

GUILFORD COUNTY CATCHMENT PRIORITIZATION & POLLUTANT IDENTIFICATION PROGRAM

Meeting #2

Tuesday, January 24, 2017
10:00 am

Guilford County Planning & Development
5th Floor Conference Room
400 W Market St, Greensboro

1. Welcome & Introductions
2. Discuss input layers & output raster (version 1 & 2) – see *Tables 2 & 3; Maps 1 & 3*
3. Review output top catchments (version 1 & 2) – see *Maps 2 & 4*
4. Review web map
5. Discuss additional input layers & weights to determine top projects (*parks, public property?*)
6. Discuss field work and validation needs
7. Review STORET data – see *Map 5; Figure 1*
8. Discuss outreach
9. Adjourn & Next Steps

Table 1: Project Overview

Activity	Organization	Time Period
1 GIS prioritization tool to identify NHD Plus catchments	PTRC	June – October 2016
2 Compare results using NLCD 30-meter data & County 1-meter data	PTRC	September – October 2016
3 Validate results using ground truthing, water quality testing and STORET water quality data	PTRC, County	November 2016 – January 2017
4 Prioritize Catchments	PTRC	November 2016 – January 2017
5 Identify 3-4 projects in the targeted catchments and promote events	PTRC, County, American Rivers	February – April 2017
6 Develop outreach materials to address BMPs to address fecal coliform inputs (restoring riparian buffers, septic tank replacement/repair, pet waste disposal, proper business waste disposal, livestock exclusion)	PTRC, County, American Rivers	February – April 2017
7 Conduct outdoor demonstrations on identified project sites	PTRC, County, American Rivers	May – July 2017
8 Final recommendations report	PTRC	July – August 2017

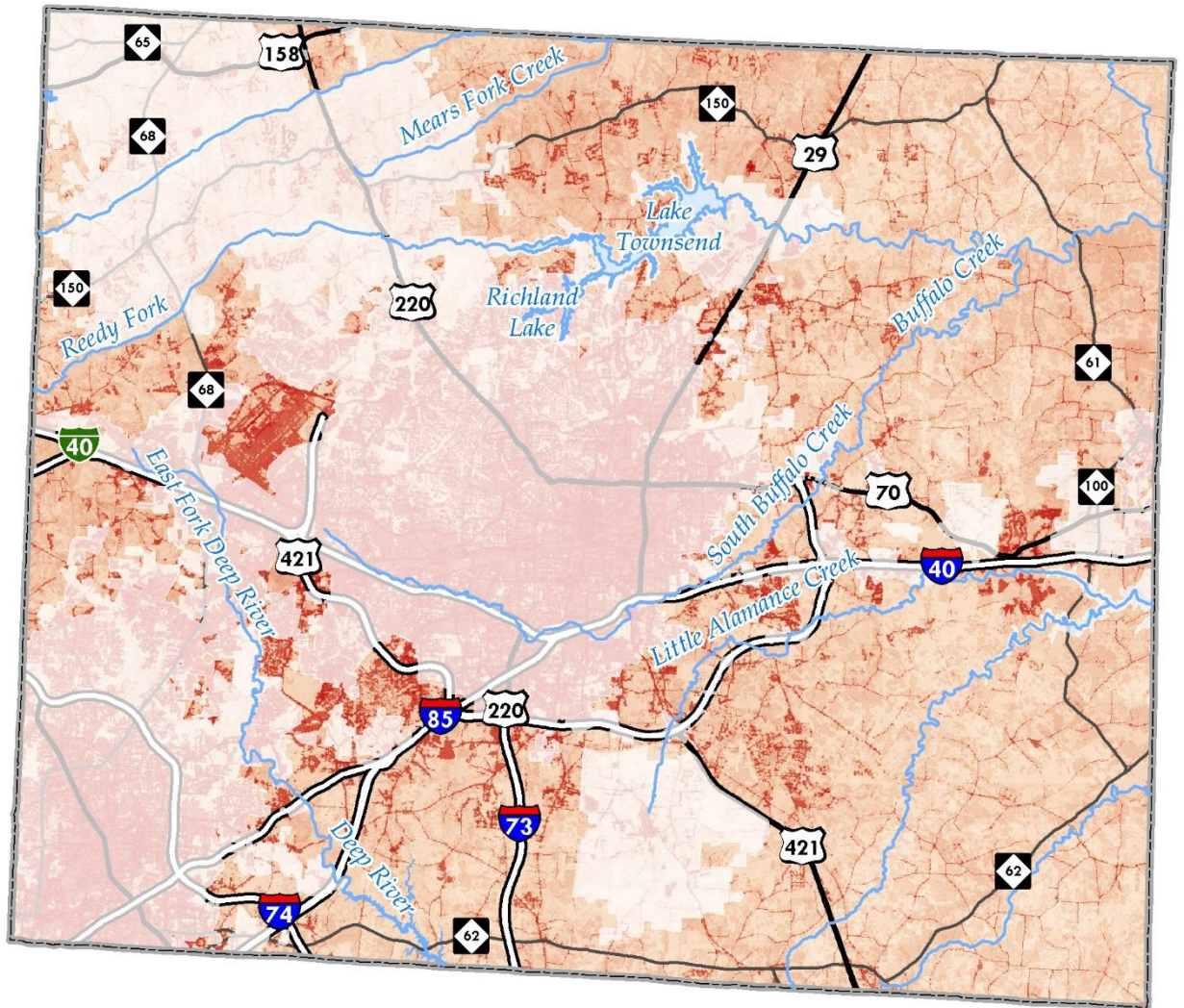
Table 2: Input Data Layers (Version 1 - same as regional model)

