of 66 samples for e-coli).
Initial Listing Date: 2016.

Rivanna River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			8.38

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H32L-01-DO

Fluvanna Ruritan Lake

Location: Fluvanna Ruritan Lake (Total Impaired Size: 51.13 Acres)

City / County: Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

This lake is impaired due to violations of the DO WQS at station: 2-CFK004.34 (6 violations of 42 samples for pH). Initial Listing Date: 2012.

Fluvanna Ruritan Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:		51.13	

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H32R-01-BEN

Middle Fork Cunningham Creek

Location: Middle Fork Cunningham Creek and tributary from the headwaters downstream to its confluence with an unnamed tributary originating near Antioch. (Start Mile: 7.43 End Mile: 3.41 Total Impaired Size: 4.02 Miles)

City / County: Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5C

This segment had a fully supporting for VSCI benthic assessment during the 2010 cycle. This benthic impairment is believed to be natural (drought). The segment remains not supporting as two unimpaired benthic assessments are required to de-list. Initial Listing Date: 2004.

Middle Fork Cunningham Creek

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Aquatic Life

Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:

4.02

Sources:

Natural Conditions - Water
Quality Standards Use
Attainability Analyses
Needed



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H32R-02-BAC

Middle Fork Cunningham Creek

Location: Middle Fork Cunningham Creek and tributary from the headwaters downstream to its confluence with Cunningham Creek.
(Start Mile: 7.43 End Mile: 0.00 Total Impaired Size: 7.43 Miles)

City / County: Fluvanna Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at stations: 2-CNM002.25 (6 violations of 18 samples for e-coli in 2010, 1 of 9 in 2012, no new data in 2016, remained impaired) and 2-CNM004.16 (2 violations of 12 samples for e-coli in 2010, 1 of 9 in 2012, no new data in 2016, remains impaired). Initial Listing Date: 2004.

Middle Fork Cunningham Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.42

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H32R-02-BEN

Middle Fork Cunningham Creek

Location: Middle Fork Cunningham Creek from its confluence with an unnamed tributary originating near Antioch downstream to its confluence with Cunningham Creek. (Start Mile: 3.41 End Mile: 0.00 Total Impaired Size: 3.41 Miles)

City / County: Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-CNM-CNM07-SW (Impaired for VSCI) and 2-CNM001.75 (Impaired for VSCI). Initial Listing Date: 2010

Middle Fork Cunningham Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.40

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H32R-03-BAC

Middle Fork Cunningham Creek X-trib

Location: Middle Fork Cunningham Creek X-trib from the headwaters downstream to its confluence with the Middle Fork Cunningham Creek. (Start Mile: 3.77 End Mile: 0.00 Total Impaired Size: 3.77 Miles)

City / County: Fluvanna Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-XPA000.57 (2 violations of 12 samples for e-coli, no data in 2016, impairment carries forward to 2016). Initial Listing Date: 2008.

Middle Fork Cunningham Creek X-trib	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			3.77

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H32R-04-BEN

X-trib to North Fork Cunningham Creek

Location: X-trib to North Fork Cunningham Creek from the headwaters downstream to its confluence with the North Fork Cunningham Creek. (Start Mile: .59 End Mile: 0.00 Total Impaired Size: .59 Miles)

City / County: Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-XCF-XCF01-SW (Impaired for VSCI). Initial Listing Date: 2010

X-trib to North Fork Cunningham Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			0.59

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H32R-05-BEN

Cunningham Creek North Fork

Location: North Fork Cunningham Creek from the Fluvanna Ruritan Lake outfall downstream to its confluence with Cunningham Creek. (Start Mile: 4.19 End Mile: 0.00 Total Impaired Size: 4.19 Miles)

City / County: Albemarle Co. Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station 2-CFK001.31 (Impaired for VSCI).
Initial Listing Date; 2012.

Cunningham Creek North Fork	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.18

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H32R-06-BEN

Cunningham Creek

Location: Cunningham Creek from the confluence of the Middle/South Fork Cunningham Creek downstream to its confluence with the Rivanna River. (Start Mile: 5.62 End Mile: 0.00 Total Impaired Size (5.62 Miles))

City / County: Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at stations: 2-CXB000.86 (Impaired for VSCI) and 2-CXB-CXB02-SW (Impaired for VSCI). Initial Listing Date: 2012.

Cunningham Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.62

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H33L-01-CHLA **Powhatan Lake**

Location: Upper and lower

City / County: Powhatan Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Chlorophyll-a / 5A

In 2014 the lake was impaired for aquatic life due to Chlorophyll a pooled violations at 2-STG000.21 and 2-STG000.91.

During the 2016 cycle there was no new data so the segment remained impaired for Chlorophyll a.

Powhatan Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Chlorophyll-a - Total Impaired Size by Water Type:			61.36

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H33L-01-DO

Powhatan Lake

Location: Upper and lower

City / County: Powhatan Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2012 cycle the segment became a reservoir. The segment was impaired for aquatic life use due to DO violations at stations 2-STG000.21 and 2-STG000.91 with a pooled rate of 5/25.

During the 2014 cycle the segment remained impaired for aquatic life use due to DO violations at 2-STG000.21 and 2-STG000.91 with a pooled rate of 11/92.

During the 2016 cycle there was no new data so the segment remained impaired for DO.

Powhatan Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:		61.36	

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H33R-02-DO **Deep Creek**

Location: Segment begins at the confluence of Deep Creek with Sallee Creek, and extends downstream to the Route 684 bridge.

City / County: Powhatan Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2008 cycle, Deep Creek from Maxey Mill Creek to the Route 684 bridge (rm 3.00) was assessed as impaired of the Aquatic Life Use because of a dissolved oxygen exceedance rate of 2/12 at 2-DCR003.00. The TMDL is due in 2020, but natural conditions are suspected.

The DO exceedance rates at other stations were acceptable in the 2010 cycle (2/26 at 2-DCR007.93 and 1/11 at 2-DCR013.89); therefore, the upstream segment was shortened to the confluence with Sallee Creek.

The exceedance rate at 2-DCR003.00 is 3/23 during the 2016 cycle.

Deep Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			0.37
Oxygen, Dissolved - Total Impaired Size by Water Type:			

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H34R-04-BEN Phils Creek

Location: Phils Creek from its headwaters to its mouth at Byrd Creek.

City / County: Fluvanna Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2016 cycle, Phils Creek was assessed as impaired of the Aquatic Life Use due to an altered benthic community at 2-PHL003.97, which is located at the Route 629 bridge.

Phils Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.69

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H36R-02-BEN **Randolph Creek**

Location: Randolph Creek from the headwaters to the upstream limit of Sports Lake.

City / County: Buckingham Co. Cumberland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-RND003.57 (2001 Probmon)

IM - Habitat assessment indicates sediment impacts.

Randolph Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			11.80

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H36R-03-BEN **Buffalo Creek**

Location: Buffalo Creek from its headwaters to its mouth on the Willis River

City / County: Buckingham Co. Cumberland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-BFC001.11 (2013 Bio)

IM - Buffalo Creek had marginal habitat availability and moderate sediment deposition.

Buffalo Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			7.10

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H36R-05-BEN **Reynolds Creek**

Location: Reynolds Creek from its headwaters to its mouth on the Willis River

City / County: Cumberland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-RLD000.48 (Ambient & 2009/2012 Bio)

IM - This stream is in the Cumberland State Forest. It is characterized by marginal bank stability, excessive sediment deposition, and marginal epifaunal substrate. Biologist notes from 2009 and 2012 indicate very unstable habitat, mostly consisting of leaf packs and woody debris that were covered in sediment. Heavy local watershed erosion was also noted. In 2012 there was noted beaver activity affecting habitat availability.

Reynolds Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.84

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H36R-06-BEN Bigger Creek

Location: Bigger Creek from its headwaters to the mouth on Reynolds Creek.

City / County: Cumberland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-BIO000.45 (2009/2014 Bio)

IM - This site is in the Cumberland State Forest and had marginal bank stability, pronounced sediment deposition, and suboptimal epifaunal substrate.

Bigger Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.43

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H38R-01-PH **Little Creek**

Location: Little Creek below its confluence with Cheneys Creek.

City / County: Goochland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

Little Creek was impaired of the Aquatic Life Use during the 2012 cycle due to a pH violation rate of 2/12 at 2-LLI000.58, which is located off of Route 607.

Little Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			0.65

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H38R-07-DO

Branch Creek

Location: Branch Creek from its headwaters to its mouth at Fine Creek.

City / County: Powhatan Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2008 cycle, Branch Creek was assessed as impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/10 at the Route 615 bridge (2-BNH001.76).

Branch Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			5.51

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-01-PH

Broad Branch

Location: Broad Branch from its headwaters to the dam above Route 623.

City / County: Goochland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

In 2006, Broad Branch was assessed as not supporting the Aquatic Life Use due to three high pH exceedances in the summer of 2003 at 2-BOD003.31, which is located downstream of a pond draining a golf course.

Broad Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			2.63

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-05-BEN **Powhite Creek**

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

City / County: Chesterfield Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle, Powhite Creek was assessed as not supporting of the Aquatic Life Use goal due to impairment of the benthic community at station 2-PWT001.97, which is a freshwater probabilistic monitoring station.

The station was replaced by 2-PWT001.23 because the location is a more appropriate stream type (non-swampy). Monitoring at 2-PWT001.23 in 2012-2013 also indicated impairment.

Powhite Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.13

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-06-PH

Reedy Creek

Location: Reedy Creek from the tributary upstream of Roanoke Street downstream to Roanoke Street.

City / County: Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

During the 2010 cycle, the portion of Reedy Creek around station 2-RDD000.99 was assessed as impaired of the Aquatic Life Use due to elevated pH levels.

The source of the pH impairment was considered unknown. However, the pH exceedances were 9.6 and 9.8 SU, which is substantially higher than at other stations on Reedy Creek and may be due to pooled water in the channelized stream.

The segment length was adjusted in the 2014 cycle to end at Roanoke Street because sampling at all other stations within Reedy Creek remain acceptable, including ACB station 2-RDD-RC1-ACB which is just downstream.

Reedy Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			0.35

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-07-DO **XZE - James River, UT**

Location: The tributary from its headwaters to its mouth at the James River.

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2010 cycle, the tributary was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 5/12 at station 2-XZE000.19, which is located at a private drive downstream of Tarrington.

XZE - James River, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.30

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-08-DO **XAB - Salles Creek, UT**

Location: The tributary from its headwaters to its mouth at Salles Creek.

City / County: Chesterfield Co. Goochland Co. Henrico Co. Powhatan Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2010 cycle, the unnamed tributary was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen exceedances at 2-SAL001.93, which is located at Route 711.

