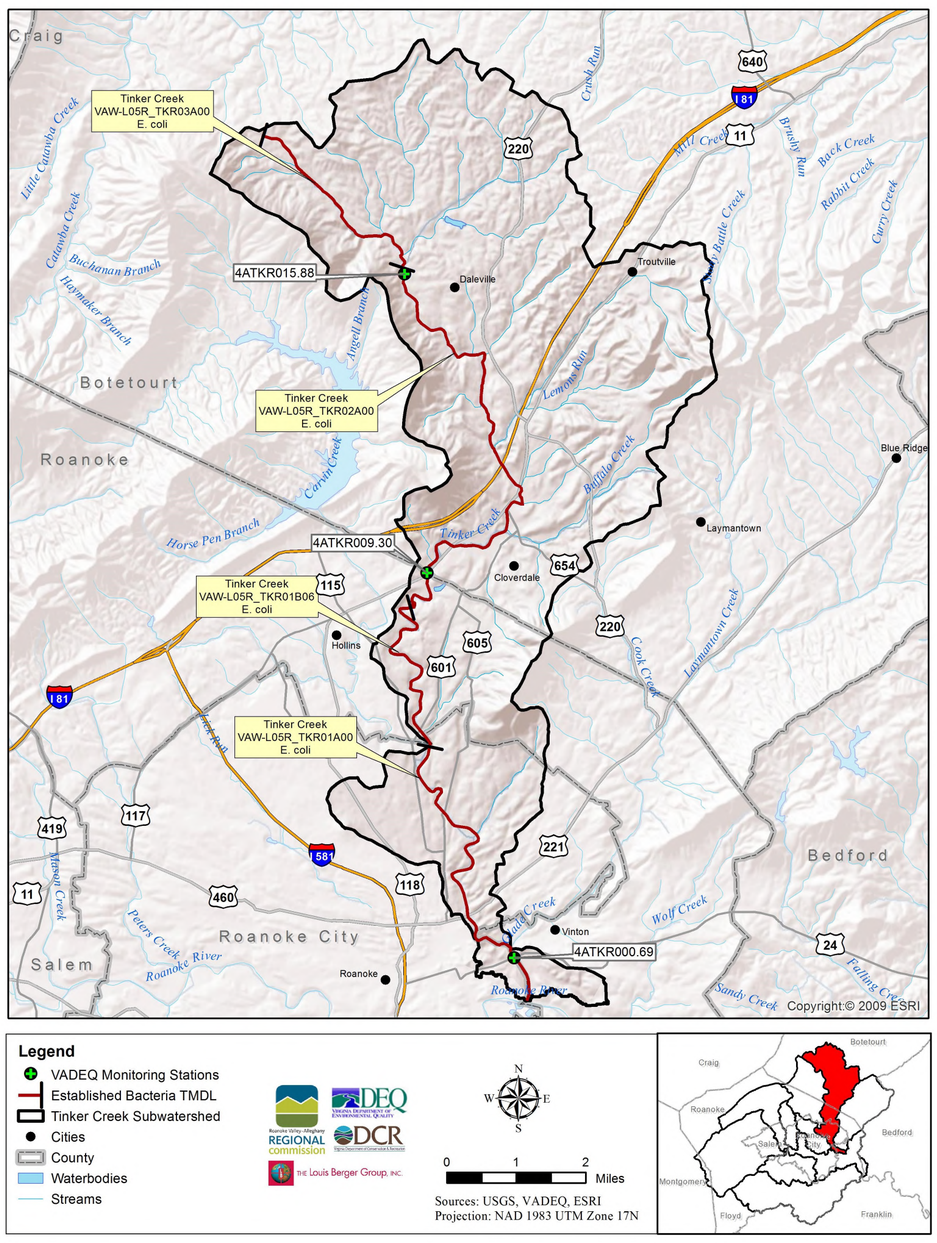
