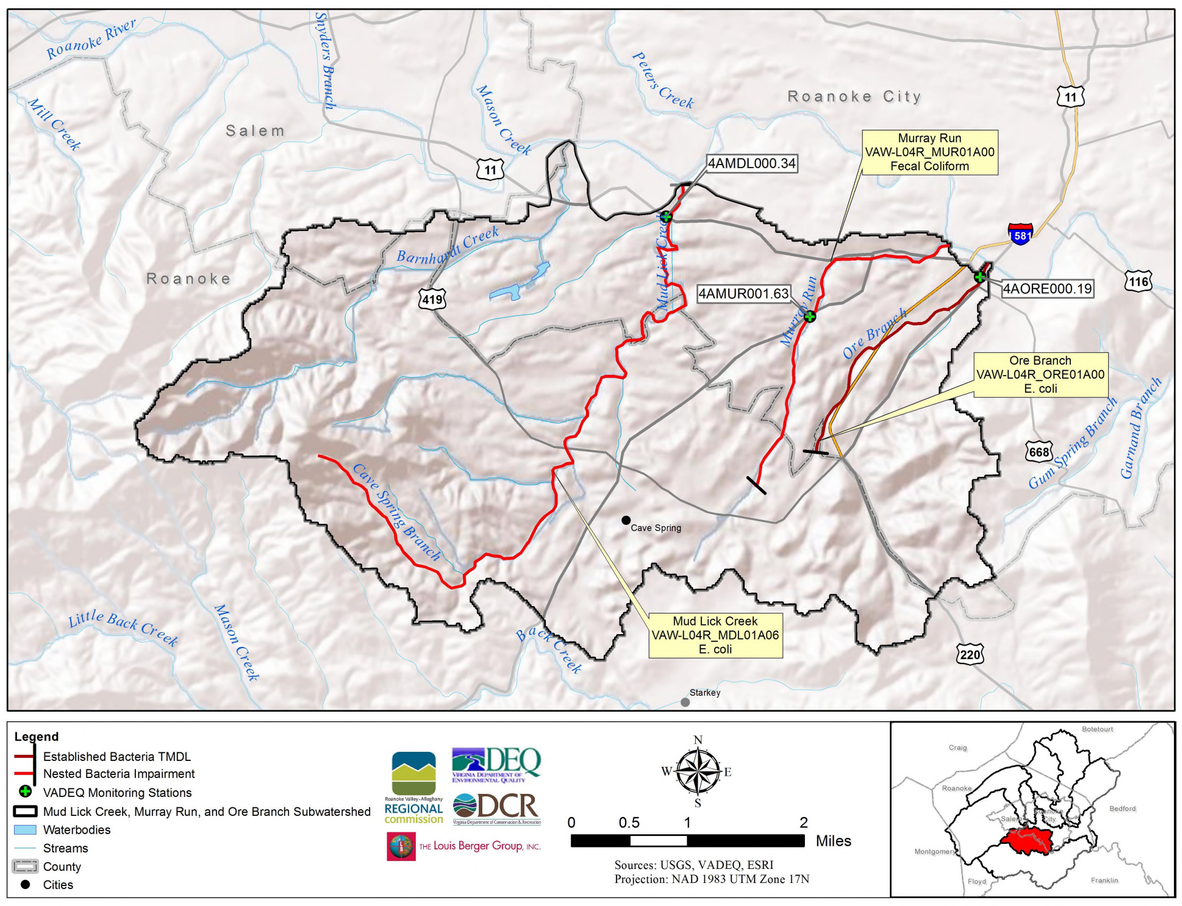
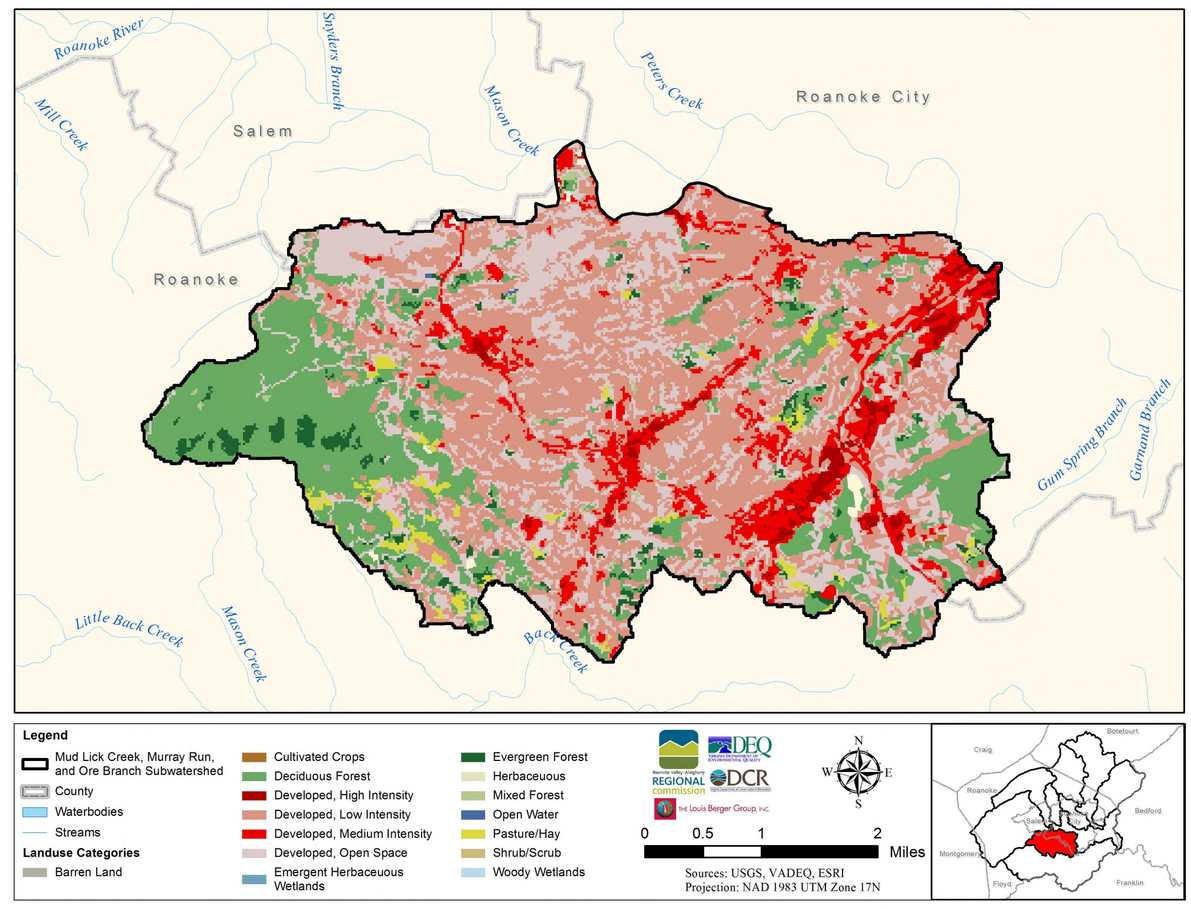
Mud Lick Creek, Murray Run and Ore Branch Subwatershed