The violation rate was 3/19 during the 2014 cycle.

XAB - Salles Creek, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			0.10

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-08-PH

XAB - Salles Creek, UT

Location: The tributary from its headwaters to its mouth at Salles Creek.

City / County: Chesterfield Co. Goochland Co. Henrico Co. Powhatan Co. Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

During the 2010 cycle, the unnamed tributary was assessed as not supporting of the Aquatic Life Use due to pH exceedances at 2-SAL001.93, which is located at Route 711. The exceedance rate was 9/19 during the 2012 cycle.

XAB - Salles Creek, UT

Aquatic Life

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
--	------------------------	----------------------	------------------

pH - Total Impaired Size by Water Type:			0.10
---	--	--	-------------

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-09-DO

James River - South Channel

Location: The south channel of the James River around Belle Isle.

City / County: Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

In the 2012 cycle, the James River from the Boulevard Bridge downstream to the fall line was assessed as not supporting of the Aquatic Life Use because of low dissolved oxygen at 2-JMS111.48. The station is located on the south channel of the James River below the Canoe Run CSO outfall.

All other stations within the segment had acceptable exceedance rates. Therefore, the segment was separated during the 2014 cycle. The impairment is limited to the south channel between the Belle Island Dam and the Brown's Island dam. The north channel was partially delisted.

The exceedance rate was 10/60 at 2-JMS111.48 during the 2016 cycle.

James River - South Channel	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			0.94

Sources:

Combined Sewer Overflows Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-10-DO

Bernards Creek

Location: The mainstem of Bernards Creek.

City / County: Chesterfield Co. Powhatan Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2014 cycle, Bernards Creek was impaired of the Aquatic Life Use due to dissolved oxygen exceedances at 2-BOR001.73, which is located at the Route 711 bridge. Monitoring near the mouth was acceptable (0/3 at 2-BOR000.02).

The exceedance rate was 4/27 during the 2016 cycle.

Bernards Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			8.12

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-11-HG

James River

Location: The James River from the rivermile 128.14 near the confluence with Norwood Creek downstream to the confluence with Tuckahoe Creek.

City / County: Goochland Co. Powhatan Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

The segment was assessed as not supporting of the Fish Consumption Use in the 2010 cycle due to mercury exceedances in redbreast sunfish and quillback carpsucker in 2003 and smallmouth bass in 2005. The monitoring occurred at station 2-JMS127.50, which is located at the end of Route 652 at Watkins Landing.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:			4.37

Sources:

Atmospheric Deposition -
Toxics

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-13-BEN Stony Run

Location: Stony Run from its headwaters to the extent of backwater at the pond.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle, upper Stony Run was assessed as impaired of the Aquatic Life Use due to impairment of the benthic community at 2-SNJ001.88 (downstream of Church Road). Additional sampling in 2012 confirmed the impairment.

Stony Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.01

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-14-BEN Jones Creek

Location: Jones Creek from its headwaters downstream to its mouth at the extent of backwater of Woodberry Pond.

City / County: Powhatan Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle, Jones Creek was assessed as impaired of the Aquatic Life Use due to impairment of the benthic community at 2005 freshwater probabilistic monitoring station 2-JOH004.23.

Additional monitoring in 2012 and 2013 confirmed the impairment.

Jones Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.19

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-15-BEN Stony Run, UT (XYT)

Location: The unnamed tributary from its headwaters to its mouth at Stony Run.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle the tributary was assessed as impaired of the Aquatic Life Use due to impairment of the benthic communities at stations 2-XYT000.04 and 2-XYT000.29, which were located downstream and upstream of the Barrington pipeline spill.

Stony Run, UT (XYT)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.27

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-16-HG

James River

Location: The James River from the Boulevard Bridge to the fall line at approximately the railroad trestle above Mayos Bridge.

City / County: Richmond City

Use(s): Fish Consumption

Cause(s) /

VA Category: Mercury in Fish Tissue / 5A

During the 2010 cycle, the James River from the Boulevard Bridge to the fall line was assessed as not supporting of the Fish Consumption Use due to mercury exceedances in 1 sp. in 2004 at 2-JMS109.98 and 3 sp. in 2003, 2 sp. in 2004 & 2 sp in 2006 at 2-JMS110.00.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:			3.88

Sources:

Atmospheric Deposition -
Toxics

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-17-CDANE **James River**

Location: The James River from the Boulevard Bridge to the fall line at approximately the railroad trestle above Mayos Bridge.

City / County: Richmond City

Use(s): Fish Consumption

Cause(s) /

VA Category: Chlordane / 5A

During the 2010 cycle, the James River from the Boulevard Bridge to the fall line was assessed as not supporting of the Fish Consumption Use due to chlordane exceedances in 1 sp. in 2003 and 2 sp. in 2005 (carp and striped bass) at 2-JMS110.00.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			3.88
Chlordane - Total Impaired Size by Water Type:			3.88

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-17-DDE

James River

Location: The James River from the Boulevard Bridge to the fall line at approximately the railroad trestle above Mayos Bridge.

City / County: Richmond City

Use(s): Fish Consumption

Cause(s) /

VA Category: DDE / 5A

During the 2010 cycle, the James River from the Boulevard Bridge to the fall line was assessed as not supporting of the Fish Consumption Use due to DDE exceedances in carp in 2002 and blue catfish in 2003 at 2-JMS110.00.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
DDE - Total Impaired Size by Water Type:			3.88

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-17-DDT

James River

Location: The James River from the Boulevard Bridge to the fall line at approximately the railroad trestle above Mayos Bridge.

City / County: Richmond City

Use(s): Fish Consumption

Cause(s) /

VA Category: DDT / 5A

During the 2010 cycle, the James River from the Boulevard Bridge to the fall line was assessed as not supporting of the Fish Consumption Use due to DDT exceedances in carp in 2002, blue catfish in 2003, and striped bass in 2005 at 2-JMS110.00.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			3.88
DDT - Total Impaired Size by Water Type:			3.88

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-19-DO Deep Run

Location: Deep Run from the dam at river mile 1.47 to its mouth at Tuckahoe Creek.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

Deep Run was impaired of the Aquatic Life Use during the 2012 cycle due to a dissolved oxygen exceedance rate of 2/12 at 2-DPR001.00, which is located at the Route 6 bridge.

Deep Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			1.49

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-24-DO

Little Tuckahoe Creek

Location: Headwaters to mouth

City / County: Goochland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

There have been historically been widespread dissolved oxygen exceedances on separate segments within the Tuckahoe Creek watershed.

The Tuckahoe Creek Natural Conditions Assessment report was completed in November 2005. The DO violations on Little Tuckahoe Creek were determined to be at periods when the stream flows were <7Q10 and the stream was recommended for delisting. The stream was delisted during the 2006 cycle.

During the 2014 cycle, the exceedance rate was 2/11; therefore, Little Tuckahoe Creek was relisted as impaired of the Aquatic Life Use.

Although the stream has extremely swampy physical characteristics, the watershed is urbanized; therefore, the natural conditions report will be considered a low priority.

Little Tuckahoe Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			6.02

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-27-BEN Deep Run

Location: Deep Run from its headwaters to the extent of backwater at the pond.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2016 cycle, upper Deep Run was impaired of the Aquatic Life Use due to an altered benthic community at 2-DPR003.75, which is located at the northern edge of Deep Run Park.

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

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-28-BEN Stony Run

Location: Deep Run from the dam of the pond downstream to the mouth at Tuckahoe Creek.

City / County: Henrico Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2016 cycle, lower Stony Run was impaired of the Aquatic Life Use due to an altered benthic community at 2-SNJ000.19, which is located at Falcon Bridge Road.

Stony Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.35

Sources:

Non-Point Source

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: H39R-29-DO

XBH - Reedy Creek, UT

Location: Headwaters to its mouth at Reedy Creek

City / County: Richmond City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

During the 2016 cycle, the unnamed tributary was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/13 at 2BXBH-UT1-ACB, which is located at Bassett Avenue and West 46th Street. The station is sampled by the Alliance for the Chesapeake Bay.

XBH - Reedy Creek, UT

Aquatic Life

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			0.11

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I01R-01-TEMP

Jackson River

Location: Jackson River from its confluence with Dry Branch downstream to the upper end of Lake Moomaw. (Start Mile: 84.37 End Mile: 55.5 Total Impaired Size: 28.87 Miles). This impairment was lengthened in 2010 with the addition of an impaired upstream assessment unit.

City / County: Bath Co. Highland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5C

This segment is impaired due to violations of the temperature WQS at station: 2-JKS058.60 (7 violations of 36 samples for temperature) and 2-JKS074.27 (3 violations of 12 samples for temperature in 2014, no new data in 2016). Initial Listing Date: 2004. This impairment is believed to be natural.

Jackson River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			28.86

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I01R-02-TEMP Bolar Run

Location: Bolar Run from the upper Bolar Spring downstream to its confluence with the Jackson River. (Start Mile: 2.10 End Mile: 0.00 Total Impaired Size: 2.10 Miles). This impairment was shortened following review of WQS and an upstream mountainous zone assessment unit was de-listed.

City / County: Bath Co. Highland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5C

This segment is impaired due to violations of the temperature WQS at station: 2-BOL000.97 (3 violations of 12 samples for temperature in 2008, 0 violations of 3 samples for temperature in 2010, no data in 2016, impairment carries forward). Initial Listing Date: 2006.

Bolar Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			2.09

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I02R-02-BAC

Back Creek

Location: Back Creek from the headwaters downstream to its confluence with East Back Creek. (Start Mile: 41.28 End Mile: 26.21
Total Impaired Size: 15.07 Miles)

City / County: Highland Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the E-coli WQS at station: 2-BCC026.08 (2 violations of 12 samples for e-coli).
Initial Listing Date: 2010

Back Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			15.05

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I04R-01-BAC

Falling Spring

Location: Falling Spring Creek mainstem from its mouth to confluence of an unnamed tributary located at 37°52'48" / 79°54'52".

City / County: Alleghany Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Station 2-FAS001.08 (Rt. 640 Bridge at Falling Spring Community) There are no additional data beyond the 2008 Integrated Report where two escherichia coli (E.coli) samples exceed the 235 cfu/100 ml instantaneous criterion from seven samples within the 2008 and 2010 data windows. The exceeding values are 250 and 580 cfu/100 ml. This 2008 initial 303(d) Listing is for 5.10 miles in Alleghany County.

