



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A01R-01-BAC</b> Recreation	<b>Piney Run</b> Escherichia coli	4A			3.94	2006	L
<b>A02R-01-BAC</b> Recreation	<b>Catoctin Creek</b> Escherichia coli	4A			7.49	2006	L
<b>A02R-02-BAC</b> Recreation	<b>North Fork Catoctin Creek</b> Escherichia coli Escherichia coli Escherichia coli	4A 4A 4A			2.54 3.43 4.42	2004 2008 2010	L L L
<b>A02R-03-BAC</b> Recreation	<b>South Fork Catoctin Creek</b> Escherichia coli Escherichia coli Escherichia coli	4A 4A 4A			11.67 3.23 3.59	1996 2002 2004	L L L
<b>A02R-05-BAC</b> Recreation	<b>Milltown Creek</b> Escherichia coli	4A			3.90	2006	L
<b>A02R-06-BAC</b> Recreation	<b>Unnamed tributary to Catoctin Creek</b> Escherichia coli	4A			4.35	2006	L
<b>A03R-01-BAC</b> Recreation	<b>Limestone Branch</b> Escherichia coli	4A			4.92	2002	L
<b>A03R-03-BAC</b> Recreation	<b>Unnamed tributary to Limestone Branch</b> Escherichia coli	4A			1.93	2006	L
<b>A03R-04-BAC</b> Recreation	<b>Unnamed tributary to Limestone Branch</b> Escherichia coli	4A			5.14	2014	L
<b>A04R-01-BAC</b> Recreation	<b>Goose Creek</b> Escherichia coli	4A			4.31	2004	L
<b>A04R-02-BAC</b> Recreation	<b>Gap Run</b> Escherichia coli	4A			3.21	2004	L
<b>A04R-03-BAC</b> Recreation	<b>Crooked Run</b> Escherichia coli	4A			1.85	2010	L
<b>A04R-04-BAC</b> Recreation	<b>Bolling Branch</b> Escherichia coli	4A			3.64	2006	L
<b>A04R-05-BAC</b> Recreation	<b>Unnamed tributary to Goose Creek</b> Escherichia coli	4A			5.91	2014	L
<b>A05R-01-BAC</b> Recreation	<b>Cromwells Run</b> Escherichia coli Escherichia coli	4A 4A			6.76 3.81	2012 2016	L L
<b>A05R-03-BAC</b> Recreation	<b>Goose Creek</b> Escherichia coli Escherichia coli	4A 4A			5.42 3.27	2006 2016	L L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A05R-04-BAC</b>	<b>Panther Skin Creek</b>						
Recreation	Escherichia coli	4A			5.27	2006	L
	Escherichia coli	4A			3.91	2012	L
<b>A05R-05-BAC</b>	<b>Jeffries Branch</b>						
Recreation	Escherichia coli	4A			6.19	2016	L
<b>A06R-01-BAC</b>	<b>North Fork Goose Creek</b>						
Recreation	Escherichia coli	4A			4.69	1998	L
	Escherichia coli	4A			2.96	2008	L
<b>A06R-02-BAC</b>	<b>Crooked Run</b>						
Recreation	Escherichia coli	4A			2.16	2014	L
<b>A07R-01-BAC</b>	<b>Beaverdam Creek</b>						
Recreation	Escherichia coli	4A			6.50	2006	L
<b>A07R-02-BAC</b>	<b>North Fork Beaverdam Creek</b>						
Recreation	Escherichia coli	4A			2.60	2006	L
	Escherichia coli	4A			3.15	2012	L
<b>A07R-03-BAC</b>	<b>Beaverdam Creek</b>						
Recreation	Escherichia coli	4A			1.26	2006	L
	Escherichia coli	4A			4.37	2012	L
<b>A08R-01-BAC</b>	<b>Goose Creek</b>						
Recreation	Escherichia coli	4A			4.81	2006	L
<b>A08R-01-BEN</b>	<b>Goose Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			4.81	1998	L
<b>A08R-02-BAC</b>	<b>Little River</b>						
Recreation	Escherichia coli	4A			2.48	2006	L
	Escherichia coli	4A			10.77	2016	L
<b>A08R-03-BAC</b>	<b>Sycolin Creek</b>						
Recreation	Escherichia coli	4A			3.09	1998	L
	Fecal Coliform	4A			7.98	1998	L
<b>A08R-04-BAC</b>	<b>South Fork Sycolin Creek</b>						
Recreation	Escherichia coli	4A			3.76	2002	L
<b>A08R-05-BAC</b>	<b>Tuscarora Creek</b>						
Recreation	Escherichia coli	4A			3.89	2004	L
<b>A08R-07-BAC</b>	<b>Howsers Branch</b>						
Recreation	Escherichia coli	4A			5.10	2008	L
<b>A08R-08-BAC</b>	<b>Big Branch</b>						
Recreation	Escherichia coli	4A			2.61	2014	L
<b>A08R-09-BAC</b>	<b>Goose Creek</b>						
Recreation	Escherichia coli	4A			2.54	2006	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A10R-01-BAC</b>	<b>Sugarland Run</b>						
Recreation	Escherichia coli	4A			4.88	2002	L
	Escherichia coli	4A			1.06	2006	L
<b>A11R-01-BAC</b>	<b>Difficult Run</b>						
Recreation	Escherichia coli	4A			3.17	2004	L
<b>A11R-01-BEN</b>	<b>Difficult Run</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			3.17	1998	L
<b>A11R-02-BAC</b>	<b>Mine Run</b>						
Recreation	Escherichia coli	4A			1.02	2006	L
<b>A11R-03-BAC</b>	<b>Difficult Run</b>						
Recreation	Escherichia coli	4A			3.55	2006	L
	Escherichia coli	4A			2.82	2010	L
<b>A11R-04-BAC</b>	<b>Snakeden Branch</b>						
Recreation	Escherichia coli	4A			0.97	2006	L
<b>A11R-05-BAC</b>	<b>Little Difficult Run</b>						
Recreation	Escherichia coli	4A			1.75	2008	L
<b>A11R-06-BAC</b>	<b>Wolftrap Creek</b>						
Recreation	Escherichia coli	4A			2.72	2008	L
<b>A11R-07-BAC</b>	<b>Captain Hickory Run</b>						
Recreation	Escherichia coli	4A			3.27	2010	L
<b>A12E-01-BAC</b>	<b>Four Mile Run</b>						
Recreation	Escherichia coli	4A	0.050			1996	L
<b>A12E-01-PCB</b>	<b>Potomac River Embayments (FOU downstream until POM)</b>						
Fish Consumption	PCB in Fish Tissue	4A	17.489			2002	L
	PCB in Fish Tissue	4A	1.811			2004	L
	PCB in Fish Tissue	4A	3.919			2006	L
	PCB in Fish Tissue	4A	0.265			2008	L
	PCB in Fish Tissue	4A	0.633			2010	L
	PCB in Water Column	4A	0.529			2010	L
	PCB in Fish Tissue	4A	0.076			2016	L
<b>A12R-01-BAC</b>	<b>Four Mile Run</b>						
Recreation	Escherichia coli	4A			7.96	1994	L
<b>A12R-01-PCB</b>	<b>Pimmit Run</b>						
Fish Consumption	PCB in Fish Tissue	4A			4.40	2006	L
<b>A12R-02-BAC</b>	<b>Pimmit Run</b>						
Recreation	Escherichia coli	4A			7.73	2010	L
<b>A12R-03-BAC</b>	<b>Long Branch</b>						
Recreation	Escherichia coli	4A			1.97	2012	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A12R-04-BAC</b> Recreation	Little Pimmit Run Escherichia coli	4A			2.35	2012	L
<b>A13R-02-BAC</b> Recreation	Holmes Run Escherichia coli	4A			3.58	2004	L
<b>A13R-03-BAC</b> Recreation	Hunting Creek Escherichia coli	4A	0.529			1998	L
<b>A13R-04-BAC</b> Recreation	Holmes Run Escherichia coli	4A			6.09	2012	L
<b>A13R-05-BAC</b> Recreation	Backlick Run Escherichia coli	4A			6.68	2012	L
<b>A13R-06-BAC</b> Recreation	Tripps Run Escherichia coli	4A			3.70	2012	L
<b>A14R-01-PCB</b> Fish Consumption	Little Hunting Creek PCB in Water Column	4A			1.09	2010	L
<b>A15R-01-BAC</b> Recreation	Accotink Creek Escherichia coli	4A			7.47	2004	L
<b>A15R-02-BAC</b> Recreation	Accotink Creek Escherichia coli	4A			5.22	1998	L
<b>A15R-03-BAC</b> Recreation	Accotink Creek Escherichia coli	4A			2.05	2002	L
<b>A15R-06-BAC</b> Recreation	Long Branch Escherichia coli	4A			4.47	2008	L
<b>A17R-01-BAC</b> Recreation	Cedar Run Escherichia coli	4A			15.09	1996	L
	Escherichia coli	4A			13.17	1998	L
<b>A17R-02-BAC</b> Recreation	Licking Run Escherichia coli	4A			6.40	1998	L
<b>A17R-03-BAC</b> Recreation	Licking Run Escherichia coli	4A			7.01	2006	L
<b>A17R-04-BAC</b> Recreation	Turkey Run Escherichia coli	4A			3.61	2006	L
<b>A17R-05-BAC</b> Recreation	Cedar Run Escherichia coli	4A			2.49	2008	L
	Escherichia coli	4A			2.41	2012	L
<b>A17R-06-BAC</b> Recreation	Walnut Branch Escherichia coli	4A			1.69	2008	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A17R-07-BAC</b> Recreation	Owl Run Escherichia coli	4A			5.85	2014	L
<b>A18R-01-BAC</b> Recreation	Elk Run Escherichia coli	4A			2.27	2008	L
<b>A18R-02-BAC</b> Recreation	Town Run Escherichia coli	4A			2.51	2008	L
<b>A18R-03-BAC</b> Recreation	Slate Run Escherichia coli	4A			6.97	2010	L
<b>A19R-01-BAC</b> Recreation	Broad Run Escherichia coli	4A			7.59	2002	L
<b>A19R-02-BAC</b> Recreation	Broad Run Escherichia coli	4A			1.54	2002	L
<b>A19R-03-BAC</b> Recreation	Kettle Run Escherichia coli	4A			7.76	2002	L
<b>A19R-04-BAC</b> Recreation	South Run Escherichia coli	4A			2.34	2012	L
<b>A19R-04-BEN</b> Aquatic Life	South Run Benthic-Macroinvertebrate Bioassessments	4A			2.34	1998	L
<b>A19R-05-BAC</b> Recreation	Broad Run Escherichia coli Escherichia coli	4A 4A			1.16 1.15	2004 2006	L L
<b>A19R-06-BAC</b> Recreation	Broad Run Escherichia coli	4A			2.40	2006	L
<b>A19R-07-BAC</b> Recreation	Trapp Branch Escherichia coli	4A			1.78	2006	L
<b>A19R-08-BAC</b> Recreation	Kettle Run Escherichia coli Escherichia coli	4A 4A			3.61 2.45	2006 2014	L L
<b>A19R-09-BAC</b> Recreation	Broad Run Escherichia coli	4A			4.17	2010	L
<b>A19R-10-BAC</b> Recreation	North Fork Broad Run Escherichia coli	4A			3.66	2016	L
<b>A20R-01-BAC</b> Recreation	Occoquan River Fecal Coliform Escherichia coli	4A 4A			1.63 3.35	2004 2006	L L
<b>A20R-02-BAC</b> Recreation	Purcell Branch Escherichia coli	4A			3.85	2006	L



