

Impairment Summary

Assessment Unit	Stream Name	Length (miles)	Boundaries	Cause
VAW-L06R_BAA01A00	Back Creek	5.65	Back Creek mainstem from the WQS designated end of the public water supply (PWS) section, ~0.83 miles upstream of the Rt. 116 crossing downstream to the Back Creek mouth; as determined from the 795 ft. Smith Mountain Lake pool elevation.	Escherichia coli
VAW-L06R_BAA02A00	Back Creek	4.23	Back Creek mainstem waters from just below the Rt. 220 crossing (~0.5 mi), Red Hill at the mouth of an unnamed tributary to Back Creek on downstream to the WQS designated end of the PWS section, ~0.83 miles upstream of the Rt. 116 crossing.	Escherichia coli

Land Use Distribution (NLCD 2006)

Land Use Category	Area	
	Acres	Percent
Developed	6,905.4	18.4
Agriculture	2,898.9	7.7
Forest	27,557.1	73.3
Water/Wetlands	19.7	0.1
Other	221.8	0.6
Total	37,603.0	100.0

Existing and Allocated Bacteria Loads

Land Use/Source	Total Annual <i>E. coli</i> Loads (billion coliform forming units/year)		Percent Reduction (%)
	Existing Load	Allocation Load	
Land Based Non-point			
Developed	50,130.2	551.4	98.9%
Agriculture	6,358.1	69.9	98.9%
Forest	519.0	5.7	98.9%
Water/Wetlands	0.1	0.1	0.0%
Other	0.5	<0.1	98.9%
Direct Non-point			
Livestock Direct	6,194.8	0.0	100.0%
Wildlife Direct	22,978.5	8,157.4	64.5%
Failed Septic, Straight Pipes and Sewer Overflows	2,325.8	0.0	100.0%
Point Source	0.0	0.0	0.0
Total	88,507.1	8,784.6	90.1%

Existing Best Management Practices Agricultural and Stormwater

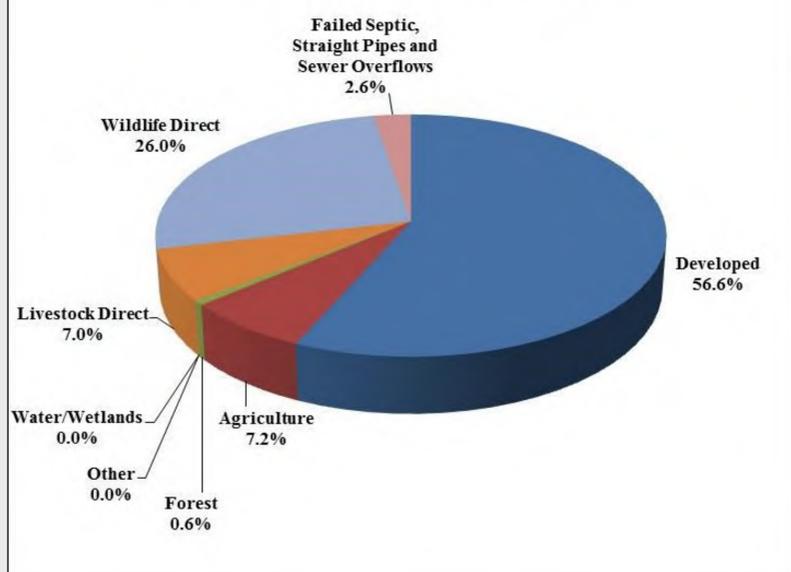
Agricultural Best Management Practice	Count	Area Treated	Streamlength Protected (ft)
Alternative Water System	1	25	N/A

Stormwater Best Management Practice	Count	Reported Area Treated* (acres)
Detention Basin	54	1397.4
Extended Detention	3	14.1
Infiltration	2	5.9
Manufactured Unit	1	No Data
Sediment Basin	1	No Data
Sediment Forebay	1	13.2
Underground Detention	10	1.2
Wet Pond	5	30.4

*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.

Existing Bacteria Load Distribution



Potential Implementation Actions to Reduce Bacteria

- Existing Best Management Practice Retrofits
- Low Impact Development Stormwater Controls
- Livestock Exclusion from Streams
- Riparian Buffer Creation/Expansion
- Septic System Repair/Replacement
- Pet Waste Disposal and Education Programs