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

Sources:

Livestock (Grazing or Feeding Operations)

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

Unspecified Domestic Waste



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I09R-01-BAC

Smith Creek

Location: Smith Creek mainstem from its mouth on the Jackson River upstream 1.20 miles; the beginning of the WQS natural trout section.

City / County: Alleghany Co.

Use(s): Recreation

Cause(s) /

VA Category: Fecal Coliform / 5A

2-SMH000.08 (Ridgeway Street - Clifton Forge) There are no additional data beyond the 2006 Integrated Report (IR) and no escherichia coli (E.coli) data available. The 2004 303(d) Listed waters (1.17 miles) remain. Fecal coliform bacteria (FC) exceeded the former 400 cfu/100 ml instantaneous criterion in eight of 16 observations with values ranging from 500 to 3500 cfu/100 ml. Three of three FC samples exceed in 2010 based on the former criterion ranging from 500 to 1600 cfu/100 ml. The 2008 data window produces the same end results where FC exceeds the former instantaneous criterion in seven of 15 observations with a range of exceedance from 500 to 3500 cfu/100 ml. Escherichia coli (E.coli) replaces fecal coliform bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters] when data become available.

Smith Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			1.21
Fecal Coliform - Total Impaired Size by Water Type:			1.21

Sources:

Municipal (Urbanized High Density Area)
Wildlife Other than Waterfowl

Sanitary Sewer Overflows (Collection System Failures)

Unspecified Domestic Waste

Wastes from Pets



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I09R-01-DO

Jackson River

Location: Jackson River mainstem from the Westvaco main processing outfall downstream to just above the Lowmoor community.

City / County: Alleghany Co. Covington City

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

The original 1998 IDs, VAW-I04R and VAW-I09R, 1996 303(d) Listed dissolved oxygen impairment was combined into one in 2002 for 11.19 miles.

2010 Assessment station locations are:

2-JKS013.29 - Off Rt. 696 above Lowmoor (I09R)

2-JKS018.68 - Rt. 18 Bridge at Covington (I09R)

2-JKS022.15 - Industrial Park behind Walmart

2-JKS023.61 - City Park - Covington at gage (I09R)

Diurnal swings in dissolved oxygen (DO) cause nonsupport of the aquatic life use for a total of 11.19 miles extending from river mile 24.21 (I04R- 0.46 miles) to 13.02 (I09R- 10.73 miles) (37°46'49.59 / 079°55'40.00").

The DO impairment remains for final determination of Use Support via the TMDL Study. 2012 flow adjusted trend analysis finds a significant increasing trend for dissolved oxygen.

2-JKS023.61- Zero excursions of the minimum DO criterion are found in the 2016 assessment from 73 measurements. The 2014 assessment reports zero excursions of the 4.0 mg/l minimum DO criterion from 50 DO measurements. Zero excursions of the minimum DO criterion are found from 46 measurements in 2012. The 2010 assessment reports no DO excursions of the minimum criterion from 48 measurements within the ambient monitoring program. The 2008 assessment also found no DO measurements in excess of the DO minimum criterion from 52 observations. However diurnal effects have been noted in previous assessments. The 2004 IR reports DO exceeds the WQS minimum of 4.0 mg/l in six of 26 1998 special study observations as well as those described below at 2-JKS022.15.

Both the 2006 and 2012 flow adjusted trend analysis reveals significant declining trends in total phosphorus and total nitrogen at 2-JKS023.61. However elevated total phosphorus (TP) levels continue resulting in 'Observed Effects'. The 2016 assessment finds four elevated total phosphorus (>0.20 mg/l) values ranging from 0.24 to 0.52 mg/l from 36 observations. TP results within the 2014 data window find six of 38 TP samples are elevated greater than 0.20 mg/l. Values range from 0.24 - 0.52 mg/l. The 2012 assessment reports TP results find five of 41 samples greater than 0.20 mg/l. Elevated TP samples range from 0.24 to 0.52 mg/l. The 2010 assessment finds six of 40 observations above 0.20 mg/l. Excessive values range from 0.28 to 0.40 mg/l. 2008 elevated TP levels are found in 17 of 51 samples with a maximum value of 1.40 mg/l and minimum of 0.23 mg/l. 2006 TP concentrations are elevated in 25 of 48 samples with excessive values also ranging from 0.23 to 1.40 mg/l.

2-JKS022.15- 2004 IR reports 1998 DO Recordings find 222 excursions of the minimum 4.0 mg/l WQS criterion from 481 measurements; Diurnal affects are noted. These data are older than 5 years.

2-JKS018.68- The 2016 IR reports no excursions of the DO minimum criterion from 63 measurements. However three measurements below 6.0 mg/l are recorded outside the 2016 data window in 2015. No excursions of the 4.0 mg/l minimum dissolved oxygen criterion are found from 41 measurements in 2014. Twenty-five DO measurements find no excursions of the minimum criterion within the 2012 data window. No excursions of the minimum criterion are found from 20 observations for the 2010 assessment. DO data within the 2008 data window find no excursions of the 4.0 mg/l minimum criterion from 10 measurements. However diurnal effects have been noted in previous assessments.

Two of 31 total phosphorus observations are elevated (>0.20 mg/l) at 0.25 and 0.41 mg/l within the 2016 data window. 2014 elevated TP results greater than 0.20 mg/l are three of 32 obs. At 0.22, 0.30 and 0.41 mg/l. 2012 TP data are two of 22 measurements.; elevated at 0.22 and 0.30 mg/l. Two of 16 TP samples are elevated above 0.20 mg/l with the 2010 assessment. Excessive values range from 0.22 to 0.30 mg/l. 2008 TP assessment results find no elevated TP levels from nine observations with no additional data beyond the 2006 IR. The 2006 IR reports six of 18 observations in excess of 0.20 mg/l. TP excursions ranged from 0.30 to 0.70 mg/l.



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

2-JKS013.29- The 2014 assessment records zero exceedances of the minimum DO criterion of 4 mg/l from 25 measurements. No excursions of the minimum DO criterion are found within the 2012 data window from 9 measurements. 2010 DO data report no exceeding values from eight observations. Ambient data within the 2008 assessment data window report no excursions of the WQS minimum criteria for DO. However diurnal effects have been noted in previous assessments.

Elevated total phosphorus values of 0.43 and 0.71 mg/l are found within the 2016 data window from 13 observations. Two TP observations from a total of 13 in 2014 are greater than 0.20 mg/l at 0.43 and 0.70 mg/L. Only one elevated TP value (0.43 mg/l) from nine samples is recorded in 2012. Two TP samples are within the 2010 data window with none greater than 0.20 mg/l. The 2008 IR reports elevated TP above 0.20 mg/l in six of 12 samples with excessive values ranging from 0.29 to 1.41 mg/l.

Jackson River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			11.36

Sources:

Industrial Point Source
Discharge

Municipal Point Source
Discharges



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I09R-01-PCB

Jackson River

Location: The Jackson River from the Covington water intake downstream to just above the Lowmoor community.

City / County: Alleghany Co. Covington City

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

The 2008 Integrated Report (IR) produces the initial 303(d) Listing of these waters for a total of 12.63 miles.

2-JKS023.88 (Covington City Park) 2005 fish tissue collections find exceedances above the former WQS based PCB TV of 54 ppb (VDH 50) from a single species. Two carp are found with tissue values of 66.4 (68.0 cm) and 71.3 ppb (61.31 cm). Application of the new WQS of 20 ppb adds three additional carp sizes (63.9 cm) exceeding at 28.81 ppb, (63.2 cm) at 35.96 and (51-58 cm) at 37.48 ppb. There are no additional data.

Jackson River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			12.63

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I09R-02-BAC

Jackson River

Location: Jackson River mainstem from the Covington water intake downstream to just below the Lexington Avenue Bridge.

City / County: Alleghany Co. Covington City

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The original 3.38 mile waters were 1998 303(d) listed for fecal coliform (FC) bacteria and delisted for bacteria October 2005 as approved by the U.S. EPA (Fed. ID - NA) where only one exceedance from 24 observations are reported via the 2006 Integrated Report (IR) for escherichia coli (E. coli) bacteria.

The bacteria impairment returned with the 2008 Integrated Report (IR) based on E. coli excursions at 2-JKS023.61. Data within the 2010 data window results in an additional extension of the impairment from stations 2-JKS018.68 and 2-JKS015.60. The impairment extends a total of 12.63 miles.

2-JKS023.61 (Covington City Park) Fourteen of 36 E.coli observations exceed the WQS instantaneous criterion of 235 cfu/100 ml. The range of exceeding values is from 425 cfu/100 ml to 24,196. The 2014 IR records 16 of 36 E.coli samples in excess of the instantaneous criterion. Excessive values range from 320 to greater than 2000 cfu/100 ml. Seventeen of 37 E.coli samples exceed the instantaneous criterion within the 2012 data window. Excessive values range from 250 cfu/100 ml to greater than 2000. 2010 results produce nine of 33 Escherichia coli (E. coli) observations in excess of the instantaneous criterion. Exceeding values range from 320 to 1400 cfu/100 ml. 2008 IR found four of 27 E. coli observations in excess of the instantaneous criterion. Exceeding values range from 250 to 1400 cfu/100 ml.

2-JKS018.68 (Rt. 8 Bridge at Covington) Six of 24 E.coli samples exceed the instantaneous criterion within the 2016 data window. Excessive values range from 275 to greater than 2000 cfu/100 ml. The 2014 data window finds E.coli exceeds 235 cfu/100 ml instantaneous criterion in seven of 24 samples. Excursions range from 250 to 950 cfu/100 ml. There are no additional E.coli data within the 2012 data window. Three of 12 E. coli observations exceed the instantaneous criterion ranging from 550 to 380 cfu/100 ml in 2010.

2-JKS015.60 (K-Mart Parking Lot, SE corner) There are no additional E.coli data within the 2012, 2014 or 2016 data windows. 2010 E. coli observations exceed the 235 cfu/100 ml criterion in two of 12 observations. Exceeding values range from 250 to 450 cfu/100 ml.

Jackson River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			12.63

Sources:

Municipal (Urbanized High Density Area)

Sanitary Sewer Overflows (Collection System Failures)

Urban Runoff/Storm Sewers



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I09R-02-TEMP Wilson Creek

Location: Wilson Creek from the headwaters downstream to the upper end of Douthat Lake pool. (Start Mile: 14.23 End Mile: 7.48
Total Impaired Size: 6.75 Miles)

City / County: Bath Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5C

This segment is considered impaired due to violations of the temperature WQS. This is carried from the 2006 assessment as no new data are available in the 2016 cycle as well and is believed to be natural. Initial Listing Date: 2004.