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

### Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A21R-03-BAC</b> Recreation	<b>Catharpin Creek</b> Escherichia coli	4A			6.80	2008	L
<b>A21R-04-BAC</b> Recreation	<b>Youngs Branch</b> Escherichia coli	4A			6.05	2012	L
<b>A21R-05-BAC</b> Recreation	<b>Bull Run</b> Escherichia coli	4A			4.02	2016	L
<b>A22R-01-BAC</b> Recreation	<b>Cub Run</b> Escherichia coli	4A			6.89	2006	L
<b>A22R-02-BAC</b> Recreation	<b>Elklick Run</b> Escherichia coli	4A			2.27	2006	L
<b>A22R-03-BAC</b> Recreation	<b>Flatlick Branch</b> Escherichia coli	4A			3.22	2014	L
<b>A22R-04-BAC</b> Recreation	<b>Big Rocky Run</b> Escherichia coli	4A			4.34	2014	L
<b>A23R-01-BEN</b> Aquatic Life	<b>Bull Run</b> Benthic-Macroinvertebrate Bioassessments	4A			4.86	1996	L
<b>A23R-02-BAC</b> Recreation	<b>Popes Head Creek</b> Escherichia coli	4A			5.63	2004	L
<b>A23R-02-BEN</b> Aquatic Life	<b>Popes Head Creek</b> Benthic-Macroinvertebrate Bioassessments	4A			5.63	1998	L
<b>A23R-03-BAC</b> Recreation	<b>Little Rocky Run</b> Escherichia coli	4A			5.23	2008	L
<b>A25R-01-PCB</b> Fish Consumption	<b>Giles Run</b> PCB in Water Column	4A			6.48	2010	L
<b>A25R-02-PCB</b> Fish Consumption	<b>Mills Branch</b> PCB in Water Column	4A			1.72	2010	L
<b>A26L-01-PCB</b> Fish Consumption	<b>Lake Montclair</b> PCB in Fish Tissue	4A		103.54		2010	L
<b>A26R-02-BAC</b> Recreation	<b>Powells Creek</b> Escherichia coli Escherichia coli	4A 4A			5.37 3.91	2006 2014	L L
<b>A26R-03-BAC</b> Recreation	<b>Quantico Creek</b> Escherichia coli	4A			1.47	2004	L
<b>A26R-04-BAC</b> Recreation	<b>North Branch Chopawamsic Creek</b> Escherichia coli	4A			7.26	2004	L
<b>A26R-05-BAC</b> Recreation	<b>South Fork Quantico Creek</b> Escherichia coli	4A			4.82	2004	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A26R-07-BAC</b>	Unnamed tributary to Potomac River						
Recreation	Escherichia coli	4A			3.67	2010	L
<b>A28R-01-BAC</b>	Austin Run						
Recreation	Escherichia coli	4A			0.85	2004	L
	Escherichia coli	4A			0.69	2014	L
<b>A29R-01-BAC</b>	Accokeek Creek						
Recreation	Escherichia coli	4A			4.48	2002	L
<b>A29R-02-BAC</b>	Potomac Creek						
Recreation	Escherichia coli	4A			2.18	2004	L
	Escherichia coli	4A			1.91	2014	L
<b>A29R-03-BAC</b>	Potomac Run						
Recreation	Escherichia coli	4A			6.59	2006	L
<b>A30E-01-BAC</b>	Williams Creek						
Recreation	Enterococcus	4A	0.135			2010	L
<b>A30E-01-PCB</b>	Coan River, Monroe Creek, Upper Machodoc Creek						
Fish Consumption	PCB in Fish Tissue	4A	2.531			2004	L
	PCB in Fish Tissue	4A	3.453			2006	L
<b>A30E-03-SF</b>	Upper Machodoc Creek						
Shellfishing	Fecal Coliform	4A	0.705			1998	L
	Fecal Coliform	4A	0.135			2012	L
<b>A30E-06-SF</b>	Deep Creek						
Shellfishing	Fecal Coliform	4A	0.030			2002	L
	Fecal Coliform	4A	0.038			2008	L
<b>A30E-07-SF</b>	Upper Machodoc Creek						
Shellfishing	Fecal Coliform	4A	0.049			2014	L
<b>A31E-01-SF</b>	Rosier Creek						
Shellfishing	Fecal Coliform	4A	0.206			1998	L
<b>A31E-01-SF2</b>	Rosier Creek						
Shellfishing	Fecal Coliform	4A	0.274			2006	L
<b>A31E-02-SF</b>	Goldman Creek						
Shellfishing	Fecal Coliform	4A	0.043			2014	L
<b>A31E-03-SF</b>	Monroe Creek						
Shellfishing	Fecal Coliform	4A	0.172			2014	L
<b>A31E-06-BAC</b>	Mattox Creek						
Recreation	Enterococcus	4A	0.706			2006	L
<b>A31E-06-SF</b>	Mattox Creek						
Shellfishing	Fecal Coliform	4A	0.340			1996	L



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

### Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A31E-07-BAC</b> Recreation	Popes Creek Enterococcus	4A	0.576			2006	L
<b>A31E-07-SF</b> Shellfishing	Popes Creek Fecal Coliform	4A	0.576			1998	L
<b>A31R-03-BAC</b> Recreation	Popes Creek Watershed Escherichia coli	4A			29.88	2014	L
<b>A32E-01-SF</b> Shellfishing	Cold Harbor Creek Fecal Coliform	4A	0.083			2004	L
<b>A32E-02-SF</b> Shellfishing	Currioman Creek Fecal Coliform	4A	0.052			1998	L
<b>A32E-04-SF</b> Shellfishing	Nomini Creek, Peirce Creek Fecal Coliform	4A	0.682			1998	L
<b>A32E-04-SF2</b> Shellfishing	Nomini Creek, Peirce Creek Fecal Coliform	4A	0.347			2004	L
<b>A32E-05-SF</b> Shellfishing	Buckner Creek - PARTIAL DELIST Fecal Coliform	4A	0.109			1998	L
<b>A32E-06-SF</b> Shellfishing	North Prong Buckner Creek Fecal Coliform	4A	0.023			1998	L
<b>A32E-08-SF</b> Shellfishing	Lower Machodoc Creek Fecal Coliform	4A	0.457			1998	L
<b>A32E-10-SF</b> Shellfishing	Weatherall Creek Fecal Coliform	4A	0.055			2016	L
<b>A32E-11-SF</b> Shellfishing	Cabin Point Creek Fecal Coliform	4A	0.123			2008	L
<b>A32E-12-SF</b> Shellfishing	Glebe Creek and Aimes Creek Fecal Coliform	4A	0.135			2008	L
<b>A32E-13-SF</b> Shellfishing	Currioman Creek Fecal Coliform	4A	0.020			2008	L
<b>A32E-14-SF</b> Shellfishing	Poor Jack Creek Fecal Coliform	4A	0.147			2008	L
<b>A32E-15-SF</b> Shellfishing	Davis Creek Fecal Coliform	4A	0.026			2008	L
<b>A32E-16-SF</b> Shellfishing	Jules Creek Fecal Coliform	4A	0.045			2008	L
<b>A32E-17-SF</b> Shellfishing	Matthews Cove Fecal Coliform	4A	0.019			2008	L





