

Impairment Summary

Assessment Unit	Stream Name	Length (miles)	Boundaries	Cause
VAW-L04R_ROA03A00	Roanoke River Niagara	0.87	Roanoke River mainstem from near the backwaters of the Niagara Impoundment upstream to the end of the WQS designated public water supply (PWS section 6) segment. The upstream ending of the PWS segment from SML 795 ft. pool elevation.	Unhealthy Aquatic Life
VAW-L04R_ROA04A00	Roanoke River	0.25	Roanoke R. mainstem from near the backwaters of Niagara Impoundment upstream to the Tinker Creek confluence on the Roanoke River (section 6). The upstream ending of the WQS designated public water supply (PWS) segment from SML 795 ft. pool elevation.	Unhealthy Aquatic Life
VAW-L04R_ROA05A00	Roanoke River	0.35	Roanoke River mainstem from the Western Virginia Water Authority Roanoke Regional Water Pollution Control Plant downstream to the Tinker Creek confluence (WQS section 6).	Unhealthy Aquatic Life
VAW-L04R_ROA06A00	Roanoke River	4.34	Roanoke River mainstem from the Murray Run mouth downstream to the Western Virginia Water Authority Roanoke Regional Water Pollution Control Plant.	Unhealthy Aquatic Life
VAW-L04R_ROA07A00	Roanoke River	3.32	Roanoke River mainstem from the Peters Creek mouth downstream to the Murray Run confluence on the Roanoke River.	Unhealthy Aquatic Life
VAW-L04R_ROA08A02	Roanoke River	2.22	Roanoke River mainstem from the Mason Creek mouth downstream to the confluence of Peters Creek on the Roanoke River.	Unhealthy Aquatic Life

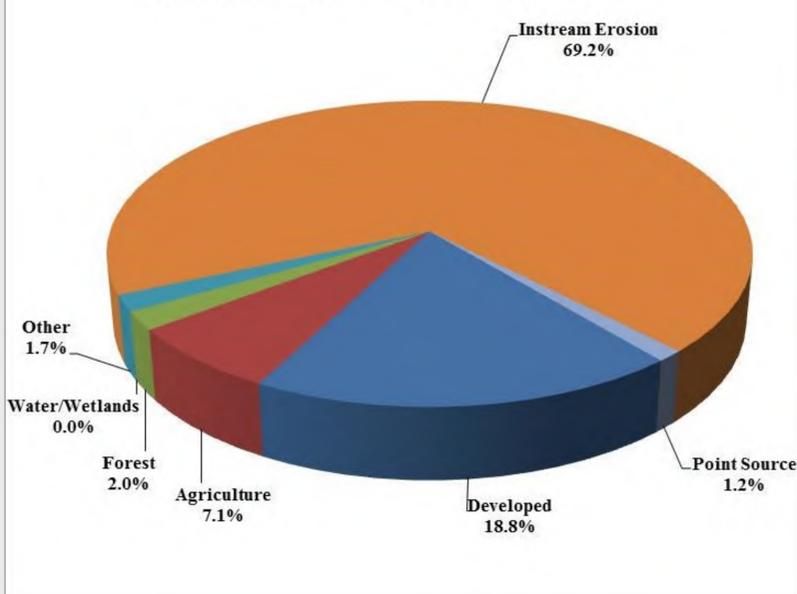
Land Use Distribution (NLCD 2006)

Land Use Category	Area	
	Acres	Percent
Developed	11,411.7	65.4%
Agriculture	385.1	2.2%
Forest	5,421.6	31.1%
Water/Wetlands	38.7	0.2%
Other	182.2	1.0%
Total	17,439.3	100.00%

Existing and Allocated Sediment Loads

Land Use/Source	Total Annual Sediment Loads (tons/yr)		Percent Reduction (%)
	Existing Load	Allocation Load	
Land Based Non-point			
Developed	9,769	2,382	75.6%
Agriculture	3,670	895	75.6%
Forest	1,018	1,018	0.0%
Water/Wetlands	0	0	0.0%
Other	906	221	75.6%
Direct Non-point			
Instream Erosion	35,980	8,772	75.6%
Point Source	615	615	0.0%
Total	51,959	13,903	73.2%

Existing Sediment Load Distribution



Existing Best Management Practices Agricultural and Stormwater

Agricultural Best Management Practice	Count	Area Treated	Streamlength Protected (ft)
Alternative Water System	6	242.5	N/A
CREP Grazing land protection	1	1.7	763
CREP Riparian Forest Buffer Planting	3	9.0	N/A
Harvestable Cover Crop	1	47.4	N/A
Nutrient Management Plan Implementation and Record Keeping	3	36.0	N/A
Permanent Vegetative Cover on Cropland	2	10.1	N/A
Protective cover for specialty crops	1	13.7	N/A
Riparian Buffer Rent	3	9.0	N/A
Small Grain cover crop for Nutrient Management	26	342	N/A
Stream Exclusion With Grazing Land Management	7	205	7,713
Streambank protection (fencing)	1	6.0	5,600

Stormwater Best Management Practice	Count	Reported Area Treated* (acres)
Bioretention	16	92.9
Constructed Wetland	1	28.7
Detention Basin	444	6,490.0
Extended Detention Basin	15	76.5
Infiltration	55	7.1
Manufactured Unit	52	7.3
Porous Pavement	4	15.9
Retention Pond	14	49.9
Sediment Basin	1	No Data
Sediment Forebay	4	1,198.3
Underground Detention Basin	105	47.5
Underground Infiltration	1	No Data
Water Quality/Grassed Swale	2	53.7
Wet Pond	14	1,224.0

*Not all Best Management Practices reported area treated

The municipalities are in the process of creating Best Management Practices inventories, so not all Best Management Practices present in the watershed may be reported.

Potential Implementation Actions to Reduce Sediment

- Existing Best Management Practice Retrofits
- Low Impact Development Stormwater Controls
- Riparian Buffer Creation/Expansion
- Street Sweeping
- Stream Bank Protection and Stabilization