Wilson Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			6.74

Sources:

Drought-related Impacts Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I10R-01-TEMP

Potts Creek

Location: Potts Creek from the Paint Bank Branch confluence downstream to the Alleghany / Craig County Line.

City / County: Alleghany Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5C

2-POT030.66- (Above the Route 18 Bridge near campsite). The 2016 Integrated Report (IR) finds two of 12 temperature observations exceed the Class V temperature criterion. The two excursions are 21.1°C (7/01/2014) and 21.7 (9/04/2014). There are no additional data beyond the 2008 Integrated Report. No excursions of the Class V 21°C criterion are found from three remaining measurements within the 2012 data window. The 2010 (12 measurements) and 2008 (13 measurements) IRs find the same temperature excursions as in the 2006 IR initial 303(d) Listing where the Class V Temp criterion of 21 °C exceeds in three of 12 measurements. Temperature exceedances occur in July and September of 2003 and 2004 ranging from 21.7 to 23 °C.

Potts Creek

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Temperature, water - Total Impaired Size by Water Type:

5.66

Sources:

Natural Conditions - Water
Quality Standards Use
Attainability Analyses
Needed



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I12R-01-BAC

Cowpasture River

Location: Cowpasture River from the headwaters downstream to its confluence with Shaws Fork. (Start Mile: 87.78 End Mile: 75.48
Total Impaired Size: 8.3 Miles)

City / County: Bath Co. Highland Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-CWP075.64 (2 violations of 12 samples for e-coli)
Initial Listing Date: 2016

Cowpasture River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			8.30

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I13R-01-BAC

Bullpasture River

Location: Bullpasture River from the headwaters downstream to just below its confluence with the Davis Run. (Start Mile: 24.56 End Mile: 12.62 Total Impaired Size: 11.94 Miles) This impairment length was shortened in 2010, lower section fully supporting.

City / County: Bath Co. Highland Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is considered impaired due to violations of the e-coli bacteria standard at stations: 2-BLP015.32 (4 violations of 20 samples for e-coli in 2012, no new data in 2016, segment remains impaired). Initial Listing Date: 2006.

Bullpasture River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.94

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I13R-02-TEMP

Bullpasture River

Location: Bullpasture River from the headwaters downstream to its confluence with the Cowpasture River. (Start Mile: 24.56 End Mile: 0.00 Total Impaired Size: 24.56 Miles)

City / County: Bath Co. Highland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS at stations: 2-BLP000.79 (15 violations of 136 samples for temperature) and 2-BLP015.32 (3 violations of 11 samples for temperature). Initial Listing Date: 2012.

Bullpasture River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			24.56

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I14R-04-PH

Laurel Run

Location: Laurel Run from the headwaters downstream to its confluence with Dry Run. (Start Mile: 2.04 End Mile: 0.00 Total Impaired Size: 2.04 Miles)

City / County: Bath Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA VT10 (2 violations of 14 samples for pH) Data now outside the 2016 assessment data window, however, the impairment carries forward. Initial Listing Date 2006.

Laurel Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			2.03

Sources:

Atmospheric Deposition -
Acidity



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I16R-01-PH

Porters Mill Creek

Location: Porters Mill Creek and headwater tributary from the headwaters downstream to its confluence with Mill Creek. (Start Mile: 5.17 End Mile: 0.00 Total Impaired Size: 5.17 Miles)

City / County: Bath Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA VT15 (10 violations of 14 samples for pH) in 2010. This data is now outside the assessment data window for 2016, however, the impairment carries forward to 2014. Initial Listing Date: 2006.

Porters Mill Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			4.85

Sources:

Atmospheric Deposition -
Acidity



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I18R-01-BAC

James River

Location: James River from the confluence of the Jackson and Cowpasture Rivers downstream to the mouth of Stull Run (JU37).

City / County: Botetourt Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This 2014 initial 303(d) Listing is a result of bacteria exceedances causing impairment of the Recreational Use.

2-JMS345.73- (Rt. 220 Bridge - near Gage) Escherichia coli exceed the WQS instantaneous criterion of 235 cfu/10 ml in three of 24 observations. Excessive values range from 250 to 550 cfu/10 ml. The 2014 IR reports E.coli exceedances occur in two of 12 samples. Values in excess of the WQS criterion are 250 and 400 cfu/100 ml.

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

Sources:

- | | | | |
|---|-------------------------------|----------------------------|---------------------------|
| Municipal (Urbanized High Density Area) | Rural (Residential Areas) | Unspecified Domestic Waste | Urban Runoff/Storm Sewers |
| Wet Weather Discharges (Non-Point Source) | Wildlife Other than Waterfowl | | |



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I18R-03-BAC

Sinking Creek

Location: Sinking Creek mainstem from its mouth on the James River upstream to the Route 697 crossing (JU38).

City / County: Botetourt Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This 2014 initial 303(d) Listing is a result of bacteria exceedances causing impairment of the Recreational Use.

2-SKG001.04 (Lower Ford - near Gala) There are no additional data beyond the 2014 Integrated Report (IR) where escherichia coli (E.coli) exceedances occur in two of 12 samples. Values in excess of the 235 cfu/10 ml instantaneous criterion are 400 and 1075 cfu/100 ml.

Sinking Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.42

Sources:

Livestock (Grazing or Feeding Operations)

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

Rural (Residential Areas)

Unspecified Domestic Waste

Wet Weather Discharges (Non-Point Source)

Wildlife Other than Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I19R-01-BAC

Craig Creek

Location: Craig Creek mainstem from the mouth of Turnpike Creek extending downstream to the Rt. 311 crossing located downstream of the Abbott community.

City / County: Craig Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The 2004 initial Listing basis is three of 27 fecal coliform (FC) samples exceeding the former 400 cfu/100 ml WQS instantaneous criterion. The maximum reported is 1100 cfu/100 ml with the remaining values at 900 and 500. These 2004 7.91 mile 303(d) Listed waters remain impaired for bacteria. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters].

2-CRG062.29- (Rt. 311 Bridge nearest New Castle) There are no additional data within the 2016 data window. The 2014 data window produces seven of 24 escherichia coli (E.coli) samples exceeding the 235 cfu/100 ml WQS instantaneous criterion. The exceeding values range from 280 to 1050 cfu/100 ml. The 2010 and 2012 assessments find two of 12 Escherichia coli (E.coli) samples exceeding the current 235 cfu/100 ml WQS instantaneous criterion. E.coli exceeding values are 280 and 400 cfu/100 ml. Data within the 2006 and 2008 data windows find one FC excursion (1100 cfu/100 ml) of the former instantaneous criterion of 400 cfu/100 ml from 15 samples.

Craig Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.90

Sources:

Livestock (Grazing or Feeding Operations)

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

Unspecified Domestic Waste

Wildlife Other than Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I22R-01-BAC

Barbours Creek

Location: Barbours Creek from just downstream of the Rt. 617 and 611 junction at the mouth of Valley Branch on downstream to its mouth on Craig Creek. (New Castle Quad).

City / County: Craig Co.

Use(s): Recreation

Cause(s) /

VA Category: Fecal Coliform / 5A

The 7.15 mile bacteria impairment initially 303(d) Listed in 2004 remains.

2-BAR000.60- (Rt. 614 Bridge) There are no additional bacteria data beyond the 2004 Integrated Report (IR). The 2004 IR reports the maximum fecal coliform (FC) of 1100 cfu/100 ml and a second at 500; both exceed the former WQS instantaneous criterion of 400 cfu/100 ml from 18 samples. The 2006 IR finds no excursions of the former WQS FC instantaneous criterion from nine samples. The 2008 data window finds no excursions of the aforementioned from 3 samples. There are no bacteria data within the 2010, 2012, 2014 or 2016 assessment data windows.

Barbours Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			7.15
Fecal Coliform - Total Impaired Size by Water Type:			

Sources:

Livestock (Grazing or Feeding Operations)

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

Unspecified Domestic Waste

Wildlife Other than Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I22R-01-PH

Mill Creek

Location: Mill Creek mainstem from ~2.0 miles upstream of its mouth on Craig Creek upstream to its headwaters and above the upstream most pond.

City / County: Craig Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

2-MIU002.97 (Upstream of Upper pond and downstream of former iron mine) Three 2010-2011 observations each of pH are in excess of the WQS acidic minimum criterion of 6.0 Standard Units (SU) at 5.2, 5.4 and 4.4 SU. This is a 2012 initial Listing. There are no additional data and the Aquatic Life Use remains impaired.

Mill Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			4.24

Sources:

Mine Tailings



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I22R-01-TEMP Barbours Creek

Location: Barbours Creek from its mouth on Craig Creek upstream to the I23 Watershed Boundary located just downstream of the Rt. 617 and 611 junction at the mouth of Valley Branch.

City / County: Craig Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5C

The original 7.15 mile temperature impairment continues with the 2014 Integrated Report (IR). The 2006 IR extended the impairment 6.29 miles (2-BAR010.10 - I23R) from the initial 2002 303(d) Listing (2-BAR000.60 - I22R). The 6.29 mile upstream extension is de-listed with the 2012 Integrated Report with station 2-BAR010.10 recording no exceeding Class VI temperatures of the 20°C WQS criterion from 15 observations.

2-BAR000.60- (Rt. 614 Bridge) There are no additional data beyond the 2004 IR. The 2004 assessment finds temperature exceeds the WQS 20°C natural trout water criterion in three of 18 observations with a maximum of 22°C on 7/10/00. Each of the remaining two temperature excursions occur on 7/08/98 (20.6°C) and 7/12/99 (20.5°C). The 2006 IR data window reveals one of nine temperature measurements in excess of the Class VI criterion. The 2008 data window finds no excursions from three measurements. There are no additional data within the 2016 assessment data window.

Barbours Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			7.15

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I22R-02-BAC

Craig Creek

Location: Craig Creek from the mouth of Johns Creek downstream to Barbours Creek confluence with Craig Creek

City / County: Craig Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

2-CRG048.53 (Below New Castle STP) - There are no additional data beyond the 2012 Integrated Report (IR). The 2012 initial 303(d) Listing results from escherichia coli (E.coli) exceedances from two of 12 samples within the 2012 data window. Values in excess of the 235 cfu/10 ml instantaneous criterion are 320 and 700 cfu/100 ml. A downstream station 2-CRG042.34 (Rt. 614 Bridge) records a single exceedance of greater than 2000 cfu/100 ml from 24 samples within the 2014 data window. The exceedance indicates potential for impairment although not impaired via Guidance.