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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A32E-19-SF</b> Shellfishing	<b>Barnes Creek</b> Fecal Coliform	4A	0.057			2008	L
<b>A32E-21-SF</b> Shellfishing	<b>North Prong Buckner Creek</b> Fecal Coliform	4A	0.032			2008	L
<b>A32R-02-BAC</b> Recreation	<b>Lee Creek</b> Escherichia coli	4A			1.35	2012	L
<b>A32R-04-BAC</b> Recreation	<b>XCJ - Jones Branch, UT</b> Escherichia coli	4A			1.02	2012	L
<b>A32R-05-BAC</b> Recreation	<b>Tavern Run</b> Escherichia coli	4A			3.27	2012	L
<b>A32R-06-BAC</b> Recreation	<b>Nontidal Nomini Creek Tributaries</b> Escherichia coli	4A			9.13	2014	L
<b>A32R-08-BAC</b> Recreation	<b>Barnes Creek</b> Escherichia coli	4A			1.94	2014	L
<b>A33E-01-SF</b> Shellfishing	<b>Gardner Creek</b> Fecal Coliform	4A	0.131			1998	L
<b>A33E-02-BAC</b> Recreation	<b>Jackson Creek</b> Enterococcus	4A	0.137			2012	L
<b>A33E-02-SF</b> Shellfishing	<b>Jackson Creek</b> Fecal Coliform	4A	0.137			1998	L
<b>A33E-03-BAC</b> Recreation	<b>Bonum Creek</b> Enterococcus	4A	0.200			2012	L
<b>A33E-03-SF</b> Shellfishing	<b>Bonum Creek</b> Fecal Coliform	4A	0.200			1998	L
<b>A33E-07-BAC</b> Recreation	<b>Hampton Hall Branch</b> Enterococcus	4A	0.274			2012	L
<b>A33E-07-SF</b> Shellfishing	<b>Hampton Hall Branch, Kinsale Branch</b> Fecal Coliform Fecal Coliform	4A 4A	0.382 0.052			1998 2016	L L
<b>A33E-09-SF</b> Shellfishing	<b>Mill Creek</b> Fecal Coliform	4A	0.119			1998	L
<b>A33E-10-SF</b> Shellfishing	<b>Lodge Creek</b> Fecal Coliform	4A	0.147			1998	L
<b>A33E-12-SF</b> Shellfishing	<b>Shannon Branch</b> Fecal Coliform	4A	0.036			2006	L
<b>A33R-01-BAC</b> Recreation	<b>Mill Creek</b> Escherichia coli	4A			5.00	2010	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A33R-03-BAC</b> Recreation	Gardner Creek Escherichia coli	4A			1.40	2012	L
<b>A33R-06-BAC</b> Recreation	XMA - Hampton Hall Creek, UT Escherichia coli	4A			2.07	2014	L
<b>A34E-01-SF</b> Shellfishing	The Glebe Fecal Coliform	4A	0.132			1998	L
<b>A34E-01-SF2</b> Shellfishing	The Glebe Fecal Coliform	4A	0.045			2004	L
<b>A34E-02-SF</b> Shellfishing	Killneck Creek Fecal Coliform	4A	0.027			2014	L
<b>A34E-04-SF</b> Shellfishing	XFJ - Coan River, UT (Cellars Cove) Fecal Coliform	4A	0.032			1998	L
<b>A34E-05-BAC</b> Recreation	Coan River Enterococcus	4A	0.349			2012	L
<b>A34E-05-SF</b> Shellfishing	Headly Cove Fecal Coliform	4A	0.026			1998	L
<b>A34E-05-SF2</b> Shellfishing	Mill Creek and the Coan River - PARTIAL DELIST Fecal Coliform	4A	0.426			1998	L
<b>A34E-07-SF</b> Shellfishing	Cod Creek Fecal Coliform	4A	0.049			1998	L
<b>A34E-08-SF</b> Shellfishing	Cod Creek, UT Fecal Coliform	4A	0.054			1998	L
<b>A34E-09-BAC</b> Recreation	Presley Creek Enterococcus	4A	0.332			2012	L
<b>A34E-09-SF</b> Shellfishing	Presley Creek Fecal Coliform	4A	0.332			1998	L
<b>A34E-11-SF</b> Shellfishing	Cod Creek, Tributary to Little Wicomico River Fecal Coliform	4A	0.012			2014	L
<b>A34E-12-SF</b> Shellfishing	Hull Creek Fecal Coliform	4A	0.252			1998	L
<b>A34E-13-SF</b> Shellfishing	Rogers Creek - PARTIAL DELIST Fecal Coliform	4A	0.035			1998	L
<b>A34E-14-SF</b> Shellfishing	Cubitt Creek Fecal Coliform	4A	0.225			1998	L
<b>A34E-15-SF</b> Shellfishing	Cod Creek, Tributary to Little Wicomico River Fecal Coliform	4A	0.078			1998	L



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

### Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>A34E-16-SF</b> Shellfishing	Little Wicomico River Fecal Coliform	4A	0.203			1998	L
<b>A34E-16-SF2</b> Shellfishing	Little Wicomico River Fecal Coliform	4A	0.366			2004	L
<b>A34E-17-SF</b> Shellfishing	Bridge Creek Fecal Coliform	4A	0.129			2006	L
<b>A34E-18-SF</b> Shellfishing	Bridge Creek Fecal Coliform	4A	0.089			2006	L
<b>A34E-21-SF</b> Shellfishing	Kingscote Creek Fecal Coliform	4A	0.009			2006	L
<b>A34E-23-SF</b> Shellfishing	Wrights Cove, UT Fecal Coliform	4A	0.046			2014	L
<b>A34E-24-BAC</b> Recreation	Spring Cove Enterococcus	4A	0.010			2010	L
<b>A34E-29-SF</b> Shellfishing	Ellyson Creek Fecal Coliform	4A	0.098			2016	L
<b>A34E-31-BAC</b> Recreation	Little Wicomico River Enterococcus	4A	0.569			2006	L
<b>A34E-33-SF</b> Shellfishing	Bridgemans Back Creek Fecal Coliform	4A	0.055			2008	L
<b>A34E-34-SF</b> Shellfishing	Back Creek Fecal Coliform	4A	0.038			2008	L
<b>A34E-35-SF</b> Shellfishing	Little Wicomico River, UT Fecal Coliform	4A	0.024			2012	L
<b>A34E-36-BAC</b> Recreation	Hack Creek Enterococcus	4A	0.224			2012	L
<b>A34E-36-SF</b> Shellfishing	Hack Creek Fecal Coliform	4A	0.224			2008	L
<b>A34R-04-BAC</b> Recreation	Coan Mill Stream Escherichia coli	4A			2.93	2012	L
<b>B02R-01-BEN</b> Aquatic Life	West Strait Creek Benthic-Macroinvertebrate Bioassessments	4A			0.36	1996	L
	Benthic-Macroinvertebrate Bioassessments	4A			0.87	2004	L
<b>B02R-01-DO</b> Aquatic Life	West Strait Creek Oxygen, Dissolved	4A			0.36	2010	L
<b>B02R-02-BEN</b> Aquatic Life	Strait Creek Benthic-Macroinvertebrate Bioassessments	4A			3.29	2002	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>B06R-02-BAC</b>	<b>Hogue Creek</b>						
Recreation	Fecal Coliform	4A			17.24	2002	L
	Escherichia coli	4A			17.24	2008	L
<b>B08R-01-BAC</b>	<b>Opequon Creek</b>						
Recreation	Escherichia coli	4A			23.21	2004	L
<b>B08R-01-BEN</b>	<b>Opequon Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			23.21	2010	L
<b>B09R-01-BAC</b>	<b>Abrams Creek</b>						
Recreation	Fecal Coliform	4A			11.18	1996	L
	Escherichia coli	4A			11.18	2008	L
<b>B09R-01-BEN</b>	<b>Abrams Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			11.18	1996	L
<b>B09R-02-BAC</b>	<b>Opequon Creek</b>						
Recreation	Fecal Coliform	4A			9.04	1996	L
	Escherichia coli	4A			9.04	2008	L
<b>B09R-02-BEN</b>	<b>Opequon Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			9.04	2004	L
<b>B09R-03-BAC</b>	<b>Lick Run</b>						
Recreation	Escherichia coli	4A			8.21	2006	L
<b>B09R-04-BAC</b>	<b>Redbud Run</b>						
Recreation	Fecal Coliform	4A			8.05	2004	L
	Escherichia coli	4A			8.05	2008	L
<b>B09R-04-BEN</b>	<b>Redbud Run</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			8.05	2004	L
<b>B10R-01-BEN</b>	<b>Cockran Spring Branch</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			0.58	1996	L
<b>B10R-02-BAC</b>	<b>Middle River</b>						
Recreation	Escherichia coli	4A			17.05	2004	L
	Fecal Coliform	4A			6.86	2006	L
	Escherichia coli	4A			3.49	2008	L
	Escherichia coli	4A			3.37	2010	L
<b>B10R-02-BEN</b>	<b>Middle River</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			17.05	1998	L
<b>B10R-03-BAC</b>	<b>Back Creek</b>						
Recreation	Fecal Coliform	4A			9.40	2004	L
	Escherichia coli	4A			9.40	2008	L
<b>B10R-04-BAC</b>	<b>Eidson Creek</b>						
Recreation	Fecal Coliform	4A			8.84	2004	L
	Escherichia coli	4A			8.84	2008	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>B12R-01-BAC</b> Recreation	<b>Lewis Creek</b> Escherichia coli	4A			10.06	2004	L
<b>B12R-01-BEN</b> Aquatic Life	<b>Lewis Creek</b> Benthic-Macroinvertebrate Bioassessments	4A			10.06	1996	L
<b>B13R-01-BAC</b> Recreation	<b>Moffett Creek</b> Fecal Coliform	4A			9.91	1996	L
	Escherichia coli	4A			9.91	2008	L
<b>B13R-01-BEN</b> Aquatic Life	<b>Moffett Creek</b> Benthic-Macroinvertebrate Bioassessments	4A			9.91	1996	L
<b>B13R-02-BAC</b> Recreation	<b>Elk Run</b> Fecal Coliform	4A			4.13	2004	L
	Escherichia coli	4A			4.13	2008	L
<b>B14R-01-BAC</b> Recreation	<b>Christians Creek</b> Fecal Coliform	4A			32.95	1996	L
	Escherichia coli	4A			32.95	2004	L
<b>B14R-01-BEN</b> Aquatic Life	<b>Christians Creek</b> Benthic-Macroinvertebrate Bioassessments	4A			32.95	2004	L
<b>B14R-02-BAC</b> Recreation	<b>Folly Mills Creek</b> Fecal Coliform	4A			14.14	2004	L
	Escherichia coli	4A			14.14	2012	L
<b>B14R-03-BAC</b> Recreation	<b>Long Meadow Run</b> Escherichia coli	4A			11.06	2006	L
<b>B15R-01-BAC</b> Recreation	<b>Middle River</b> Fecal Coliform	4A			17.85	1996	L
	Escherichia coli	4A			17.85	2008	L
<b>B15R-02-BAC</b> Recreation	<b>Polecat Draft</b> Fecal Coliform	4A			7.90	1996	L
	Escherichia coli	4A			7.90	2004	L
<b>B17R-01-BAC</b> Recreation	<b>North River</b> Fecal Coliform	4A			21.37	1996	L
	Fecal Coliform	4A			3.48	2002	L
	Escherichia coli	4A			15.82	2004	L
	Escherichia coli	4A			7.08	2012	L
	Escherichia coli	4A			5.55	2012	L
	Escherichia coli	4A			3.48	2014	L
<b>B17R-02-BAC</b> Recreation	<b>Thorny Branch</b> Fecal Coliform	4A			7.76	2004	L