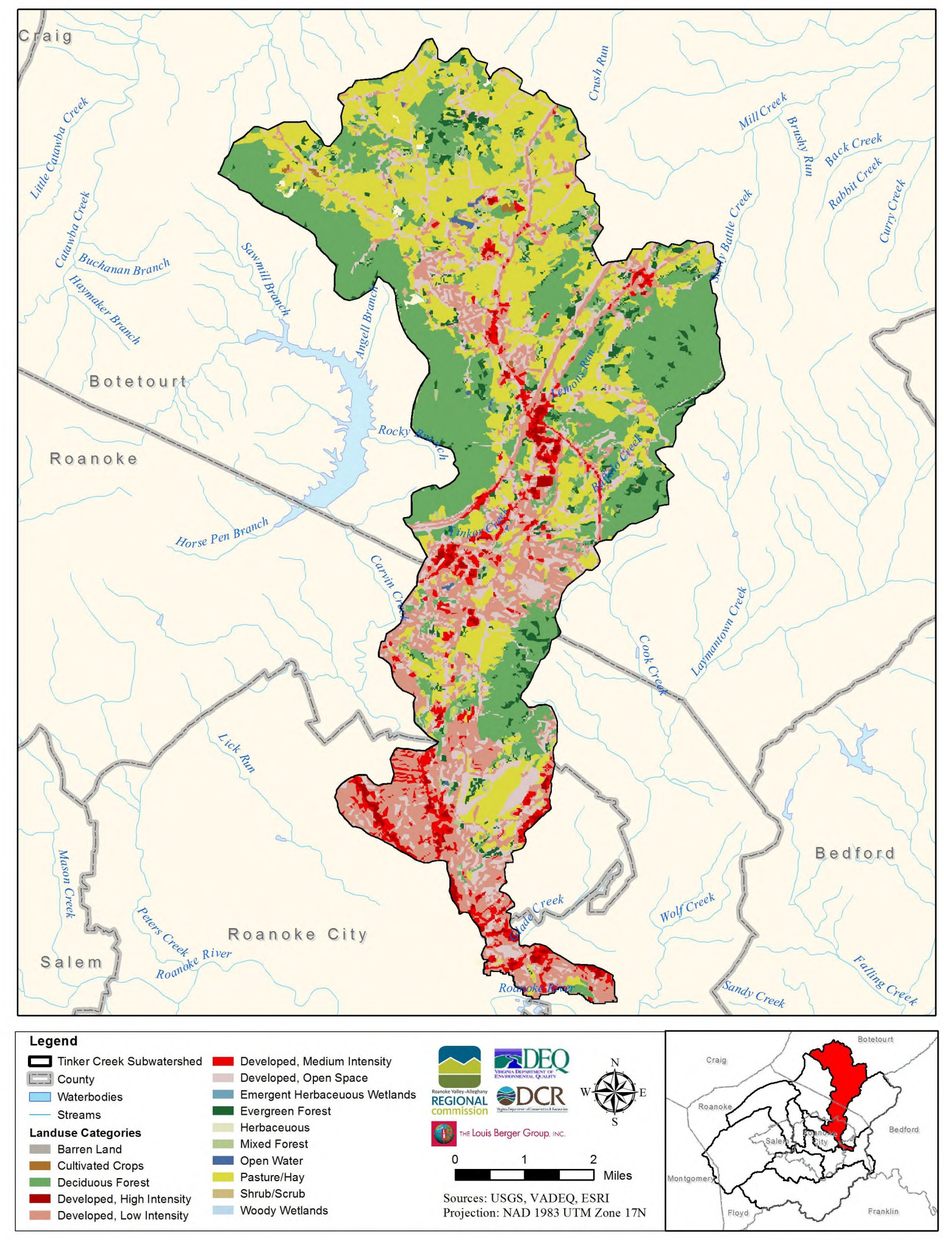
Tinker Creek Subwatershed