Craig Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.43

Sources:

Livestock (Grazing or Feeding Operations)

Municipal (Urbanized High Density Area)

Unspecified Domestic Waste

Wastes from Pets

Wet Weather Discharges (Non-Point Source)

Wildlife Other than Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I22R-04-BAC

Little Patterson Creek

Location: Little Patterson Creek from just upstream of the Rt. 684 (Sugar Tree Hollow Rd.) crossing downstream to its confluence with Patterson Creek.

City / County: Botetourt Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The 2004 Integrated Report (IR) initially 303(d) Lists the 4.24 mile fecal coliform (FC) bacteria impairment. Escherichia coli replaces the fecal coliform impairment with the 2012 IR.

Station 2-LIP001.00 (Rt. 682 Bridge - Sugartree Hollow Rd.) There are no additional data beyond the 2012 Integrated Report (IR). Five of 12 escherichia coli (E.coli) samples exceed the 235 cfu/100 ml instantaneous criterion within the 2012 data window. Exceeding values range from 250 to 1300 cfu/100 ml. The 2004 IR reports FC exceeds the former 400 cfu/100 ml WQS instantaneous criterion in two of nine samples. The two exceedances are 2800 (2001) and 2100 cfu/100 ml (2001). In both the 2006 and 2008 assessments FC exceeds in two of 12 samples with the same excursions as in previous cycles. No additional data extended into the 2010 data window where three observations did not exceed.

Little Patterson Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			4.24

Sources:

Livestock (Grazing or Feeding Operations)

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

Unspecified Domestic Waste

Wildlife Other than Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I22R-05-BAC

Craig Creek

Location: Craig Creek mainstem from the mouth of Wilson Branch downstream to the Craig Creek confluence with the James River.

City / County: Botetourt Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This 2016 303(d) initial Listing is due to impairment of the Recreational Use based on escherichia coli (E.coli) bacteria excursions of the WQS instantaneous criterion.

2-CRG016.90 (Rt. 817 pull off from Rt. 615) The 2016 Integrated Report (IR) finds two of 11 E.coli samples exceed the instantaneous criterion of 235 cfu/100 ml. Values in excess of the criterion are 546 and 650 cfu/100 ml.

2-CRG001.20 (Rt. 818 Bridge) The 2016 data window reveals two of 11 E.coli samples exceed the 235 cfu/100 ml instantaneous criterion. Values in excess of the criterion are 325 and 830 cfu/100 ml.

Craig Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			27.56
Escherichia coli - Total Impaired Size by Water Type:			27.56

Sources:

Livestock (Grazing or Feeding Operations)	Loss of Riparian Habitat	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Unspecified Domestic Waste
Wastes from Pets	Wet Weather Discharges (Non-Point Source)	Wildlife Other than Waterfowl	



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I24R-01-BAC

Lapsley Run

Location: Lapsley Run from its confluence with the James River upstream to its headwaters.

City / County: Botetourt Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

2-LAP001.20 (Rt. 726 Bridge) The 2016 Integrated Report (IR) finds six of 12 escherichia coli (E.coli) samples exceed the 235 cfu/100 ml instantaneous criterion. Excessive values range from 275 to 1325 cfu/100 ml. There were no additional data within the 2010, 2012 or 2014 assessment cycles. E.coli exceed the WQS instantaneous criterion in three of nine samples within the 2008 data window. These excursions cause the 2008 initial 303(d) Listing of these waters for 9.01 miles. E.coli values in excess of the criterion are: 800, 420 and 250 cfu/100 ml.

Lapsley Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			9.01
Escherichia coli - Total Impaired Size by Water Type:			

Sources:

Grazing in Riparian or
Shoreline Zones

Livestock (Grazing or
Feeding Operations)

Unspecified Domestic
Waste

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I25R-01-BAC

Catawba Creek

Location: Catawba Creek from the confluence of Little Catawba Creek downstream to the Town of Fincastle POTW (JU53).

City / County: Botetourt Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Three Catawba Creek stations find non-supporting fecal coliform (FC) bacteria results through the 2008 - 2012 data windows. In previous cycles two of the stations below (2-CAT000.34 & 2-CAT023.83) have sufficient escherichia coli (E.coli) data to assess. Escherichia coli (E.coli) replaces fecal coliform (FC) bacteria as the indicator as per Water Quality Standards [9 VAC 25-260-170. Bacteria; other waters].

2014 escherichia coli (E.coli) data are sufficient to partially delist the lower portion of Catawba Creek from the Town of Fincastle POTW downstream to the confluence of Catawba Creek with the James River (11.71 miles). Station 2-CAT000.34 (Bridge near Salisbury Furnace) records two of 24 E.coli samples exceeding the WQS instantaneous criterion with a exceedance rate of 8.30%. The remaining waters exhibit impairment for the Recreational Use.

The original 2002 FC bacteria impairment was extended both upstream and downstream with the 2004 assessment. The extension downstream is from the Fincastle POTW to the Catawba Creek confluence with the James River (11.71 miles); now delisted. The upstream extension is from the confluence of Little Catawba Creek downstream to the Roanoke Cement outfalls on Catawba Creek (0.81 miles). The original 2002 11.87 mile impairment began at the Roanoke Cement Co. water intake on Catawba Creek (37°28'12"/80°00'18") extending downstream to the Town Branch confluence with Catawba Creek (37°31'01"/79°52'45").

2-CAT023.83- (Rt. 779 Bridge near Gage) There are no additional data within the 2016 data window where six of 12 E.coli remaining samples exceed the WQS instantaneous criterion of 235 cfu/100 ml. The 2014 assessment finds eight of 24 escherichia coli (E.coli) samples exceed the instantaneous criterion. Excursions range from 280 to 1950 cfu/100 ml. There are no additional data within the 2012 data window. 2010 data report two of 12 E.coli observations in excess of the 235 cfu/100 ml instantaneous criterion with data through 2008. Exceeding values are 280 and 480 cfu/100 ml. FC exceeds in four of 12 observations with additional data through May 2003 in 2008. Each excursion is in excess of the former WQS 400 cfu/100 ml instantaneous criterion. The maximum exceedance is 1900 cfu/100 ml and the minimum is 500 (2004 upstream extension). The 2006 Integrated Report (IR) finds FC exceeds in four of 12 observations. The maximum exceedance is 1900 cfu/100 ml and the minimum is 500. Exceedance range is the same as in 2004 where FC exceeds in three of nine observations.

2-CAT014.63- (Rt. 606 Bridge, Botetourt Co.) There are no additional E.coli data within the 2014 data window. The 2008 IR finds FC exceeds the former WQS criterion in four of 14 observations with additional data through May 2003. The 2006 IR reports FC exceeds in six of 20 observations. Exceedances range from 500 to the maximum of 1300 cfu/100 ml (original 2002 303(d) Listing). FC exceeds in seven of 27 observations ranging from 500 to the maximum of 2000 cfu/100 ml in 2004.

Catawba Creek

Recreation

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Escherichia coli - Total Impaired Size by Water Type:

13.46

Sources:

Livestock (Grazing or Feeding Operations)

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

Unspecified Domestic Waste

Wastes from Pets

Wildlife Other than Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I25R-01-BEN

Catawba Creek

Location: Catawba Creek from Buchanan Branch downstream to the Fincastle POTW.

City / County: Botetourt Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The impaired waters were partially delisted for 9.16 miles with the 2012 assessment; 3.23 miles remain impaired.

These remaining waters will be considered for delist with additional macroinvertebrate data collection within the 2016 data window. Both upstream (2-CAT028.98) and downstream (2-CAT025.14) sites indicate non-impaired conditions. The Virginia Stream Condition Index (VSCI) is a multi-metric statewide stream index of biotic integrity that is based on data collected from minimally impacted reference sites throughout Virginia. The index shows that a VSCI score of 60.0 is the lower limit for reference (or, unimpaired) conditions in a benthic community. Each of the aforementioned sites have average scores above 60.

2-CAT026.55 (Off Rt. 779 North of Catawba) There are no additional data beyond the 2008 Integrated Report (IR). This 2008 initial 303(d) Listing for General Standard (Benthic) impairment is based on two 2003 Virginia Stream Condition Index (VSCI) surveys scoring spring 36.4 and fall 56.9. More taxa, including a higher percentage of mayflies were collected in the fall sample. Also, fewer midge larvae (Chironomidae) were present in the fall sample helping to improve the benthic community score. The land use adjacent to and immediately upstream of the station is open pasture. The riparian zone is impacted by the pastures and bank erosion due to cattle access as well as poor bank vegetative protection.

Catawba Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.23

Sources:

Grazing in Riparian or
Shoreline Zones

Livestock (Grazing or
Feeding Operations)

Loss of Riparian Habitat



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I26R-01-BEN

Mill Creek, UT (XUL)

Location: Mill Creek, UT (XUL) from just downstream of the Rt. 11 crossing upstream to its headwaters.

City / County: Botetourt Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2-XUL001.67 (Downstream of Rt. 799 (Ammen Rd.) crossing)- There are no additional information beyond the 2010 Integrated Report (IR). The benthic community is impaired for 5.37 miles from two 2008 Virginia Stream Condition Index (VSCI) surveys. 2008 VSCI scores are spring 33.9 and fall 50.9. This is a small second order tributary to Mill Creek. The average VSCI score for all samples was 42.4 indicating a benthic community with many organisms that are tolerant of pollution. Habitat scores indicate a stream reach with badly eroded stream banks, poor vegetative protection on the banks and in the riparian zone excessive deposits of sand and fine sediment on the stream bottom. The watershed consists of pastures, crop fields, and some residential areas.

Mill Creek, UT (XUL)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.37

Sources:

Livestock (Grazing or Feeding Operations)

Loss of Riparian Habitat

Wet Weather Discharges (Non-Point Source)



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I27R-01-BAC

James River

Location: James River from the Looney Cr. mouth downstream to the confluence of Jennings Creek (JU56).

City / County: Botetourt Co. Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This initial 7.15 mile 2014 303(d) Listing is a result of escherichia coli (E.coli) samples in excess of the WQS 235 cfu/10 ml instantaneous criterion. The Recreational impairment is extended downstream 9.53 mile with the 2016 Integrated Report (IR).

2-JMS309.13 (Gage - Foot Bridge Buchanan) Six of 24 E.coli samples exceed the 235 cfu/100 ml WQS instantaneous criterion within the 2016 data window. Excessive values range from 600 to 1800 cfu/100 ml. The 2014 Integrated Report (IR) finds three E.coli samples exceed the instantaneous criterion from 24 samples. Values in excess of the instantaneous criterion are 600, 1000 and 1475 cfu/100 ml.