Impairment Summary

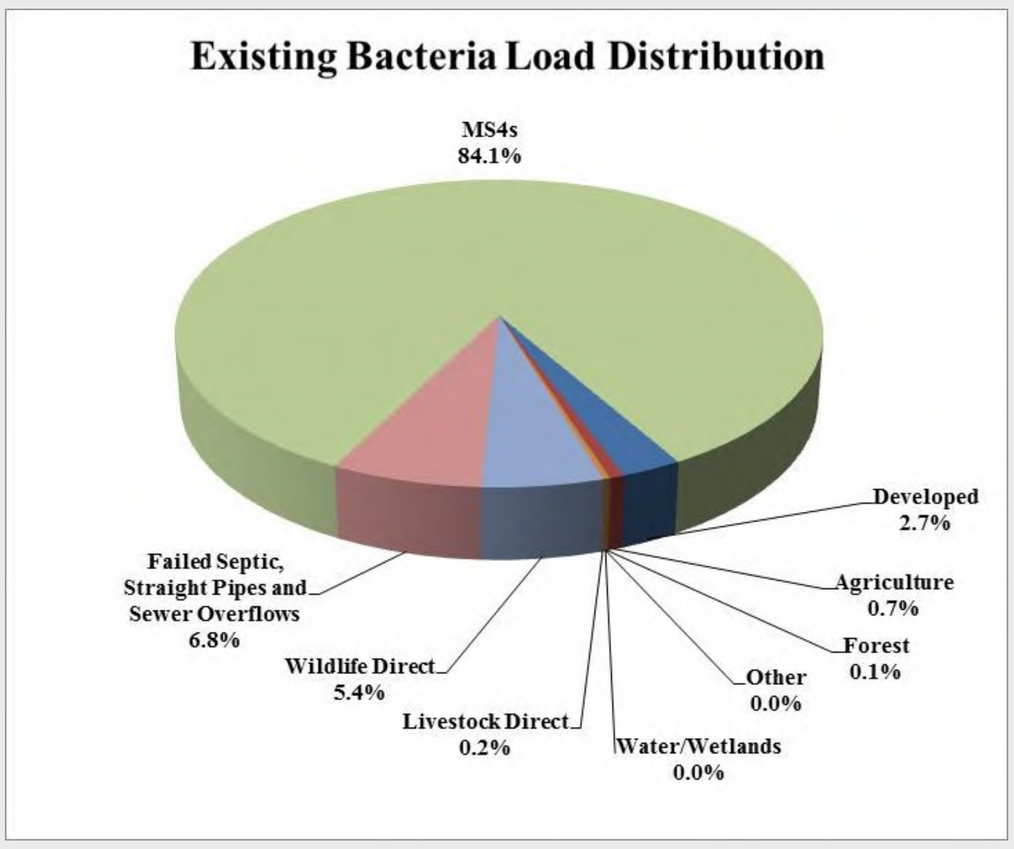
Assessment Unit	Stream Name	Length (miles)	Boundaries	Cause
VAW-L04R_MDL01A06	Mud Lick Creek	7.28	Mud Lick Creek from its confluence on the Roanoke River upstream to its headwaters.	Escherichia coli
VAW-L04R_MUR01A00	Murray Run	3.22	Murray Run mainstem from its headwaters to its mouth on the Roanoke River.	Fecal coliform
VAW-L04R_ORE01A00	Ore Branch	2.42	Ore Branch mainstem headwaters near Hunting Hills downstream to its confluence with the Roanoke River.	Escherichia coli

Land Use Distribution (NLCD 2006)

Land Use Category	Area	
	Acres	Percent
Developed	8,257.4	78.3%
Agriculture	215.1	2.0%
Forest	2,037.2	19.3%
Water/Wetlands	1.0	0.0%
Other	32.8	0.3%
Total	**10,543.5**	**100.0%**

Existing and Allocated Bacteria Loads

Land Use/Source	Total Annual *E. coli* Loads (billion coliform forming units/year)		Percent Reduction (%)
	Existing Load	Allocation Load	
Land Based Non-point			
Developed	950.8	3.1	99.6%
Agriculture	554.6	2.2	99.6%
Forest	60.8	0.2	99.6%
Water/Wetlands	0.1	0.1	0.0%
Other	0.1	0.0	99.6%
Direct Non-point			
Livestock Direct	189.2	0.0	100.0%
Wildlife Direct	4,638.3	560.8	87.9%
Failed Septic, Straight Pipes and Sewer Overflows	5,759.2	0.0	100.0%
Point Source	0.00	0.00	0.0%
MS4s	73,096.2	322.7	99.5%
Total	**85,249.4**	**889.1**	**99.0%**



Existing Best Management Practices Agricultural and Stormwater

Agricultural Best Management Practice	Count	Area Treated	Streamlength Protected (ft)
No Known Agricultural Best Management Practices			

Stormwater Best Management Practice	Count	Reported Area Treated* (acres)
Bioretention	6	38.7
Constructed Wetland	1	28.7
Detention Basin	96	2,293.0
Extended Detention Basin	1	No Data
Infiltration	14	3.0
Manufactured Unit	8	3.5
Porous Pavement	1	15.9
Sediment Forebay	1	1,169.9
Underground Detention Basin	48	9.8
Wet Pond	5	180.2

*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 Bacteria

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