Impairment Summary

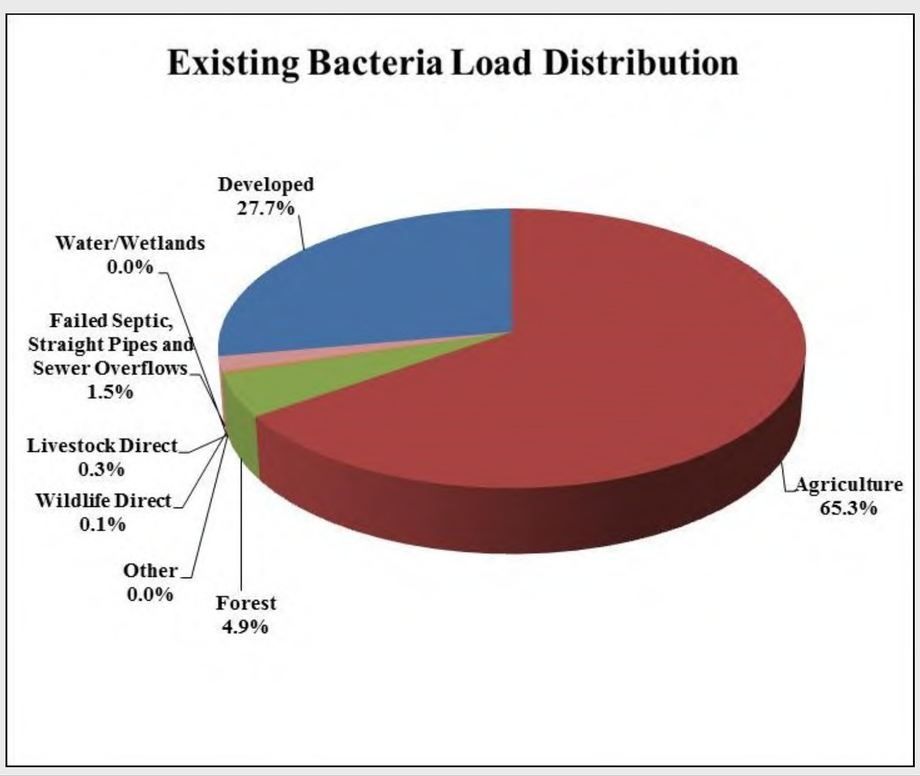
Assessment Unit	Stream Name	Length (miles)	Boundaries	Cause
VAW-L05R_TKR01A00	Tinker Creek	5.34	Tinker Creek mainstem from its confluence with the Roanoke River upstream to the mouth of Carvin Creek.	Escherichia coli
VAW-L05R_TKR01B06	Tinker Creek	6.54	Tinker Creek mainstem from the Carvin Creek mouth upstream to the confluence of Buffalo Creek.	Escherichia coli
VAW-L05R_TKR02A00	Tinker Creek	4.34	Tinker Creek mainstem from the mouth of Buffalo Creek upstream to the Roanoke City diversion tunnel located just upstream of the USGS stream gaging station.	Escherichia coli
VAW-L05R_TKR03A00	Tinker Creek	3.12	Tinker Creek mainstem from the Roanoke City diversion tunnel to Carvin Cove on upstream to its headwaters.	Escherichia coli

Land Use Distribution (NLCD 2006)

Land Use Category	Area	
	Acres	Percent
Developed	9,171.3	35.8%
Agriculture	7,245.6	28.3%
Forest	9,068.3	35.4%
Water/Wetlands	50.5	0.2%
Other	58.6	0.2%
Total	**25,594.4**	**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	1,501,985	19,826	98.7%
Agriculture	3,481,415	6,963	99.8%
Forest	271,038	13,552	95.0%
Water/Wetlands	802	40	95.0%
Other	1,658	33	98.0%
Direct Non-point			
Livestock Direct	16,947	0	100.0%
Wildlife Direct	3,229	810	74.9%
Failed Septic, Straight Pipes and Sewer Overflows	83,800	0	100.0%
Point Source	0	0	0.0%
Total	**5,360,873**	**41,225**	**99.2%**



Existing Best Management Practices Agricultural and Stormwater

Agricultural Best Management Practice	Count	Area Treated	Streamlength Protected (ft)
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	24	326.4	N/A
Stream Exclusion With Grazing Land Management	6	174.9	5,913
Streambank protection (fencing)	1	6.0	5,600
Total	**45**	**634**	**12,276**

Stormwater Best Management Practice	Count	Reported Area Treated* (acres)
Bioretention	1	52.2
Detention Basin	46	476.3
Infiltration	8	No Data
Manufactured Unit	3	1.4
Porous Pavement	1	0.2
Retention Pond	6	20.4
Underground Detention Basin	4	2.2
Water Quality/Grassed Swale	1	52.2
Wet Pond	3	167.0

*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 Bacteria

- **Improved Pasture Management**
- **Waste Storage Facilities**
- **Livestock Exclusion from Streams**
- **Riparian Buffer Creation/Expansion**
- **Low Impact Development Stormwater Controls**
- **Septic System Repair/Replacement**
- **Educational Programs**
- **Pet Waste Disposal Systems**