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

## Potomac and Shenandoah River Basins

Cause Group Code	Water Name	Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>B18R-04-BAC</b>	<b>Beaver Creek</b>							
Recreation		Fecal Coliform	4A			6.28	2002	L
		Escherichia coli	4A			2.65	2008	L
		Escherichia coli	4A			3.63	2008	L
<b>B18R-05-BAC</b>	<b>Briery Branch</b>							
Recreation		Fecal Coliform	4A			1.47	2004	L
		Escherichia coli	4A			1.47	2014	L
<b>B19R-01-BAC</b>	<b>Mossy Creek</b>							
Recreation		Fecal Coliform	4A			10.46	1996	L
		Escherichia coli	4A			10.46	2004	L
<b>B19R-01-BEN</b>	<b>Mossy Creek</b>							
Aquatic Life		Benthic-Macroinvertebrate Bioassessments	4A			10.46	1998	L
<b>B21R-01-BAC</b>	<b>Dry River</b>							
Recreation		Fecal Coliform	4A			6.55	1998	L
		Escherichia coli	4A			6.55	2004	L
<b>B21R-02-BAC</b>	<b>Honey Run</b>							
Recreation		Fecal Coliform	4A			4.25	2004	L
<b>B22R-01-BAC</b>	<b>Muddy Creek</b>							
Recreation		Fecal Coliform	4A			11.13	1996	L
		Escherichia coli	4A			11.13	2004	L
<b>B22R-01-BEN</b>	<b>Muddy Creek</b>							
Aquatic Life		Benthic-Macroinvertebrate Bioassessments	4A			11.13	1996	M
<b>B23R-01-BEN</b>	<b>North River</b>							
Aquatic Life		Benthic-Macroinvertebrate Bioassessments	4A			15.82	1998	L
<b>B24R-01-BAC</b>	<b>Long Glade Creek</b>							
Recreation		Fecal Coliform	4A			11.22	1998	L
		Escherichia coli	4A			11.22	2008	L
<b>B25R-01-BAC</b>	<b>Cooks Creek</b>							
Recreation		Fecal Coliform	4A			14.37	1996	L
		Escherichia coli	4A			14.37	2004	L
<b>B25R-01-BEN</b>	<b>Cooks Creek</b>							
Aquatic Life		Benthic-Macroinvertebrate Bioassessments	4A			14.37	1996	M, 2yr
<b>B25R-02-BAC</b>	<b>Silver Creek</b>							
Recreation		Fecal Coliform	4A			0.20	2002	L
<b>B25R-03-BAC</b>	<b>Sunset Heights Branch</b>							
Recreation		Fecal Coliform	4A			4.74	2004	L
<b>B26R-01-BAC</b>	<b>Blacks Run</b>							
Recreation		Fecal Coliform	4A			11.64	1996	L
		Escherichia coli	4A			11.64	2004	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>B26R-01-BEN</b> Aquatic Life	<b>Blacks Run</b> Benthic-Macroinvertebrate Bioassessments	4A			11.64	1996	M, 2yr
<b>B27R-01-BAC</b> Recreation	<b>Pleasant Run</b> Fecal Coliform	4A			6.73	1996	L
	Escherichia coli	4A			6.73	2004	L
<b>B27R-01-BEN</b> Aquatic Life	<b>Pleasant Run</b> Benthic-Macroinvertebrate Bioassessments	4A			6.73	1996	M
<b>B28R-01-BAC</b> Recreation	<b>Naked Creek</b> Fecal Coliform	4A			7.12	1996	L
	Escherichia coli	4A			7.12	2004	L
<b>B28R-02-BAC</b> Recreation	<b>North Fork Naked Creek</b> Escherichia coli	4A			5.24	2012	L
<b>B29R-01-BAC</b> Recreation	<b>Congers Creek/Duck Run/Mill Creek</b> Fecal Coliform	4A			9.11	1996	L
	Escherichia coli	4A			6.24	2004	L
	Fecal Coliform	4A			5.99	2004	L
<b>B29R-01-BEN</b> Aquatic Life	<b>Mill Creek</b> Benthic-Macroinvertebrate Bioassessments	4A			6.24	1996	M
<b>B30R-01-BAC</b> Recreation	<b>South River</b> Fecal Coliform	4A			12.42	1996	L
	Escherichia coli	4A			12.42	2008	L
<b>B30R-03-BAC</b> Recreation	<b>Pine Run</b> Escherichia coli	4A			20.38	2006	L
<b>B32R-01-BEN</b> Aquatic Life	<b>South River</b> Benthic-Macroinvertebrate Bioassessments	4A			7.44	1996	L
	Benthic-Macroinvertebrate Bioassessments	4A			11.55	2008	L
	Benthic-Macroinvertebrate Bioassessments	4A			10.30	2012	L
<b>B32R-02-BAC</b> Recreation	<b>South River</b> Fecal Coliform	4A			24.36	1996	L
	Escherichia coli	4A			14.37	2006	L
	Escherichia coli	4A			2.11	2010	L
	Escherichia coli	4A			18.22	2012	L
	Escherichia coli	4A			5.37	2014	L
<b>B32R-02-HG</b> Fish Consumption	<b>South River/South Fork Shenandoah River/North Fork Shenandoah River/Shenandoah River</b> Mercury in Fish Tissue	4A			118.23	1998	L
	Mercury in Fish Tissue	4A			5.01	2002	L
	Mercury in Fish Tissue	4A			6.60	2006	L
	Mercury in Fish Tissue	4A			24.36	2008	L
<b>B32R-05-BAC</b> Recreation	<b>Steele Run</b> Escherichia coli	4A			3.78	2016	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>B33R-01-BAC</b>	<b>South Fork Shenandoah River</b>						
Recreation	Fecal Coliform	4A			16.44	2002	L
	Escherichia coli	4A			16.44	2008	L
<b>B33R-01-BEN</b>	<b>South Fork Shenandoah River</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			58.11	1998	L
<b>B34R-01-BAC</b>	<b>Cub Run</b>						
Recreation	Fecal Coliform	4A			14.89	1998	L
	Escherichia coli	4A			14.89	2004	L
<b>B35R-02-BEN</b>	<b>Quail Run</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			5.12	1998	L
<b>B38R-01-BAC</b>	<b>Mill Creek</b>						
Recreation	Fecal Coliform	4A			7.06	1998	L
	Escherichia coli	4A			7.06	2008	L
<b>B39R-01-BAC</b>	<b>Pass Run</b>						
Recreation	Fecal Coliform	4A			9.47	2002	L
	Escherichia coli	4A			9.47	2004	L
<b>B39R-02-BAC</b>	<b>Hawksbill Creek</b>						
Recreation	Fecal Coliform	4A			12.53	2002	L
	Escherichia coli	4A			12.53	2004	L
	Escherichia coli	4A			7.35	2006	L
<b>B39R-03-BAC</b>	<b>East Hawksbill Creek</b>						
Recreation	Escherichia coli	4A			9.38	2006	L
<b>B41R-01-BAC</b>	<b>Happy Creek</b>						
Recreation	Fecal Coliform	4A			8.54	2004	L
	Escherichia coli	4A			8.54	2014	L
<b>B41R-02-PCB</b>	<b>South Fork Shenandoah River/North Fork Shenandoah River/Shenandoah River</b>						
Fish Consumption	PCB in Fish Tissue	4A			45.64	1998	L
<b>B41R-03-BEN</b>	<b>Happy Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			8.54	2008	L
<b>B44R-01-BAC</b>	<b>Runions Creek</b>						
Recreation	Escherichia coli	4A			14.80	2010	L
<b>B45R-01-BAC</b>	<b>Long Meadow Run</b>						
Recreation	Escherichia coli	4A			9.85	2008	L
<b>B45R-02-BAC</b>	<b>Turley Creek</b>						
Recreation	Fecal Coliform	4A			4.03	2002	L
	Escherichia coli	4A			4.03	2010	L
<b>B45R-03-BAC</b>	<b>Holmans Creek</b>						
Recreation	Fecal Coliform	4A			11.09	1996	L
	Escherichia coli	4A			11.09	2008	L





