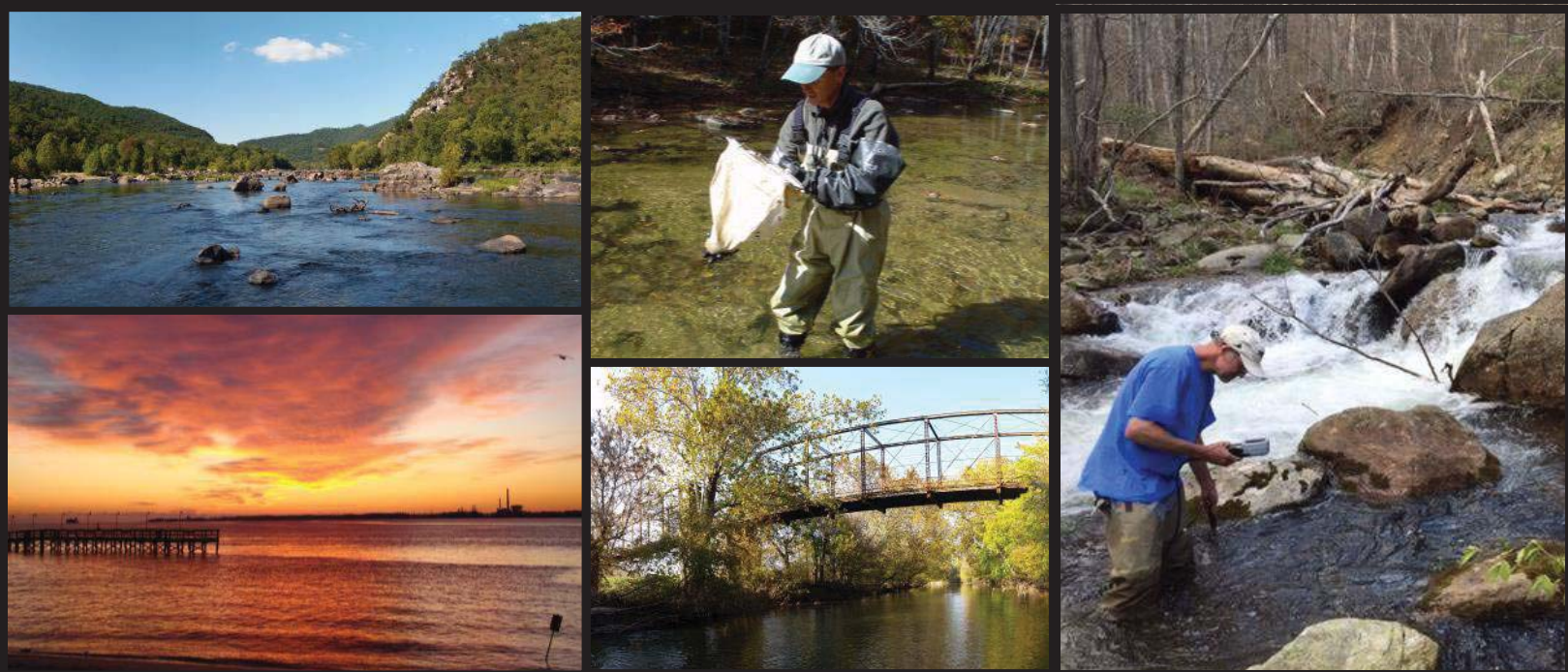




Virginia Water Quality Assessment 305(b)/303(d) Integrated Report 2016



In summary, the Integrated Report provides the following information relating to:

- the delineation of water quality assessment units (AUs) based on National Hydrography Dataset (NHD);
- the status of and progress toward achieving comprehensive assessments of all waters;
- the attainment status of designated uses for every AU assessed;
- additional monitoring that may be needed to determine designated use support status and, if necessary, to assist development of TMDLs for each pollutant/AU combination;
- schedules for additional monitoring planned for AUs;
- pollutant/AU combinations still requiring TMDLs; and
- TMDL development schedules reflecting the priority ranking of each pollutant/AU combination.
- “Effluent Limited” Waters.

Assessment Scheme

The 305(b) process assesses six primary designated uses, as appropriate for a particular waterbody, based on water quality standards:

Aquatic Life Use: supports the propagation, growth, and protection of a balanced indigenous population of aquatic life which may be expected to inhabit a waterbody. In Chesapeake Bay waters (mainstem and tributaries), this use is divided into sub-uses that target specific aquatic life assemblages.

Recreation Use: supports swimming, boating, and other recreational activities.