Stress Layers (v1)			Weighted Average	Total Layer Value
Criteria	Data Source	Factors	Integer Values	Layer Percentage
High Impervious Surface Cover	NLCD 2011 Percent Developed Imperviousness (Oct 2014 edition)	1 - 4%	26	45.5%
		5 - 9%	141	
		> 10%	288	
Highly Erodible Soils	SSURGO (K factor)	0 - 0.23	0	8.7%
		0.24 - 0.39	24	
		0.40 - 0.49	62	
Density of Impact Sites	NC DWQ & VA DEQ	Low (1-7 per sq mile)	27	8.1%
		High (8-48 per sq mi)	54	
Road Density	NCDOT & VDOT	Low	0	7.6%
		Med	0	
		High	76	
Forest Cover	NLCD 2011 Tree Canopy (Feb 2016 edition)	< 50%	66	6.6%
Population Density Change (2000 to 2010)	U.S. Census Bureau	1 - 9%	3	5.9%
		10 - 24%	5	
		25 - 49%	8	
		> 50%	44	
Population Density (Persons Per Acre) (2010)	U.S. Census Bureau	Low (0.01 - 0.24)	6	5.2%
		Med (0.25 - 0.99)	19	
		High (1.00 +)	27	
Small Streams with Less than 50% Canopy Cover	NHD unnamed streams; NLCD canopy cover	Within 100 ft buffer where forest cover <50%	45	4.5%
Steep Slope	USGS NED (1 arc second)	> 15%	37	3.7%
Small Parcel Size	Counties/Municipalities	< 10 Acres	16	1.6%
Zoning (High Impact)	Counties/Municipalities	Commercial, Industrial, High Density Residential, Multi-family, Office & Institutional	14	1.4%
Floodplain	NC Floodplain Mapping Program; VA CDR	Within 500 Year Floodplain	12	1.2%

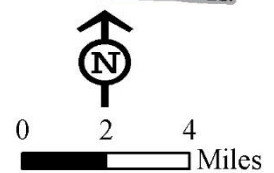
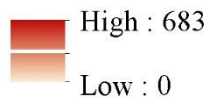
Total Possible Points