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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>B45R-03-BEN</b>	<b>Holmans Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			11.09	1996	L
<b>B45R-04-BAC</b>	<b>North Fork Shenandoah River</b>						
Recreation	Fecal Coliform	4A			30.31	1996	L
	Escherichia coli	4A			23.79	2008	L
	Fecal Coliform	4A			1.98	2008	L
	Escherichia coli	4A			10.81	2012	L
<b>B46R-01-BAC</b>	<b>Linville Creek</b>						
Recreation	Fecal Coliform	4A			5.38	1996	L
	Fecal Coliform	4A			9.00	1996	L
	Escherichia coli	4A			5.38	2004	L
	Escherichia coli	4A			9.00	2004	L
<b>B46R-01-BEN</b>	<b>Linville Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			5.38	1996	L
	Benthic-Macroinvertebrate Bioassessments	4A			9.00	1996	L
<b>B47R-02-BAC</b>	<b>Mountain Run/Smith Creek/War Branch</b>						
Recreation	Fecal Coliform	4A			35.63	1996	L
	Escherichia coli	4A			6.63	2006	L
	Escherichia coli	4A			33.51	2008	L
	Escherichia coli	4A			10.38	2012	L
<b>B47R-03-BAC</b>	<b>Lacey Spring Branch</b>						
Recreation	Escherichia coli	4A			0.59	2014	L
<b>B47R-03-BEN</b>	<b>Lacey Spring Branch</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			0.59	1998	L
<b>B47R-05-BEN</b>	<b>Smith Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			14.09	1998	L
	Benthic-Macroinvertebrate Bioassessments	4A			6.88	2004	L
	Benthic-Macroinvertebrate Bioassessments	4A			5.44	2006	L
<b>B47R-06-BAC</b>	<b>Dry Fork</b>						
Recreation	Fecal Coliform	4A			10.85	2004	L
	Escherichia coli	4A			10.85	2012	L
<b>B48R-01-BAC</b>	<b>Mill Creek</b>						
Recreation	Fecal Coliform	4A			15.65	2002	L
	Escherichia coli	4A			4.54	2012	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>B49R-01-BAC</b>	<b>Stony Creek</b>						
Recreation	Fecal Coliform	4A			1.27	1998	L
	Fecal Coliform	4A			4.58	2002	L
	Fecal Coliform	4A			4.68	2004	L
	Fecal Coliform	4A			3.43	2006	L
	Escherichia coli	4A			10.53	2008	L
	Escherichia coli	4A			3.43	2012	L
<b>B49R-08-BAC</b>	<b>Orkney Springs Run</b>						
Recreation	Escherichia coli	4A			2.19	2012	L
<b>B49R-09-BAC</b>	<b>Stony Creek</b>						
Recreation	Escherichia coli	4A			3.50	2014	L
<b>B50R-02-BAC</b>	<b>Narrow Passage Creek</b>						
Recreation	Fecal Coliform	4A			11.61	2002	L
	Escherichia coli	4A			11.61	2008	L
<b>B50R-04-BAC</b>	<b>North Fork Shenandoah River</b>						
Recreation	Escherichia coli	4A			12.31	2012	L
<b>B50R-05-BAC</b>	<b>Spring Hollow</b>						
Recreation	Escherichia coli	4A			6.39	2012	L
<b>B52R-02-BEN</b>	<b>Orndorff Spring Branch</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			0.23	1998	L
<b>B55R-01-BAC</b>	<b>Manassas Run</b>						
Recreation	Fecal Coliform	4A			15.09	2004	L
	Escherichia coli	4A			15.09	2014	L
<b>B55R-02-BAC</b>	<b>Borden Marsh Run</b>						
Recreation	Escherichia coli	4A			15.68	2006	L
<b>B55R-03-BAC</b>	<b>Willow Brook</b>						
Recreation	Escherichia coli	4A			4.09	2006	L
<b>B56R-01-BAC</b>	<b>Crooked Run</b>						
Recreation	Fecal Coliform	4A			9.22	2002	L
	Escherichia coli	4A			9.22	2008	L
<b>B56R-02-BAC</b>	<b>Stephens Run</b>						
Recreation	Escherichia coli	4A			0.99	2010	L
<b>B56R-03-BAC</b>	<b>West Run</b>						
Recreation	Escherichia coli	4A			8.08	2010	L
<b>B57R-01-BAC</b>	<b>Page Brook Run/Spout Run</b>						
Recreation	Fecal Coliform	4A			4.12	1998	L
	Fecal Coliform	4A			10.97	2004	L
	Escherichia coli	4A			10.97	2004	L
	Escherichia coli	4A			4.12	2010	L



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

## Potomac and Shenandoah River Basins

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>B57R-01-BEN</b>	<b>Spout Run</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			4.12	1998	L
<b>B57R-02-BAC</b>	<b>Long Branch</b>						
Recreation	Fecal Coliform	4A			3.87	2004	L
	Escherichia coli	4A			3.87	2008	L
<b>B57R-04-BAC</b>	<b>Roseville Run</b>						
Recreation	Escherichia coli	4A			6.39	2010	L
<b>CB5MH-DO-BAY</b>	<b>Chesapeake Bay segment CB5MH</b>						
Aquatic Life	Oxygen, Dissolved	4A	1.532			2016	L
Deep-Water Aquatic Life	Oxygen, Dissolved	4A	1.532			2016	L
<b>CB5MH-SAV-BAY</b>	<b>Chesapeake Bay segment CB5MH</b>						
Aquatic Life	Aquatic Plants (Macrophytes)	4A	2.708			2006	L
Shallow-Water Submerged Aquatic Vegetation	Aquatic Plants (Macrophytes)	4A	2.708			2006	L
<b>POTMH-DO-BAY</b>	<b>Potomac Mesohaline Embayments</b>						
Aquatic Life	Oxygen, Dissolved	4A	0.176			2002	L
	Oxygen, Dissolved	4A	1.954			2006	L
	Oxygen, Dissolved	4A	0.038			2008	L
	Oxygen, Dissolved	4A	29.687			2014	L
	Oxygen, Dissolved	4A	0.135			2014	L
Deep-Water Aquatic Life	Oxygen, Dissolved	4A	0.448			2006	L
	Oxygen, Dissolved	4A	4.644			2014	L
Open-Water Aquatic Life	Oxygen, Dissolved	4A	0.176			2002	L
	Oxygen, Dissolved	4A	1.954			2006	L
	Oxygen, Dissolved	4A	0.038			2008	L
	Oxygen, Dissolved	4A	0.135			2014	L
	Oxygen, Dissolved	4A	29.687			2014	L
<b>POTMH-SAV-BAY</b>	<b>Potomac Mesohaline Embayments</b>						
Aquatic Life	Aquatic Plants (Macrophytes)	4A	31.989			2006	L
Shallow-Water Submerged Aquatic Vegetation	Aquatic Plants (Macrophytes)	4A	31.989			2006	L
<b>POTOH-DO-BAY</b>	<b>Potomac Oligohaline Embayments</b>						
Aquatic Life	Oxygen, Dissolved	4A	0.923			2006	L
	Oxygen, Dissolved	4A	3.389			2006	L
	Oxygen, Dissolved	4A	0.449			2016	L
	Oxygen, Dissolved	4A	3.012			2016	L
Open-Water Aquatic Life	Oxygen, Dissolved	4A	3.389			2006	L
	Oxygen, Dissolved	4A	0.923			2006	L
	Oxygen, Dissolved	4A	3.012			2016	L
	Oxygen, Dissolved	4A	0.449			2016	L



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

## Potomac and Shenandoah River Basins

Cause Group Code	Water Name	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
Impaired Use	Cause						
<b>POTTF-DO-BAY</b>	<b>Potomac Tidal Fresh Embayments</b>						
Aquatic Life	Oxygen, Dissolved	4A	16.783			2014	L
	Oxygen, Dissolved	4A	0.076			2016	L
Open-Water Aquatic Life	Oxygen, Dissolved	4A	16.783			2014	L
	Oxygen, Dissolved	4A	0.076			2016	L

VA DEQ is transitioning from Fecal Coliform bacteria to Escherichia coli (fresh water) and Enterococci (salt water) for assessing the Recreation Use.

TMDL Development Priorities are: H (High) = formal EPA priority to be addressed with a plan by 2022; M (Medium) = DEQ priority that may be addressed with a plan by 2022; or L (Low) = not prioritized to be addressed with a plan by 2022. Within the H or M priority there may be "2yr" noted which means the priority is to be addressed within the two next years.

Multiple listings are due to the same impairments for different uses and/or different initial listing dates for adjacent waters.