2-JMS298.17 (Pull off of Rt. 608) The 2016 IR reports two of 12 E.coli samples in excess of the WQS instantaneous criterion. Excessive values are 265 and 275 cfu/100 ml.

James River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			16.67

Sources:

Livestock (Grazing or Feeding Operations)	Municipal (Urbanized High Density Area)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Rural (Residential Areas)
Unspecified Domestic Waste	Wastes from Pets	Wet Weather Discharges (Non-Point Source)	Wildlife Other than Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I28R-02-BAC

Elk Creek

Location: Elk Creek from the headwaters downstream to its confluence with the James River. (Start Mile: 4.00 End Mile: 0.00 Total Impaired Size: 4.00 Miles)

City / County: Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-ELK001.37 (2 violations of 10 samples for e-coli)
Initial Listing Date: 2014

Elk Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			3.98

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I29R-01-TEMP

Ramseys Draft

Location: Ramseys Draft from the headwaters downstream to its confluence with the Calfpasture River. (Start Mile: 10.29 End Mile: 0.00 Total Impaired Size: 10.29 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS at station: 2-RAM000.26 (2 violations of 12 samples for temperature). Initial Listing Date: 2016

Ramseys Draft	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			10.29

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I30R-01-BAC

Calfpasture River

Location: Calfpasture River from its confluence with Tizzle Branch downstream to its confluence with Hamilton Branch. (Start Mile: 26.52 End Mile: 23.72 Total Impaired Size: 2.8 Miles) The extents of this impairment were adjusted due to changes in the NWBD boundaries in 2010. The impairment length was shortened in 2012 as a downstream assessment unit returned to fully supporting status for bacteria.

City / County: Augusta Co. Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-CFP024.20 (3 violations of 12 samples for e-coli in 2014, no new data in 2016). Initial Listing Date: 2006.

Calfpasture River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.83

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I30R-03-BAC

Hamilton Branch

Location: Hamilton Branch from the headwaters downstream to its confluence with the Calfpasture River. (Start Mile: 6.29 End Mile: 0.00 Total Impaired Size: 6.29 Miles)

City / County: Augusta Co. Bath Co. Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station 2AHAM000.02 (8 violations of 12 samples for e-coli).
Initial Listing Date: 2016

Hamilton Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.28

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I30R-03-PH

Piney Branch

Location: Piney Branch from the headwaters downstream to its confluence with Guys Run. (Start Mile: 2.33 End Mile: 0.00 Total Impaired Size: 2.33 Miles)

City / County: Rockbridge Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA RB08 (12 violations of 12 samples for pH) in 2010. This data is now outside the assessment data window for 2016, however, the impairment carries forward to 2014. Initial Listing Date: 2006.

Piney Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			2.33

Sources:

Atmospheric Deposition -
Acidity



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I32R-03-BAC

Little Calfpasture River

Location: Little Calfpasture River from the headwaters downstream to its confluence with Smith Creek. (Start Mile: 23.54 End Mile: 11.18 Total Impaired Size: 12.36 Miles)

City / County: Augusta Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-LCF013.93 (2 violations of 12 samples for e-coli in 2014) no data in 2016. Initial Listing Date: 2004.

Little Calfpasture River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			12.35
<hr/>			
Little Calfpasture River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			12.35

Sources:

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I33R-01-BAC

Cedar Grove Branch

Location: Cedar Grove Branch from the headwaters downstream to its confluence with the Maury River. (Start Mile: 4.62 End Mile: 0.00 Total Impaired Size: 4.62 Miles)

City / County: Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-CGB001.80 (10 violations of 23 samples for e-coli in 2012, 3 violations 5 samples in 2014/16, no new data). Initial Listing Date: 2004.

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Cedar Grove Branch			
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			4.62

	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Cedar Grove Branch			
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			4.62

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I33R-03-BAC

Kerrs Creek

Location: Kerrs Creek from the headwaters downstream to its confluence with the Maury River. (Start Mile: 11.87 End Mile: 0.00 Total Impaired Size: 11.87 Miles)

City / County: Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at stations: 2-KRR001.54 (4 violations of 12 samples for e-coli) and 2-KRR008.16 (2 violations of 6 samples for e-coli). Initial Listing Date: 2012.

Kerrs Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.86

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I35R-02-BAC

Mill Creek

Location: Mill Creek from the headwaters downstream to its confluence with the Maury River. (Start Mile: 9.14 End Mile: 0.00 Total Impaired Size: 9.14 Miles)

City / County: Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 2-MIS000.04 (2 violations of 12 samples for e-coli in 2014, no data in 2016). Initial Listing Date: 2006.

Mill Creek Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			9.13

Mill Creek Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			9.13

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I35R-02-BEN **Mill Creek**

Location: Mill Creek from the headwaters downstream to its confluence with the Maury River. (Start Mile: 9.14 End Mile: 0.00 Total Impaired Size: 9.14 Miles)

City / County: Rockbridge Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations General Standard for Benthics at station: 2-MIS000.04 (Impaired for VSCI). Initial Listing Date: 2016.

Mill Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			9.13

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I35R-03-BAC **Woods Creek**

Location: Woods Creek and tributary from the headwaters downstream to its confluence with the Maury River. (Start Mile: 6.06 End Mile: 0.00 Total Impaired Size: 6.06 Miles)

City / County: Lexington City Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2AWDS000.10 (2 violations of 6 samples for e-coli).
Initial Listing Date: 2012.

Woods Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.05

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I35R-03-BEN Woods Creek

Location: Woods Creek and tributary from the headwaters downstream to its confluence with the Maury River. (Start Mile: 6.06 End Mile: 0.00 Total Impaired Size: 6.06 Miles)

City / County: Lexington City Rockbridge Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 2-WDS000.12 (Impaired for VSCI) and 2-WDS002.08 (Impaired for VSCI). Initial Listing Date: 2008.

Woods Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.05

Sources:

Municipal (Urbanized High Density Area) Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I36R-02-BEN

Moore's Creek

Location: Moore's Creek and tributaries from the headwaters downstream to its confluence with the South River. (Start Mile: 9.09 End Mile: 0.00 Total Impaired Size: 9.09 Miles)

City / County: Rockbridge Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 2-MRC002.14 (Impaired for VSCI) and 2-MRC003.82 (Impaired for VSCI). Initial Listing Date 2006.

Moore's Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			9.09

Sources:

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I36R-03-PH

Saint Marys River

Location: Saint Marys River from a point approximately 1.97 miles above its confluence with Cellar Hollow downstream to its confluence with South River. (Start Mile: 1.97 End Mile: 0.00 Total Impaired Size: 1.97 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: 2-SMR001.52 (3 violations of 16 samples for pH in 2014, no new data in 2016). Initial Listing Date: 2006.

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

Sources:

Atmospheric Deposition -
Acidity



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I36R-03-TEMP

Saint Marys River

Location: Saint Marys River from a point approximately 1.97 miles above its confluence with Cellar Hollow downstream to its confluence with South River. (Start Mile: 1.97 End Mile: 0.00 Total Impaired Size: 1.97 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS at station: 2-SMR001.52 (3 violations of 16 samples for temperature in 2014, no new data in 2016). Initial Listing Date: 2010.

Saint Marys River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			1.97

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I36R-05-BEN **Marl Creek**

Location: Marl Creek and tributaries from the headwaters downstream to its confluence with the South River. (Start Mile: 7.74 End Mile: 0.00 Total Impaired Size: 7.74 Miles)

City / County: Rockbridge Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 2-MRL002.62 (Impaired for VSCI) and 2AXEM000.35 (Impaired for VSCI). Initial Listing Date: 2012.

Marl Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			7.74

Sources:

Agriculture

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I36R-06-BAC **South River**

Location: South River from its confluence with Moores Creek downstream to its confluence with Irish Creek. (Start Mile: 13.56 End Mile: 5.60 Total Impaired Size: 7.96 Miles)

City / County: Augusta Co. Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-STH011.28 (2 violations of 11 samples for e-coli).
Initial Listing Date; 2012.

South River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.95

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I37R-02-PCB

Maury River

Location: Maury River from its confluence with the South River downstream to its confluence with the James River. (Start Mile: 16.94
End Mile: 0.00 Total Impaired Size: 16.94 Miles)

City / County: Buena Vista City Rockbridge Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

This segment is impaired due to the presence of PCB's in fish tissue at stations: 2-MRY011.23 (01 PCBs 3 sp 05 PCBs 3 sp) and 2-MRY011.86 (04 PCBs) This data now outside the 2016 assessment data window, however, the impairment carries forward to 2016. Initial Listing Date: 2006. VDH Fish Consumption Advisory

Maury River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			16.92

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I37R-03-BAC

Poague Run

Location: Poague Run and tributaries from the headwaters downstream to its confluence with the Maury River. (Start Mile: 17.12 End Mile: 0.00 Total Impaired Size: 17.12)

City / County: Rockbridge Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 2-PGH002.44 (5 violations of 12 samples for e-coli).
Initial Listing Date: 2014

Poague Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			17.12

Sources:

Agriculture

Non-Point Source

Wildlife Other than
Waterfowl



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: I38L-01-PH

Lexington Reservoir

Location: Lexington Reservoir (Total Impaired Size: 22.60 Acres)

City / County: Rockbridge Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5A

The lake is impaired due to violations of the pH WQS at 2-MOR003.60 (18 violations of 66 samples for pH). Initial Listing Date: 2010.

Lexington Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			22.60

Sources:

Atmospheric Deposition -
Acidity



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J01R-02-BEN

Horsepen Creek

Location: Horsepen Creek from its headwaters to the mouth at the Appomattox River

City / County: Buckingham Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-HRE000.44 (2013 Bio)

IM - This stream had moderate deposition of sediment and moderately unstable banks.

Horsepen Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.00

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J01R-09-BEN **Crane Creek**

Location: Crane Creek from its headwaters to its mouth on Vaughans Creek

City / County: Appomattox Co. Buckingham Co. Cumberland Co. Prince Edward Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-CNE000.96

2008/2012-2014 Bio - IM

Dairy cows have access to stream, though it is a very wooded area. Habitat consisted of numerous log jams, some good cobble riffles and some gravel riffles. The riffles weren't very embedded but sedimentation was high throughout the rest of the stream. Nitrogen concentrations in the stream were high, indicating a nutrient problem. Extreme seasonal variation in SCI scores, therefore additional monitoring is needed to accurately assess water quality in this stream reach.

Crane Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.18

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J03R-06-BEN

Sandy River

Location: Sandy River from the backwaters of Sandy River Reservoir to the Prince Edward Lake Dam.