Fish Consumption Use: supports game and marketable fish species that are safe for human health.

Shellfishing Use: supports the propagation and marketability of shellfish (clams, oysters, and mussels).

Public Water Supply Use: supports safe drinking water.

Wildlife Use: supports the propagation, growth, and protection of associated wildlife.

The 2016 EPA Integrated Report Guidance and Assessment Database (ADB V2.3.1) continues to use five categories (“category 4” having three subcategories) in which every assessment unit (AU) should be placed based on designated use attainment. Additionally, Virginia has devised several other sub-categories to supplement the federal categories, enabling a more precise system of tracking and reporting.

Below are the EPA defined categories followed by associated Virginia defined subcategories:

FULLY SUPPORTING - Waters are supporting one or more designated uses

- **EPA Category 1** - Attaining all associated designated uses and no designated use is threatened

Va. Category 1A - waters are attaining all uses and a TMDL has been developed for one or more uses.

- **EPA Category 2** – Available data and/or other information indicate that some, but not all of the designated uses are supported.

Va. Category 2A - waters are supporting all of the uses for which they are monitored.

Va. Category 2B - waters are of concern to the state but no water quality standard exists for a specific pollutant, or the water exceeds a state screening value or toxicity test.

Va. Category 2C - waters are now attaining the use(s) for which they were originally 303(d) listed and the TMDL is EPA approved but other applicable use(s) were not monitored and assessed.

INDETERMINATE - Waters needing additional information

- **EPA Category 3** - Insufficient data and/or information to determine whether any designated uses are met.

Va. Category 3A - no data are available within the data window of the current assessment to determine if any designated use is attained and the water was not previously listed as impaired.

Va. Category 3B - some data exist but are insufficient to determine support of designated uses. Such waters will be prioritized for follow-up monitoring, as resources allow.

Va. Category 3C - data collected by a citizen monitoring or another organization indicating water quality problems may exist but the methodology and/or data quality has not been approved for a determination of support of designated use(s). These waters are considered as having insufficient data with observed effects. Such waters will be prioritized by DEQ for follow-up monitoring.

Va. Category 3D - data collected by a citizen monitoring or other organization indicating designated use(s) are being attained but the methodology and/or data quality has not been approved for such a determination.

IMPAIRED - Waters are impaired or threatened but a TMDL is not required.

- **EPA Category 4A** – water is impaired or threatened for one or more designated uses but does not require a TMDL. A new TMDL is not necessary to address the newly identified impaired tributaries if TMDL modeling, source identification and reductions cover the entire watershed and the TMDL has been approved by EPA. These waters are primarily related to shellfish and/or recreational bacteria impairments but could include benthic impairments.
- **EPA Category 4B** - water is impaired or threatened for one or more designated uses but does not require the development of a TMDL because other pollution control requirements (such as VPDES limits under a compliance schedule) are reasonably expected to result in attainment of water quality standards by the next reporting period or permit cycle.
- **EPA Category 4C** - water is impaired or threatened for one or more designated uses but does not require a TMDL because the impairment is not caused by a pollutant and/or is determined to be caused by natural conditions.

Va. Category 4D - part(s) of a water quality standard is attained for a pollutant with a TMDL, but the remaining criteria for the standard were not assessed due to insufficient information. (Only to be applied to dissolved oxygen in tidal waters of the Chesapeake Bay).

IMPAIRED - Waters are impaired or threatened and require a TMDL

- **EPA Category 5 - Waters are impaired or threatened and a TMDL is needed.**

Va. Category 5A - a water quality standard is not attained. The water is impaired or threatened for one or more designated uses (excluding shellfish use) by a pollutant(s) and requires a TMDL (303d list).

Va. Category 5B - the water quality standard for shellfish use is not attained. One or more