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>APPTF-SAV-BAY</b> Appomattox River							
Aquatic Life	Aquatic Plants (Macrophytes)	4A	2.708			2006	L
	Aquatic Plants (Macrophytes)	4A	0.032			2014	L
Shallow-Water Submerged Aquatic Vegetation	Aquatic Plants (Macrophytes)	4A	2.708			2006	L
	Aquatic Plants (Macrophytes)	4A	0.032			2014	L
<b>EBEMH-DO-BAY</b> Eastern Branch, Elizabeth River and Indian River							
Aquatic Life	Oxygen, Dissolved	4A	2.292			2006	L
Open-Water Aquatic Life	Oxygen, Dissolved	4A	2.292			2006	L
<b>ELIPH-DO-BAY</b> Chesapeake Bay segment ELIPH (Elizabeth River Mainstem)							
Aquatic Life	Oxygen, Dissolved	4A	8.112			2006	L
Open-Water Aquatic Life	Oxygen, Dissolved	4A	8.112			2006	L
<b>G01E-01-BAC</b> James River							
Recreation	Escherichia coli	4A	1.484			1996	L
	Escherichia coli	4A	4.605			2006	L
	Escherichia coli	4A	0.078			2008	L
<b>G01E-02-CHLA</b> James River							
Aquatic Life	Chlorophyll-a	4A	5.534			2008	L
Open-Water Aquatic Life	Chlorophyll-a	4A	5.534			2008	L
<b>G01R-01-BAC</b> Goode Creek							
Recreation	Escherichia coli	4A			1.21	2006	L
<b>G01R-02-BAC</b> Almond Creek							
Recreation	Escherichia coli	4A			2.10	2006	L
<b>G01R-04-BAC</b> Falling Creek							
Recreation	Escherichia coli	4A			16.97	2006	L
<b>G01R-05-BAC</b> Kingsland Creek							
Recreation	Escherichia coli	4A			8.54	2006	L
<b>G01R-06-BAC</b> Gillies Creek							
Recreation	Escherichia coli	4A			5.88	2008	L
<b>G01R-08-BAC</b> XSZ - James River, UT (aka No Name Creek)							
Recreation	Escherichia coli	4A			2.22	2008	L
<b>G01R-10-BAC</b> Pocoshock Creek							
Recreation	Escherichia coli	4A			8.70	2008	L
<b>G01R-11-BAC</b> Broad Rock Creek							
Recreation	Escherichia coli	4A			3.12	2006	L
<b>G01R-13-BAC</b> XYA - Almond Creek, UT							
Recreation	Escherichia coli	4A			1.14	2008	L
<b>G01R-14-BAC</b> Cornelius Creek							
Recreation	Escherichia coli	4A			7.22	2008	L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>G01R-15-BAC</b> Recreation	Proctors Creek Escherichia coli	4A			8.26	2008	L
<b>G01R-16-BAC</b> Recreation	Horners Run Escherichia coli	4A			2.43	2008	L
<b>G01R-17-BAC</b> Recreation	Falling Creek, UT Escherichia coli	4A			2.32	2008	L
<b>G01R-18-BAC</b> Recreation	Licking Creek Escherichia coli	4A			3.24	2008	L
<b>G01R-19-BAC</b> Recreation	Stony Run Escherichia coli	4A			3.16	2008	L
<b>G01R-20-BAC</b> Recreation	Reedy Creek Escherichia coli	4A			3.42	2012	L
<b>G01R-21-BAC</b> Recreation	Great Branch Escherichia coli	4A			4.38	2016	L
<b>G02E-02-CHLA</b> Aquatic Life Open-Water Aquatic Life	James River Chlorophyll-a Chlorophyll-a	4A 4A	25.824 0.633			2008 2008	L L
<b>G02R-01-BAC</b> Recreation	Fourmile Creek Escherichia coli Escherichia coli	4A 4A			37.00 9.91	2006 2006	L L
<b>G02R-05-BAC</b> Recreation	Crewes Channel Escherichia coli	4A			3.24	2008	L
<b>G02R-07-BAC</b> Recreation	Western Run Escherichia coli	4A			1.84	2006	L
<b>G02R-08-BAC</b> Recreation	Turkey Island Creek Escherichia coli	4A			8.85	2014	L
<b>G03E-01-BAC</b> Recreation	Bailey Creek (tidal), Cattail Creek (tidal) Escherichia coli	4A	0.114			1994	L
<b>G03E-04-BAC</b> Recreation	James River Escherichia coli	4A	10.194			2006	L
<b>G03R-02-BAC</b> Recreation	Bailey Creek Escherichia coli	4A			6.47	2008	L
<b>G03R-04-BAC</b> Recreation	West Run Escherichia coli	4A			1.86	2010	L
<b>G03R-07-BAC</b> Recreation	Walls Run Escherichia coli	4A			5.85	2006	L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>G03R-08-BAC</b> Recreation	<b>Cattail Creek</b> Escherichia coli	4A			1.67	2008	L
<b>G03R-09-BAC</b> Recreation	<b>Southerly Run</b> Escherichia coli	4A			2.84	2008	L
<b>G03R-10-BAC</b> Recreation	<b>Powell Creek, UT</b> Escherichia coli	4A			1.72	2008	L
<b>G03R-11-BAC</b> Recreation	<b>Courthouse Creek</b> Escherichia coli	4A			4.39	2014	L
<b>G04R-02-BAC</b> Recreation	<b>Upper Chippokes Creek</b> Escherichia coli	4A			5.61	2008	L
<b>G04R-04-BAC</b> Recreation	<b>XBB - Upper Chippokes Creek, UT</b> Escherichia coli	4A			7.09	2014	L
<b>G04R-05-BAC</b> Recreation	<b>Flowerdew Hundred Creek</b> Escherichia coli	4A			3.68	2016	L
<b>G05R-01-BEN</b> Aquatic Life	<b>Chickahominy River, UT - Unnamed Tributary</b> Benthic-Macroinvertebrate Bioassessments pH	4A 4A			1.17 1.17	1996 2006	L L
<b>G05R-02-BAC</b> Recreation	<b>Upham Brook Watershed</b> Escherichia coli	4A			65.30	2006	L
<b>G05R-03-BAC</b> Recreation	<b>Chickahominy River</b> Escherichia coli Escherichia coli	4A 4A			14.25 2.30	2012 2014	L L
<b>G05R-04-BEN</b> Aquatic Life	<b>Chickahominy River</b> Benthic-Macroinvertebrate Bioassessments	4A			7.08	2010	L
<b>G05R-05-BAC</b> Recreation	<b>Stony Run</b> Escherichia coli	4A			0.21	2010	L
<b>G05R-12-BAC</b> Recreation	<b>Upper Stony Run and Tributaries</b> Escherichia coli	4A			39.87	2012	L
<b>G05R-13-BEN</b> Aquatic Life	<b>Allens Branch</b> Benthic-Macroinvertebrate Bioassessments	4A			3.32	2016	L
<b>G06R-03-BAC</b> Recreation	<b>White Oak Swamp</b> Escherichia coli	4A			6.68	2006	L
<b>G06R-12-BAC</b> Recreation	<b>Beaverdam Creek</b> Escherichia coli	4A			7.64	2006	L
<b>G06R-13-BAC</b> Recreation	<b>Boatswain Creek</b> Escherichia coli	4A			3.75	2006	L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>G06R-14-BAC</b> Recreation	Chickahominy River Escherichia coli	4A			7.45	2008	L
<b>G06R-15-BAC</b> Recreation	Chickahominy River Escherichia coli	4A			11.78	2016	L
<b>G07R-01-BAC</b> Recreation	Collins Run Escherichia coli	4A			4.49	2010	L
<b>G07R-04-BAC</b> Recreation	Schiminoe Creek Escherichia coli	4A			6.22	2012	L
<b>G07R-08-BAC</b> Recreation	Chickahominy River Escherichia coli	4A			11.03	2016	L
<b>G08E-01-BAC</b> Recreation	Morris Creek Enterococcus	4A	0.394			2010	L
<b>G10E-01-BAC</b> Recreation	Powhatan Creek/Sandy Bay Enterococcus	4A	0.204			1998	L
<b>G10E-03-BAC</b> Recreation	Mill Creek Enterococcus	4A	0.075			1998	L
<b>G10E-04-CHLA</b> Aquatic Life	James River (Mesohaline and Polyhaline) Chlorophyll-a	4A	123.068			2008	L
	Chlorophyll-a	4A	0.404			2008	L
	Chlorophyll-a	4A	0.156			2010	L
	Chlorophyll-a	4A	0.060			2016	L
Open-Water Aquatic Life	Chlorophyll-a	4A	0.404			2008	L
	Chlorophyll-a	4A	123.068			2008	L
	Chlorophyll-a	4A	0.156			2010	L
	Chlorophyll-a	4A	0.060			2016	L
<b>G11E-01-BAC</b> Recreation	Warwick River - Middle Tidal Portion Enterococcus	4A	0.075			2008	L
<b>G11E-01-SF</b> Shellfishing	Chuckatuck Creek System Fecal Coliform	4A	0.560			1998	L
<b>G11E-03-BAC</b> Recreation	Deep Creek - Lower Enterococcus	4A	0.100			2006	L
<b>G11E-05-BAC</b> Recreation	Pagan River - Upstream of Chalmers Point Enterococcus	4A	0.300			1998	L
<b>G11E-06-BAC</b> Recreation	Lawnes Creek (Tributary to James River) Enterococcus	4A	0.291			2010	L
<b>G11E-06-SF</b> Shellfishing	Lawnes Creek Fecal Coliform	4A	0.291			1998	L





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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>G11E-10-SF</b> Shellfishing	Pagan River - Middle Fecal Coliform	4A	1.394			2008	L
<b>G11E-16-SF</b> Shellfishing	Pagan River, Cypress & Jones Creeks & Brewers Creeks Fecal Coliform	4A	0.263			1998	L
<b>G11E-16-SF2</b> Shellfishing	Pagan River - Upstream of Chalmers Point Fecal Coliform	4A	0.300			2008	L
<b>G11E-17-SF</b> Shellfishing	Ballard Creek & Bay, James River - Ballard Swamp Area and Kings Creek & Bay - James River South Shore Tributary Fecal Coliform	4A	0.056			1998	L
<b>G11E-20-SF</b> Shellfishing	Jones Creek - Tributary to Pagan River Fecal Coliform	4A	0.102			2008	L
<b>G11E-22-BAC</b> Recreation	Pagan River - Middle Enterococcus	4A	0.246			2014	L
<b>G11R-01-BAC</b> Recreation	Baptist Run Fecal Coliform	4A			3.15	2004	L
<b>G13E-12-BAC</b> Recreation	Bennett Creek, Tributary to Nansemond River Enterococcus	4A	0.542			2004	L
<b>G13E-12-SF</b> Shellfishing	Bennett, Bleakhorn and Knotts Creek Fecal Coliform	4A	0.677			1998	L
<b>G13E-13-BAC</b> Recreation	Nansemond River - Upper Enterococcus	4A	0.310			1994	L
<b>G13E-13-SF</b> Shellfishing	Burnetts Mill Creek - Tributary to Upper Nansemond R. Fecal Coliform Fecal Coliform	4A 4A	3.352 0.278			1994 1998	L L
<b>G13E-14-SF</b> Shellfishing	Nansemond River Mainstem - Upper, at mouth of Knotts Creek Fecal Coliform	4A	0.467			2010	L
<b>G13E-15-BAC</b> Recreation	Knotts Creek - Tributary to E. shore Nansemond R. Enterococcus	4A	0.122			2014	L
<b>G13E-16-BAC</b> Recreation	Nansemond River - Upper Middle Enterococcus	4A	0.209			2014	L
<b>G13E-17-BAC</b> Recreation	Nansemond River - Lower Middle Enterococcus	4A	2.833			2014	L
<b>G13E-18-BAC</b> Recreation	Western Branch - Tributary to Nansemond R. Enterococcus	4A	0.106			2014	L
<b>G15E-02-02-BAC</b> Recreation	Elizabeth River Upper Mainstem, Eastern Branch, Broad Creek, Southern Branch and Paradise Creek Recreation Impairment Enterococcus Enterococcus	4A 4A	0.916 0.053			1998 2006	L L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>G15E-02-03-BAC</b> Recreation	Southern Branch, Elizabeth R. - Middle Enterococcus	4A	1.074			2016	L
<b>G15E-02-05-BAC</b> Recreation	Indian River, tributary of Eastern Branch, Elizabeth River Enterococcus	4A	0.268			2002	L
<b>G15E-02-06-BAC</b> Recreation	Eastern Branch, Elizabeth R. - Lower Enterococcus	4A	1.015			2006	L
<b>G15E-04-02-BAC</b> Recreation	Western Branch, Elizabeth R. - Lower Enterococcus	4A	1.457			2006	L
<b>G15E-05-02-BAC</b> Recreation	Knitting Mill Creek Enterococcus	4A	0.027			2002	L
<b>G15E-06-03-BAC</b> Recreation	Hoffler Creek Enterococcus	4A	0.053			2008	L
<b>H01R-01-BAC</b> Recreation	Reed Creek Escherichia coli	4A			8.83	2004	L
<b>H02R-01-BAC</b> Recreation	Pedlar River Escherichia coli	4A			9.52	2006	H
	Escherichia coli	4A			1.33	2014	H
	Escherichia coli	4A			5.53	2016	H
<b>H02R-02-BAC</b> Recreation	Pedlar River, Upper Escherichia coli	4A			8.94	2016	L
<b>H03R-01-BAC</b> Recreation	Blackwater Creek Escherichia coli	4A			10.54	2006	H
<b>H03R-02-BAC</b> Recreation	Fishing Creek Escherichia coli	4A			6.32	2008	H
<b>H03R-03-BAC</b> Recreation	Ivy Creek Escherichia coli	4A			21.44	2008	H
<b>H03R-04-BAC</b> Recreation	James River Escherichia coli	4A			10.74	2008	H
	Escherichia coli	4A			8.25	2014	H
<b>H03R-05-BAC</b> Recreation	Burton Creek Escherichia coli	4A			3.47	2006	H
<b>H03R-06-BAC</b> Recreation	Judith Creek Escherichia coli	4A			11.08	2006	H
<b>H03R-07-BAC</b> Recreation	Tomahawk Creek Escherichia coli	4A			6.06	2006	H
<b>H03R-08-BAC</b> Recreation	Williams Run Escherichia coli	4A			6.49	2006	H