City / County: Prince Edward Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2DSDY008.80 (2009 & 2012 Bio)

IM - This stream had marginal bank stability, obvious sediment deposition, and marginal epifaunal substrate. 2009 biologist field notes indicate that every surface was covered in algae. The water was very sluggish and there were beaver dams upstream and downstream.

Sandy River

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:

4.08

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J04R-01-BEN **Bush River**

Location: Bush River from its headwaters to the confluence with Mountain Creek.

City / County: Prince Edward Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station IDs:

2-BSR012.33 (2014 FPM)

FS Benthic Assessment

2-BSR017.69 (2008 Bio)

IM Benthic Assessment - This site was monitored in order to supplement probabilistic monitoring data from probabilistic monitoring site 2-BSR018.10, which can only be accessed via private land and cannot be revisited. Bush River has evidence of extremely high flows with very high sedimentation occurring instream. The habitat assessment scores very low for bank stability and bank vegetative protection. In the fall of 2008 a new clear-cut was noted on the right bank. The riffles had become more embedded, reducing available habitat for benthic macro invertebrates.

2-BSR018.10 (2005 Probmon)

J Rating Benthic Assessment - Condition of stream drastically different seasonally, therefore an accurate assessment is not possible without additional data. This site was part of the probabilistic monitoring program and can only be accessed via private land, therefore it will not be revisited. Seasonal difference noted. Abundant algal floc dominated riffles in spring but was not present in fall.

Bush River	Estuary (Sq. Miles)	Reservoir (Acres)		River (Miles)
Aquatic Life				
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:				11.48

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J04R-02-BEN **Mountain Creek**

Location: Mountain Creek from its headwaters to its mouth on Bush River.

City / County: Prince Edward Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-MTC001.24 (Ambient, Bio)

IM - 2008 Bio

This monitoring station was characterized by sluggish flow, marginal habitat, considerable sediment deposition, and unstable banks with little vegetative protection.

2-MTC005.27 (2014 Bio)

FS - This site had decent habitat but sedimentation was occurring.

Mountain Creek

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:

8.97

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J05R-01-BEN Briery Creek

Location: Briery Creek from the Briery Creek Lake Dam to the confluence with the Bush River.

City / County: Prince Edward Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-BRI007.80 (2004 Probmon)

Impaired Benthic Assessment - Fixed, stable habitat was in short supply within this stream reach. Sediments are frequently disturbed during high flow events. Briery Creek Reservoir is upstream of the sample reach. Flow modifications due to the upstream dam may be affecting the stream community.

Are any seasonal differences noted? None

2009 Bio

This stream has marginal bank stability, increased sediment deposition, and decent epifaunal substrate. 2009 biologist field notes indicate that the snags were full of sediment and the stream appears to get high flows relatively often.

2DBRI007.10 (2009/2012-2014 Bio)

Impaired Benthic Assessment - This stream has marginal bank stability, increased sediment deposition, and decent epifaunal substrate. 2009 biologist field notes indicate that the snags were full of sediment and the stream appears to get high flows relatively often.

Briery Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			10.48

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J05R-03-BEN **Rice Creek**

Location: Rice Creek from its headwaters to its mouth on Bush River.

City / County: Prince Edward Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2DRCE002.44 (2012 Bio)

IM - This site has unstable banks and sediment deposition. Habitat availability improved somewhat in the fall. This site was monitored as a follow-up to probabilistic station 2DRCE001.21 that was located on private property and could not be revisited.

Rice Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.59

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J06R-03-BEN **Horsepen Creek**

Location: Horsepen Creek from its headwaters to the mouth at Big Guinea Creek.

City / County: Cumberland Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Station ID:

2-HRP000.42 (2007-2012 Bio)

Impaired Benthic Assessment

Small, sandy stream in low area that is likely inundated often and may dry during drought.

The benthic macroinvertebrate population is probably influenced by these flow fluctuations. Habitat scores were low for sediment deposition, pool variability, bank stability, bank vegetative protection and epifaunal substrate. SCI scores straddled the impairment threshold until 2012. Sediment and organic pollution are likely stressors in this stream.

Horsepen Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.99

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J07L-01-PH

Amelia Lake

Location: Amelia Lake

City / County: Amelia Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

In 2014 the Lake became impaired for aquatic life with a pH violation rate of 21/122 at station 2-XLW000.60.

During the 2016 cycle the segment remained impaired for pH since there was no new data collected.

Amelia Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			98.31

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J09R-04-BEN

Nibbs Creek South Branch

Location: Nibbs Creek South Branch

City / County: Amelia Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2014 cycle the segment became impaired for aquatic life due to Benthics at station 2DNBX002.33.

During the 2016 cycle no new data was collected so the segment remains impaired for benthics at station 2DNBX002.33.

Nibbs Creek South Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.86

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J10R-01-BEN

UT to Appomattox River

Location: Mainstem to Appomattox

City / County: Amelia Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2008 cycle this segment is impaired for aquatic life use due to benthic impairment at fresh water probabilistic monitoring station 2-XUE000.31

During the 2010 cycle this segment is impaired for aquatic life use due to benthic impairment at fresh water probabilistic monitoring station 2-XUE000.31.

During the 2012 cycle this segment will remain impaired for aquatic life use due to benthic impairment at fresh water probabilistic monitoring station 2-XUE000.31 because there is no new data in the data window.

There is no new data during the 2014 and 2016 cycle

UT to Appomattox River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.49

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J10R-02-DO

Goodes Creek

Location: From the dam of the pond located at approximately 2.73 miles from the mouth to the Appomattox

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle the segment was impaired for aquatic life use due to low DO with a violation rate of 2/14 at station 2-GOC001.19., and assessed as Category 5C.

During the 2012 cycle the segment was impaired aquatic life use due to low DO with a violation rate of 3/23 at station 2-GOC001.19.

During the 2014 and 2016 cycle there was no new data so the impairment remains.

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

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J10R-03-DO

Smacks Creek

Location: Headwaters to mouth

City / County: Amelia Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

The 2012 cycle the segment was impaired for aquatic life use at station 2-SMK006.57 for DO with a violation rate of 3/9. During the 2014 and 2016 cycle there was no new data, so the impairments remain.

Smacks Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			9.06

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J11R-03-DO

Bland Creek

Location: Bland Creek from its headwaters to the confluence with Cellar Creek

City / County: Nottoway Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle the segment was impaired for aquatic life use due to low D.O. with a violation rate of 2/12 at station 2-BLO001.85 .

During the 2012 cycle the segment was impaired for aquatic life use due to low D.O. at station 2-BLO001.85(10/35).

During the 2014 cycle the segment was impaired for aquatic life use due to low D.O. at station 2-BLO001.85(13/47).

During the 2016 cycle the segment was impaired for DO(15/46).

Bland Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			6.51
Oxygen, Dissolved - Total Impaired Size by Water Type:			

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J11R-04-DO

Cellar Creek

Location: From the confluence of Bland Creek to the mouth at Deep Creek

City / County: Amelia Co. Nottoway Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2012 cycle the segment was impaired for aquatic life use with a D.O. with a violation rate of 5/35 at station 2-CLR001.23.

During the 2014 cycle the segment was impaired for aquatic life use with a DO violation rate of 9/47 at station 2-CLR001.23.

During the 2016 cycle the segment was impaired for DO with a violation rate of 14/46.

Cellar Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			2.70

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J11R-05-DO

Woody Creek

Location: Woody Creek from its headwaters to its mouth at Deep Creek.

City / County: Nottoway Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle the segment became impaired aquatic life use with a DO violation rate of 6/48 at station 2-WDY003.04.

During the 2016 cycle the segment remained impaired for DO with a violation rate of 5/46 at station 2-WDY003.04.

Woody Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			7.97

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J12R-01-BEN

Winticomack Creek

Location: Winticomack Creek from Long Branch to its mouth at the Appomattox River.

City / County: Amelia Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2010 cycle the segment was impaired for aquatic life use for Benthics at station 2-WTK001.50.

There has been no new data since the 2010 cycle.

During the 2016 cycle the segment was impaired for Benthics, new data was collected in 2013.

Winticomack Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.07

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J12R-06-PH

Horsepen Branch

Location: Headwaters to mouth

City / County: Amelia Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

Horsepen Branch is assessed as not supporting for aquatic life use goals based on a dissolved oxygen violation rate 2/15 and a pH violation rate of 6/15 at the Rt. 622 bridge (2-HOI001.85).

Source of the DO and pH violations may be attributed to natural conditions

For 2008 it was assessed as not supporting for aquatic life based on a DO and pH violations at station at HOI001.85, violation rate was 1/15 for DO and 7/15 for pH.

For the 2010 cycle the segment was impaired for pH with a violation rate of 5/12 and the DO was fully supporting and delisted no new data since 2010 cycle

During the 2016 cycle the segment had insufficient data to fully assess.

Horsepen Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			4.44

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J13R-01-DO

Namozine Creek

Location: Namozine Creek from its headwaters to the confluence with Tylers Branch.

City / County: Amelia Co. Dinwiddie Co. Nottoway Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2016 cycle the segment was impaired for DO with a violation rate of 6/12.

Namozine Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			12.91

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J14R-02-PH

Stoney Creek

Location: Stoney Creek from headwaters to the limit with Lake Chesdin

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

In 2010 cycle the DEQ station 2-STY001.96 was added and was impaired for pH with a violation rate of 8/10. The Chesterfield Co station was also impaired for pH. The Chesterfield data was not acceptable for an impairment but were assessed as an observed effect for low pH. The low pH could be due to natural conditions.

In 2012 cycle station 2DSTY001.96 was impaired for pH with a violation rate of 9/14. The Chesterfield Co station was also impaired for pH. The Chesterfield data was not acceptable for an impairment but were assessed as an observed effect for low pH. The low pH could be due to natural conditions.

During the 2014 cycle there was no new data.

During the 2016 cycle the segment remained impaired for pH with a violation rate of 2/14.

Stoney Creek

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

pH - Total Impaired Size by Water Type:

2.59

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J14R-03-DO

Whipponock Creek

Location: Whipponock Creek from its headwaters to the limit of Lake Chesdin.

City / County: Chesterfield Co. Dinwiddie Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

During the 2016 cycle the segment became impaired due to a DO violation rate of 3/23.

Whipponock Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			6.82

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J15E-01-EBTOX Appomattox River

Location: Tidal Appomattox River from the confluence of Walthall Channel to the end of APPTF

City / County: Chesterfield Co. Hopewell City Prince George Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Sediment Bioassays for Estuarine and Marine Water / 5A

WOE was performed in 2006 at station 2SAPP001.91 Was Category 5A scenario 1. The segment was also shortened to split WOE samples.