2016 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

Tennessee and Big Sandy River Basins

Cause Group Code	Water Name	Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Revision Priority
Impaired Use								
P11R-03-PCB	Guest River and Bear Creek							
Fish Consumption		PCB in Fish Tissue	5A			4.15	2004	L
		PCB in Fish Tissue	5A			1.94	2004	L
		PCB in Fish Tissue	5A			19.87	2006	L
P11R-05-BEN	Eastland Creek							
Aquatic Life		Benthic-Macroinvertebrate Bioassessments	5A			2.00	2010	L
P12R-01-BEN	Bark Camp Branch							
Aquatic Life		Benthic-Macroinvertebrate Bioassessments	5A			3.07	2004	M
P12R-01-PH	Bark Camp Branch							
Aquatic Life		pH	5A			3.07	2010	M
P12R-02-BEN	Devil Fork							
Aquatic Life		Benthic-Macroinvertebrate Bioassessments	5A			4.40	2006	M
P12R-02-pH	Devil Fork							
Aquatic Life		pH	5A			4.40	2014	M
P13R-02-PCB	Stock Creek							
Fish Consumption		PCB in Fish Tissue	5A			4.78	2004	L
P14R-02-BEN	Blackoak Branch Tributary							
Aquatic Life		Benthic-Macroinvertebrate Bioassessments	5A			0.76	2012	M
P17R-00-PH	Dark Hollow							
Aquatic Life		pH	5A			1.40	2012	H
P18L-01-HG	Big Cherry Reservoir							
Fish Consumption		Mercury in Fish Tissue	5A		104.00		2010	L
P18L-01-PH	Big Cherry Reservoir							
Aquatic Life		pH	5C		104.00		2002	M
P18R-01-PH	South Fork Powell River							
Aquatic Life		pH	5A			3.83	2016	L
P20L-01-HG	Lake Keokee							
Fish Consumption		Mercury in Fish Tissue	5A		96.21		2010	L
P20R-01-TEMP	North Fork Powell River							
Aquatic Life		Temperature, water	5A			2.98	2014	M
		Temperature, water	5A			7.67	2016	L
P21R-02-BAC	Hardy Creek							
Recreation		Escherichia coli	5A			12.52	2006	M
P21R-03-BAC	Powell River and Town Creek							
Recreation		Escherichia coli	5A			2.69	2006	M
		Escherichia coli	5A			3.73	2012	M
P21R-04-BAC	Dry Creek							
Recreation		Escherichia coli	5A			8.87	2012	M



2016 Impaired Waters (Category 4A/4D) TMDL Approved and (Category 4B) Other Control Measures Present*

Tennessee and Big Sandy River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Revision Priority
P09R-05-BAC	Russell Creek						
Recreation	Escherichia coli	4A			5.23	2008	L
P09R-06-BAC	Bull Run						
Recreation	Escherichia coli	4A			3.99	2012	M
P10R-01-BAC	Lick Creek and Tributaries						
Recreation	Fecal Coliform	4A			9.61	2002	L
	Fecal Coliform	4A			4.18	2004	L
	Escherichia coli	4A			9.61	2006	L
	Escherichia coli	4A			2.49	2012	L
P10R-01-BEN	Lick Creek and Tributaries						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			9.61	2002	L
	Benthic-Macroinvertebrate Bioassessments	4A			4.18	2004	L
	Benthic-Macroinvertebrate Bioassessments	4A			5.52	2004	L
	Sedimentation/Siltation	4A			9.61	2010	L
P11R-01-BEN	Guest River and Tributaries						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			31.43	2006	L
	Sedimentation/Siltation	4A			28.34	2010	L
	Sedimentation/Siltation	4A			3.09	2012	L
	Benthic-Macroinvertebrate Bioassessments	4A			11.80	2014	L
P11R-03-BAC	Guest River and Bear Creek						
Recreation	Fecal Coliform	4A			4.15	2002	M
	Escherichia coli	4A			4.15	2004	M
	Escherichia coli	4A			3.09	2006	M
	Escherichia coli	4A			1.94	2010	M
	Escherichia coli	4A			28.34	2012	M
	Escherichia coli	4A			5.06	2014	M
P11R-05-BAC	Crab Orchard Creek						
Recreation	Escherichia coli	4A			2.75	2006	L
P11R-06-BAC	Little Tom's Creek						
Recreation	Fecal Coliform	4A			4.79	2004	L
	Escherichia coli	4A			4.79	2006	L
P11R-08-BAC	Toms Creek						
Recreation	Escherichia coli	4A			12.60	2006	L
P13R-03-BAC	Clinch River, Cove Creek and Stock Creek						
Recreation	Escherichia coli	4A			9.63	2008	M
	Escherichia coli	4A			11.91	2008	M
	Escherichia coli	4A			13.55	2014	M



Fact Sheets for Impaired (Category 5) Waters in 2016

Tennessee and Big Sandy River Basins

Cause Group Code: **P11R-05-BEN**

Eastland Creek

Location: This segment of Eastland Creek includes from the headwaters downstream to the confluence with Clear Creek.

City / County: Wise Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological station located at 6BEAS000.07 was impaired based on VSCI scores.

Eastland Creek

Aquatic Life

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

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

2.00

Sources:

Rural (Residential Areas)