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>H03R-09-BAC</b> Recreation	<b>Dreaming Creek</b> Escherichia coli	4A			5.04	2008	H
<b>H03R-10-BAC</b> Recreation	<b>Burton Creek, Unnamed Tributary</b> Escherichia coli	4A			3.46	2008	H
<b>H04R-01-BAC</b> Recreation	<b>Graham Creek</b> Fecal Coliform	4A			5.59	2002	H
<b>H04R-02-BAC</b> Recreation	<b>Harris Creek</b> Escherichia coli	4A			8.33	2008	H
<b>H05R-04-BAC</b> Recreation	<b>Opossum Creek</b> Escherichia coli	4A			3.17	2010	H
<b>H05R-05-BAC</b> Recreation	<b>Stonewall Creek</b> Escherichia coli	4A			9.39	2008	L
<b>H06R-01-BAC</b> Recreation	<b>Wreck Island Creek</b> Escherichia coli Escherichia coli	4A 4A			9.77 9.77	2008 2010	L L
<b>H06R-01-BEN</b> Aquatic Life	<b>Phelps Branch</b> Benthic-Macroinvertebrate Bioassessments	4A			2.21	2010	L
<b>H06R-02-BAC</b> Recreation	<b>North Creek</b> Escherichia coli	4A			5.87	2010	L
<b>H07R-01-BAC</b> Recreation	<b>Bent Creek</b> Escherichia coli	4A			13.82	2008	L
<b>H09R-01-BEN</b> Aquatic Life	<b>Montebello Spring Branch</b> Benthic-Macroinvertebrate Bioassessments	4A			0.13	1998	L
<b>H09R-02-BAC</b> Recreation	<b>Hat Creek</b> Fecal Coliform Escherichia coli	4A 4A			9.51 9.51	2004 2010	L L
<b>H09R-03-BAC</b> Recreation	<b>Tye River</b> Escherichia coli Escherichia coli	4A 4A			8.40 8.24	2006 2008	L L
<b>H10R-01-BAC</b> Recreation	<b>Piney River</b> Escherichia coli Escherichia coli	4A 4A			6.89 6.50	2008 2010	L L
<b>H11R-01-BAC</b> Recreation	<b>Buffalo River</b> Escherichia coli Escherichia coli Escherichia coli	4A 4A 4A			3.66 9.85 4.26	2006 2010 2014	L L L
<b>H11R-01-BEN</b> Aquatic Life	<b>Long Branch</b> Benthic-Macroinvertebrate Bioassessments	4A			3.59	2008	L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>H11R-02-BAC</b> Recreation	<b>Mill Creek</b> Escherichia coli	4A			4.15	2008	L
<b>H11R-02-BEN</b> Aquatic Life	<b>Buffalo River</b> Benthic-Macroinvertebrate Bioassessments	4A			2.09	2008	L
<b>H12R-01-BAC</b> Recreation	<b>Rutledge Creek</b> Escherichia coli	4A			3.32	2012	L
<b>H12R-03-BAC</b> Recreation	<b>Buffalo River</b> Escherichia coli Escherichia coli	4A 4A			2.34 5.46	2008 2008	L L
<b>H12R-04-BAC</b> Recreation	<b>Turner Creek</b> Escherichia coli	4A			4.49	2008	L
<b>H12R-05-BAC</b> Recreation	<b>Rutledge Creek</b> Escherichia coli	4A			4.16	2014	L
<b>H13R-01-BAC</b> Recreation	<b>Rucker Run</b> Fecal Coliform Escherichia coli	4A 4A			18.35 18.35	2004 2012	L L
<b>H13R-02-BAC</b> Recreation	<b>Bobs Creek</b> Escherichia coli	4A			4.34	2014	L
<b>H15R-01-BAC</b> Recreation	<b>South Fork Rockfish River</b> Fecal Coliform Escherichia coli	4A 4A			11.55 11.55	2004 2008	L L
<b>H15R-02-BAC</b> Recreation	<b>North Fork Rockfish River</b> Escherichia coli	4A			7.18	2006	L
<b>H15R-03-BAC</b> Recreation	<b>Taylor Creek</b> Escherichia coli	4A			4.99	2012	L
<b>H15R-04-BAC</b> Recreation	<b>Goodwin Creek</b> Escherichia coli	4A			2.55	2016	L
<b>H16R-01-BAC</b> Recreation	<b>Rockfish River</b> Escherichia coli	4A			5.77	2006	L
<b>H17R-01-BAC</b> Recreation	<b>Totier Creek</b> Fecal Coliform Escherichia coli	4A 4A			10.31 9.60	2002 2008	L L
<b>H17R-03-BAC</b> Recreation	<b>Ballinger Creek</b> Escherichia coli	4A			10.08	2008	L
<b>H18R-01-BAC</b> Recreation	<b>North Fork Hardware River</b> Fecal Coliform Escherichia coli	4A 4A			11.34 11.34	2004 2008	H H