No new data for the 2014 and 2016 cycle so the impairment remains.

Appomattox River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Sediment Bioassays for Estuarine and Marine Water - Total Impaired Size by Water Type:	1.474		

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J15R-01-BEN Appomattox River

Location: Appomattox River from the Lake Chesdin dam downstream to the Confluence with Rohoic Creek

City / County: Chesterfield Co. Dinwiddie Co. Petersburg City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2012 cycle, the segment was shortened from 7.502 miles to 5.13 miles. The segment is impaired for aquatic life from Benthics at station 2DAPP015.51.

no new data since 2012 cycle

Appomattox River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.57

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J15R-02-BEN

Oldtown Creek

Location: Oldtown Creek from the confluence with Big Branch downstream to its tidal limit.

City / County: Chesterfield Co. Colonial Heights City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

For the 2010 cycle the segment was impaired for aquatic life use from Benthics at station 2-OTC001.54.

For the 2012 cycle the segment was impaired for Benthics at station 2-OTC001.54.

During the 2014 and 2016 cycle there has been no new data collected so the segment remains impaired for Benthics.

Oldtown Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.22

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J15R-05-BEN Rohoic Creek

Location: Mainstem Rohoic Creek from headwaters to mouth including tributaries

City / County: Dinwiddie Co. Petersburg City

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2012 cycle the segment became impaired for aquatic life use for Benthics at station 2-RHC000.58.

During the 2014 and 2016 cycle there was no new data so the Benthic Impairment remains.

Rohoic Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			13.45

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J15R-08-PH

Oldtown Creek

Location: Headwaters to the confluence of Big Branch

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

For the 2010 Cycle the segment was impaired for aquatic life use with a pH violation rate of 2/10 at station 2-OTC005.38.

For the 2012 Cycle the segment was impaired for aquatic life use with a pH violation rate of 2/14 at station 2-OTC005.38.

During the 2014 cycle there was no new data so the pH remained impaired.

For the 2016 Cycle the segment was impaired for pH with a violation rate of 2/16 at station 2-OTC005.38.

Oldtown Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			6.22

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J16R-02-DO

Blackman Creek

Location: Mainstem from its headwaters to its mouth at the confluence of Deep Creek and Horsepen Creek

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

The segment is considered impaired of the Aquatic Life Use based on a dissolved oxygen violations at the Route 668 bridge (2-BCM000.79). In addition, phosphorus was listed as an observed effect in the segment.

The DO standards violation rate for Blackman Creek was 6/12 at the Rt. 668 bridge. However, it is suspected the low DO is due to natural conditions of the watershed. Therefore, for the 2006 cycle, Blackman Creek is assessed as Cat. 5C.

The segment also had observed effects for violation in Total Phosphorus standards with exceedences of 2/12.

The 2008 cycle the segment was impaired for the aquatic life use. the violation rate for DO was 6/12 at station 2-BCM000.79.

There is no new data since the 2008 cycle.

There is no new data for the 2014 cycle.

During the 2016 cycle the segment was impaired for DO(4/12) at station 2-BCM000.79.

Blackman Creek

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Oxygen, Dissolved - Total Impaired Size by Water Type:

4.56

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17L-01-DO

Swift Creek Lake

Location: Swift Creek Lake

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

In 2006 the reservoir was impaired for DO in bottom waters during summer months due to stratification and the lake being drained in 2003. The Trophic State Index (TSI) is acceptable except for Secchi TSI = 67 (TSI >60). Since the Secchi TSI is larger than the Phos and Chl_a TSIs, the Secchi TSI is ignored and the segment is considered naturally impaired due to stratification.

For 2008 cycle there was no new data; Swift Creek Lake does not have defined nutrient criteria therefore the segment was moved to Cat 5A.

During the 2010 cycle the segment was impaired for aquatic life use with a DO violation rate of 9/58 at station 2-SFT022.14.

No new data since the 2010 cycle, the DO impairment remains.

Swift Creek Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:		107.74	

Sources:

Changes in Ordinary
Stratification and Bottom
Water Hypoxia/Anoxia

Dam or Impoundment



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-01-BEN Swift Creek

Location: Swift Creek from the Swift Creek Lake dam downstream to its confluence with Licking Creek.

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

For the 2010 cycle the segment was impaired for Benthics at station 2-SFT019.02.

During the 2012 cycle the segment was impaired at station 2-SFT019.02 for Benthics.

During the 2014 and 2016 cycle there was no new data so the segment remains impaired for Benthics.

Swift Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			7.25

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-01-DO

Swift Creek

Location: Swift Creek from the Swift Creek Lake dam downstream to its confluence with Licking Creek.

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

In 1998, Swift Creek was assessed as threatened of the Aquatic Life Use due to dissolved oxygen violations. In 2002, the segment was considered partially supporting of the Aquatic Life use support goal based on water quality monitoring performed at the Route 655 bridge (2-SFT019.15). During the year 2004 cycle, the segment continued to show dissolved oxygen problems.

In 2006, the DO violation rate was 3/22 at the Rt. 655 bridge. However, it is suspected the low DO violations in this segment of Swift Creek are due to an upstream impoundment, therefore will be assessed as Cat. 5C.

In 2008 cycle, the DO violation rate was 4/26 at the Rt. 655 bridge. However, it is suspected the low DO violations in this segment of Swift Creek are due to an upstream impoundment, therefore will be assessed as Cat. 5C.

In the 2010 cycle the segment remained impaired for DO with a violation rate of 5/33. It is suspected the low DO violations in this segment of Swift Creek are due to an upstream impoundment, therefore will be assessed as Cat. 5A.

During the 2012 cycle the segment was impaired for aquatic life use for DO at station 2-SFT019.15. However, it is suspected the low DO violations in this segment of Swift Creek are due to an upstream impoundment, therefore will be assessed as Cat. 5C.

During the 2014 and 2016 cycle there was no new data so the segment remains impaired for DO.

Swift Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			7.25

Sources:

Dam or Impoundment



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-05-PH

Church Branch

Location: From headwaters to the mouth at Franks Branch

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

For the 2008 cycle the violation rate for pH was 8/8. This segment was assessed as Insufficient information with observed effects of pH, since methodology used for samples was uncertain.

For the 2010 cycle the segment was impaired for aquatic life use with a pH violation rate of 8/9 at station 2-CUR001.58.

For the 2012 cycle the segment was impaired for aquatic life use with a pH violation rate of 12/13 at station 2-CUR001.58.

During the 2014 and 2016 cycle there was no new data so the segment remains impaired for pH.

Church Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			2.64
pH - Total Impaired Size by Water Type:			2.64

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-06-BEN

Nuttree Branch

Location: The mainstem of Nuttree Branch

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

During the 2012 cycle the segment was impaired for aquatic life use for Benthics at station 2-NUT000.62.

During the 2014 and 2016 cycle there was no new data so the segment remained impaired for Benthics.

Nuttree Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.58

Sources:

Non-Point Source



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-06-DO

Nuttree Branch

Location: The mainstem of Nuttree Branch

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

For the 2010 cycle 2 new stations were added Station 2-NUT002.22 was impaired for aquatic life use with a DO violation rate of 2/9.

During the 2012 cycle the segment was impaired for aquatic life use with a DO violation rate of 2/13 at station 2-NUT002.22.

During the 2014 and 2016 cycle there was no new data so the segment remained impaired for DO.

Nuttree Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			5.58

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-06-PH

Nuttree Branch

Location: The mainstem of Nuttree Branch

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

for the 2006 cycle the pH violation rate recorded by Chesterfield Co was 4/20. However the data are not acceptable for an impairment, therefore the segment was assessed as fully supporting with an observed effect for low pH.

for the 2008 cycle the pH violation rate recorded by Chesterfield Co was 4/20. However the data are not acceptable for an impairment, therefore the segment was assessed as fully supporting with an observed effect for low pH.

For the 2010 cycle 2 new stations were added Station 2-NUT002.22 was impaired for aquatic life use with a pH violation rate of 2/9.

During the 2012 cycle the segment was impaired for aquatic life use with a pH violation rate of 2/13 at station 2-NUT002.22.

During the 2014 and 2016 cycle there was no new data so the segment remained impaired for pH.

Nuttree Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			5.58

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-07-PH

Second Branch

Location: Second Branch from Headwaters downstream to confluence with Mann Creek

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

For the 2010 cycle the segment was impaired for pH at station 2-SEC008.84(A) with a violation rate of 4/12. The Chesterfield Co. stations are impaired with observed effects for pH and DO.

For the 2012 cycle the segment is impaired for aquatic life use for pH at station 2-SEC008.84(A) with a violation rate of 4/16. The Chesterfield Co. and ACB stations are impaired with observed effects for pH and DO.

During the 2014 and 2016 cycle there was no new data so the segment remained impaired for pH.

Second Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			6.22

Sources:

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



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-08-DO

Swift Creek

Location: Swift Creek from the Swift Creek Reservoir dam downstream to its confluence with Reedy Creek.

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5A

For the 2010 cycle 2 DEQ stations (2-SFT030.65, 2-SFT027.38) were added and both stations were impaired for aquatic life use for DO.

there has been no new data since 2010 cycle.

Swift Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			3.78

Sources:

Dam or Impoundment



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-09-BEN **Swift Creek**

Location: Swift Creek from Reedy Branch to the limit of Swift Creek Lake

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

For the 2010 cycle the segment was impaired for aquatic life use for Benthics at station 2-SFT025.32.

For the 2012 cycle the segment was impaired for aquatic life use for Benthics at station 2-SFT025.32.

During the 2014 and 2016 cycle there was no new data and the segment remained impaired for Benthics.

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

Sources:

Source Unknown



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-11-DO

Long Swamp

Location: The mainstem of Long Swamp

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 5C

For the 2010 cycle the segment was assessed as not supporting for Aquatic Life use due to a pH violation rate of 6/11 at station 2-LNS000.69.

there has been no new data since 2010 cycle.

During the 2016 cycle the segment was impaired for DO(4/11).

Long Swamp	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			3.72

Sources:

Natural Sources



Fact Sheets for Impaired (Category 5) Waters in 2016

James River Basin

Cause Group Code: J17R-11-PH

Long Swamp

Location: The mainstem of Long Swamp

City / County: Chesterfield Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: pH / 5C

For the 2010 cycle the segment was assessed as not supporting for Aquatic Life use due to a pH violation rate of 6/11 at station 2-LNS000.69.

there has been no new data since 2010 cycle.

During the 2016 cycle the segment was impaired for pH(2/11).

Long Swamp	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			3.72

Sources:

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