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>H18R-02-BAC</b>	<b>South Branch North Fork Hardware River &amp; Tributaries</b>						
Recreation	Escherichia coli	4A			24.01	2008	H
	Escherichia coli	4A			1.76	2012	H
<b>H19R-01-BAC</b>	<b>Hardware River</b>						
Recreation	Fecal Coliform	4A			23.24	2002	H
	Escherichia coli	4A			23.24	2008	H
<b>H20R-01-BAC</b>	<b>Bear Garden Creek</b>						
Recreation	Escherichia coli	4A			9.58	2010	L
<b>H20R-02-BEN</b>	<b>North Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			3.32	2008	L
<b>H21R-01-BAC</b>	<b>Horsepen Creek</b>						
Recreation	Escherichia coli	4A			5.86	2016	L
<b>H21R-03-BAC</b>	<b>North River</b>						
Recreation	Escherichia coli	4A			5.43	2008	L
<b>H21R-04-BAC</b>	<b>Slate River</b>						
Recreation	Escherichia coli	4A			6.69	2008	L
	Escherichia coli	4A			6.25	2012	L
<b>H21R-06-BAC</b>	<b>Grease Creek</b>						
Recreation	Escherichia coli	4A			10.73	2008	L
<b>H22R-01-BAC</b>	<b>Slate River</b>						
Recreation	Escherichia coli	4A			9.04	2008	L
	Escherichia coli	4A			7.15	2012	L
<b>H22R-02-BAC</b>	<b>Muddy Creek</b>						
Recreation	Escherichia coli	4A			6.76	2008	L
<b>H22R-03-BAC</b>	<b>Turpin Creek</b>						
Recreation	Escherichia coli	4A			7.30	2008	L
<b>H22R-04-BAC</b>	<b>Hunts Creek</b>						
Recreation	Escherichia coli	4A			11.48	2014	L
<b>H23R-03-BAC</b>	<b>Mechums River</b>						
Recreation	Escherichia coli	4A			11.18	2006	L
	Escherichia coli	4A			15.16	2012	L
<b>H27R-03-BAC</b>	<b>Preddy Creek</b>						
Recreation	Escherichia coli	4A			7.48	2006	L
	Escherichia coli	4A			6.24	2010	L
<b>H27R-04-BAC</b>	<b>North Fork Rivanna River</b>						
Recreation	Escherichia coli	4A			10.54	2006	L
	Escherichia coli	4A			7.33	2010	L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>H28R-01-BEN</b>	<b>Rivanna River/Moores Creek</b>						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	4A			5.48	1996	L
	Benthic-Macroinvertebrate Bioassessments	4A			5.91	2006	L
	Benthic-Macroinvertebrate Bioassessments	4A			0.54	2008	L
<b>H28R-02-BAC</b>	<b>Moores Creek</b>						
Recreation	Fecal Coliform	4A			6.86	2002	L
	Escherichia coli	4A			6.86	2008	L
<b>H28R-03-BAC</b>	<b>Meadow Creek</b>						
Recreation	Fecal Coliform	4A			4.98	2002	L
	Escherichia coli	4A			4.98	2008	L
<b>H28R-06-BAC</b>	<b>Rivanna River</b>						
Recreation	Escherichia coli	4A			5.48	2006	L
<b>H33R-01-BAC</b>	<b>Solomons Creek</b>						
Recreation	Escherichia coli	4A			4.05	2010	L
<b>H33R-03-BAC</b>	<b>Sallee Creek</b>						
Recreation	Escherichia coli	4A			7.08	2014	L
<b>H33R-04-BAC</b>	<b>XAQ - Deep Creek, UT</b>						
Recreation	Escherichia coli	4A			3.18	2016	L
<b>H33R-05-BAC</b>	<b>Davis Creek</b>						
Recreation	Escherichia coli	4A			7.68	2012	L
<b>H33R-06-BAC</b>	<b>James River</b>						
Recreation	Escherichia coli	4A			23.08	2016	L
<b>H34R-01-BAC</b>	<b>Byrd Creek</b>						
Recreation	Escherichia coli	4A			19.36	2008	L
<b>H34R-03-BAC</b>	<b>Venable Creek</b>						
Recreation	Escherichia coli	4A			8.06	2008	L
<b>H34R-04-BAC</b>	<b>Phils Creek</b>						
Recreation	Escherichia coli	4A			6.69	2008	L
<b>H34R-05-BAC</b>	<b>Mill Creek</b>						
Recreation	Escherichia coli	4A			5.99	2008	L
<b>H35R-01-BAC</b>	<b>Willis River</b>						
Recreation	Fecal Coliform	4A			12.25	2004	L
	Escherichia coli	4A			10.34	2012	L
	Escherichia coli	4A			12.25	2016	L
<b>H35R-02-BAC</b>	<b>Willis River, Unnamed Tributary</b>						
Recreation	Fecal Coliform	4A			1.68	2004	L
<b>H35R-03-BAC</b>	<b>Little Willis River</b>						
Recreation	Escherichia coli	4A			6.13	2008	L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>H35R-04-BAC</b> Recreation	<b>Whispering Creek</b> Escherichia coli	4A			13.46	2014	L
<b>H36R-01-BAC</b> Recreation	<b>Willis River</b> Escherichia coli	4A			4.83	2006	L
	Escherichia coli	4A			12.97	2006	L
	Escherichia coli	4A			15.20	2010	L
<b>H36R-02-BAC</b> Recreation	<b>Randolph Creek</b> Escherichia coli	4A			11.80	2006	L
<b>H36R-04-BAC</b> Recreation	<b>Hatcher Creek</b> Escherichia coli	4A			10.18	2010	L
<b>H36R-05-BAC</b> Recreation	<b>Reynolds Creek</b> Escherichia coli	4A			6.84	2012	L
<b>H37R-01-BAC</b> Recreation	<b>Big Lickinghole, Little Lickinghole, &amp; White Hall Creeks</b> Escherichia coli	4A			22.53	2008	L
<b>H37R-02-BAC</b> Recreation	<b>Tarred Rat Creek</b> Escherichia coli	4A			3.30	2008	L
<b>H38R-01-BAC</b> Recreation	<b>Little Creek</b> Escherichia coli	4A			0.65	2012	L
<b>H38R-02-BAC</b> Recreation	<b>Mohawk Creek</b> Escherichia coli	4A			4.69	2012	L
<b>H38R-03-BAC</b> Recreation	<b>Beaverdam Creek</b> Escherichia coli	4A			8.74	2008	L
<b>H38R-05-BAC</b> Recreation	<b>XVV - UT to XNH (James River, UT)</b> Fecal Coliform	4A			0.41	2004	L
<b>H38R-06-BAC</b> Recreation	<b>Courthouse Creek</b> Escherichia coli	4A			10.33	2006	L
<b>H39R-02-BAC</b> Recreation	<b>Tuckahoe Creek and Major Tributaries</b> Escherichia coli	4A			10.18	2002	L
	Fecal Coliform	4A			5.05	2004	L
	Escherichia coli	4A			7.70	2006	L
	Escherichia coli	4A			1.49	2012	L
	Escherichia coli	4A			8.97	2014	L
<b>H39R-04-BAC</b> Recreation	<b>Rattlesnake Creek</b> Escherichia coli	4A			2.23	2010	L
<b>H39R-06-BAC</b> Recreation	<b>Reedy Creek</b> Escherichia coli	4A			3.80	2006	L
<b>H39R-07-BAC</b> Recreation	<b>XZE - James River, UT</b> Escherichia coli	4A			1.30	2010	L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>H39R-08-BAC</b> Recreation	James River Escherichia coli	4A			3.88	2006	L
<b>H39R-10-BAC</b> Recreation	Bernards Creek Escherichia coli	4A			8.12	2008	L
<b>H39R-12-BAC</b> Recreation	Salles Creek Escherichia coli	4A			1.96	2010	L
<b>H39R-13-BAC</b> Recreation	Genito Creek Escherichia coli	4A			6.81	2008	L
<b>H39R-14-BAC</b> Recreation	Jones Creek Escherichia coli	4A			8.19	2012	L
<b>H39R-18-BAC</b> Recreation	XHP - Tuckahoe Creek, UT Escherichia coli	4A			1.73	2006	L
<b>H39R-20-BAC</b> Recreation	Norwood Creek Escherichia coli	4A			6.36	2012	L
<b>H39R-21-BAC</b> Recreation	XAB - Salles Creek, UT Escherichia coli	4A			0.10	2012	L
<b>H39R-22-BAC</b> Recreation	Manchester Canal Escherichia coli	4A			0.85	2012	L
<b>H39R-23-BAC</b> Recreation	Michauk Creek Escherichia coli	4A			4.48	2012	L
<b>H39R-25-BAC</b> Recreation	XCK - Reedy Creek, UT (aka Crooked Branch) Escherichia coli	4A			1.25	2014	L
<b>H39R-29-BAC</b> Recreation	XBH - Reedy Creek, UT Escherichia coli	4A			0.11	2016	L
<b>I09R-01-BEN</b> Aquatic Life	Jackson River Benthic-Macroinvertebrate Bioassessments	4A			14.73	1996	L
<b>I14R-01-BEN</b> Aquatic Life	Pheasanty Run Benthic-Macroinvertebrate Bioassessments	4A			0.41	1998	L
<b>I26R-01-BAC</b> Recreation	Looney Creek Drainage Escherichia coli	4A			2.66	1998	L
<b>I26R-02-BAC</b> Recreation	Ellis Run and Mill Creek Escherichia coli	4A			10.58	2004	L
<b>I28R-01-BAC</b> Recreation	Cedar Creek Fecal Coliform Escherichia coli	4A 4A			12.10 12.10	2002 2010	L L
<b>I32R-01-BEN</b> Aquatic Life	Wallace Mill Stream Benthic-Macroinvertebrate Bioassessments	4A			0.91	1998	L





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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>I32R-02-BEN</b> Aquatic Life	<b>Little Calfpasture River</b> Benthic-Macroinvertebrate Bioassessments	4A			0.80	1996	L
<b>I34R-01-BAC</b> Recreation	<b>Hays Creek/Moffatts Creek</b> Fecal Coliform	4A			11.94	1998	L
	Fecal Coliform	4A			8.85	2004	L
	Escherichia coli	4A			20.79	2008	L
<b>I34R-03-BAC</b> Recreation	<b>Walker Creek</b> Escherichia coli	4A			8.79	2006	L
<b>I34R-04-BAC</b> Recreation	<b>Otts Creek</b> Escherichia coli	4A			5.39	2006	L
<b>I38R-01-BAC</b> Recreation	<b>Buffalo Creek</b> Fecal Coliform	4A			3.96	2004	L
	Fecal Coliform	4A			12.13	2006	L
	Escherichia coli	4A			3.96	2008	L
	Escherichia coli	4A			12.13	2010	L
<b>I38R-02-BAC</b> Recreation	<b>Colliers Creek</b> Fecal Coliform	4A			15.11	2006	L
	Escherichia coli	4A			15.11	2010	L
<b>I38R-02-BEN</b> Aquatic Life	<b>Colliers Creek</b> Benthic-Macroinvertebrate Bioassessments	4A			15.11	2010	L
<b>I38R-03-BAC</b> Recreation	<b>South Fork Buffalo Creek</b> Escherichia coli	4A			14.47	2010	L
<b>I38R-04-BAC</b> Recreation	<b>North Fork Buffalo Creek</b> Escherichia coli	4A			7.57	2012	L
<b>J01R-01-BAC</b> Recreation	<b>Appomattox River</b> Fecal Coliform	4A			4.72	2004	L
	Escherichia coli	4A			12.09	2006	L
	Escherichia coli	4A			35.55	2006	L
	Escherichia coli	4A			39.00	2006	L
	Escherichia coli	4A			6.55	2014	L
<b>J01R-02-BAC</b> Recreation	<b>Horsepen Creek</b> Escherichia coli	4A			4.00	2010	L
<b>J01R-03-BAC</b> Recreation	<b>Suane Creek</b> Escherichia coli	4A			6.31	2006	L
<b>J01R-04-BAC</b> Recreation	<b>Vaughans Creek</b> Escherichia coli	4A			4.31	2006	L
	Escherichia coli	4A			8.60	2010	L
<b>J01R-05-BAC</b> Recreation	<b>Gross Creek</b> Escherichia coli	4A			1.91	2008	L



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

## James River Basin

Cause Group Code Impaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Priority
<b>J01R-06-BAC</b> Recreation	Gross Creek, UT Escherichia coli	4A			0.64	2008	L
<b>J01R-07-BAC</b> Recreation	Plum Creek Escherichia coli	4A			3.75	2008	L
<b>J01R-08-BAC</b> Recreation	South Fork Appomattox River Escherichia coli	4A			5.79	2010	L
<b>J01R-09-BAC</b> Recreation	Crane Creek Escherichia coli	4A			5.18	2010	L
<b>J01R-10-BAC</b> Recreation	Fishpond Creek Escherichia coli	4A			9.49	2010	L
<b>J01R-11-BAC</b> Recreation	Rough Creek Escherichia coli	4A			6.50	2010	L
<b>J01R-12-BAC</b> Recreation	Ducker Creek Escherichia coli	4A			5.74	2012	L
<b>J01R-13-BAC</b> Recreation	Appomattox River Escherichia coli	4A			7.90	2014	L
<b>J02R-01-BAC</b> Recreation	Spring Creek Escherichia coli	4A			7.86	2006	L
<b>J02R-02-BAC</b> Recreation	Buffalo Creek Escherichia coli Escherichia coli	4A 4A			11.03 5.22	2006 2014	L L
<b>J03R-01-BAC</b> Recreation	Little Sandy Creek Escherichia coli	4A			3.27	2006	L
<b>J03R-05-BAC</b> Recreation	Sandy River Escherichia coli	4A			3.43	2008	L
<b>J04R-01-BAC</b> Recreation	Bush River Escherichia coli Escherichia coli	4A 4A			4.40 0.80	2006 2008	L L
<b>J04R-02-BAC</b> Recreation	Bush River, Upper Escherichia coli	4A			11.48	2016	L
<b>J05R-01-BAC</b> Recreation	Briery Creek Escherichia coli	4A			10.48	2006	L
<b>J05R-02-BAC</b> Recreation	Tanyard Branch Escherichia coli	4A			0.46	2006	L
<b>J06R-01-BAC</b> Recreation	Angola Creek Escherichia coli	4A			6.97	2006	L

































































































































