741

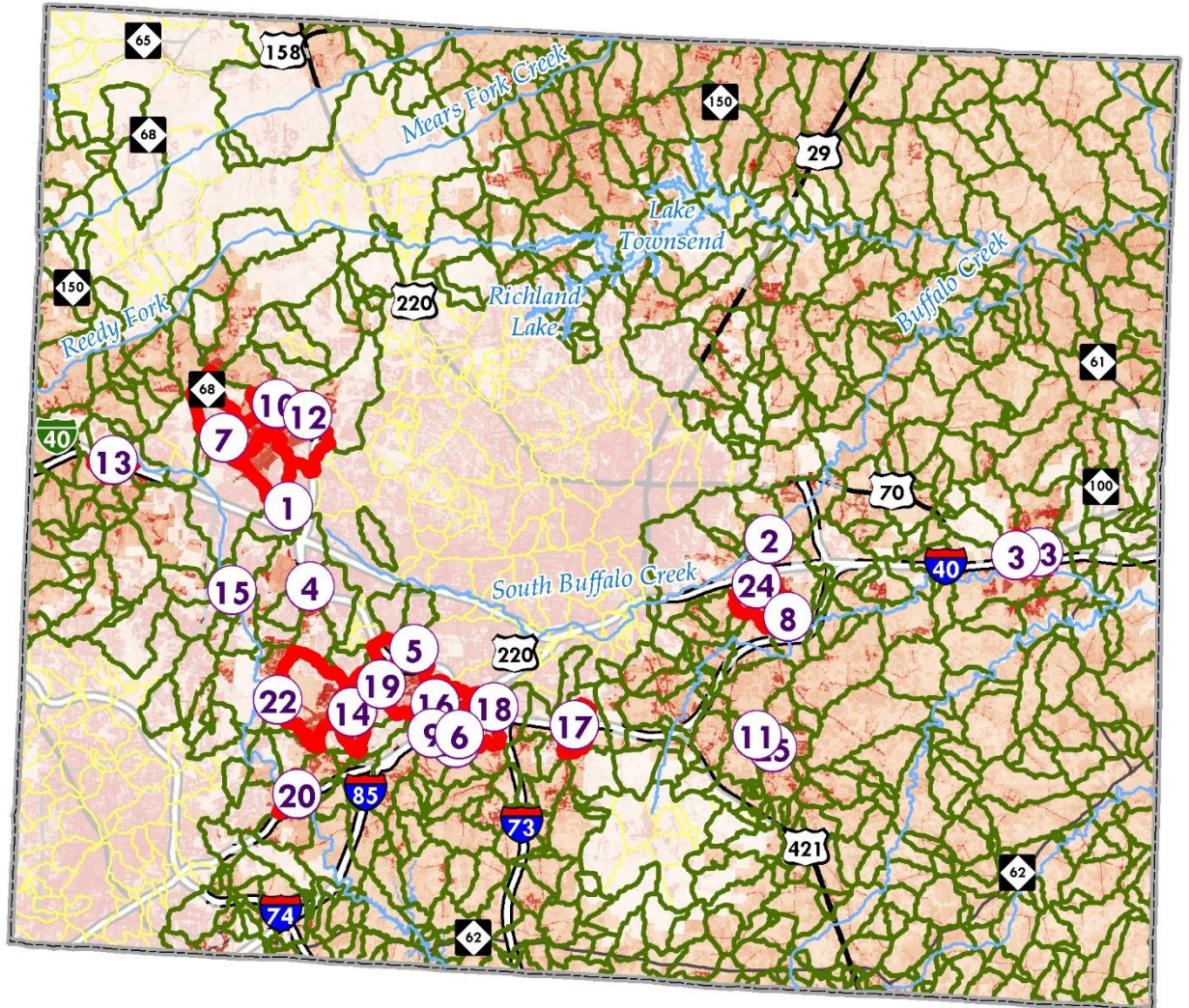
Map 1: Output Analysis (Version 1)



Stress Analysis



Map 2: Top 25 Catchments (Version 1)



Stress Analysis

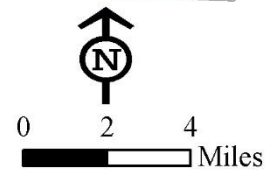


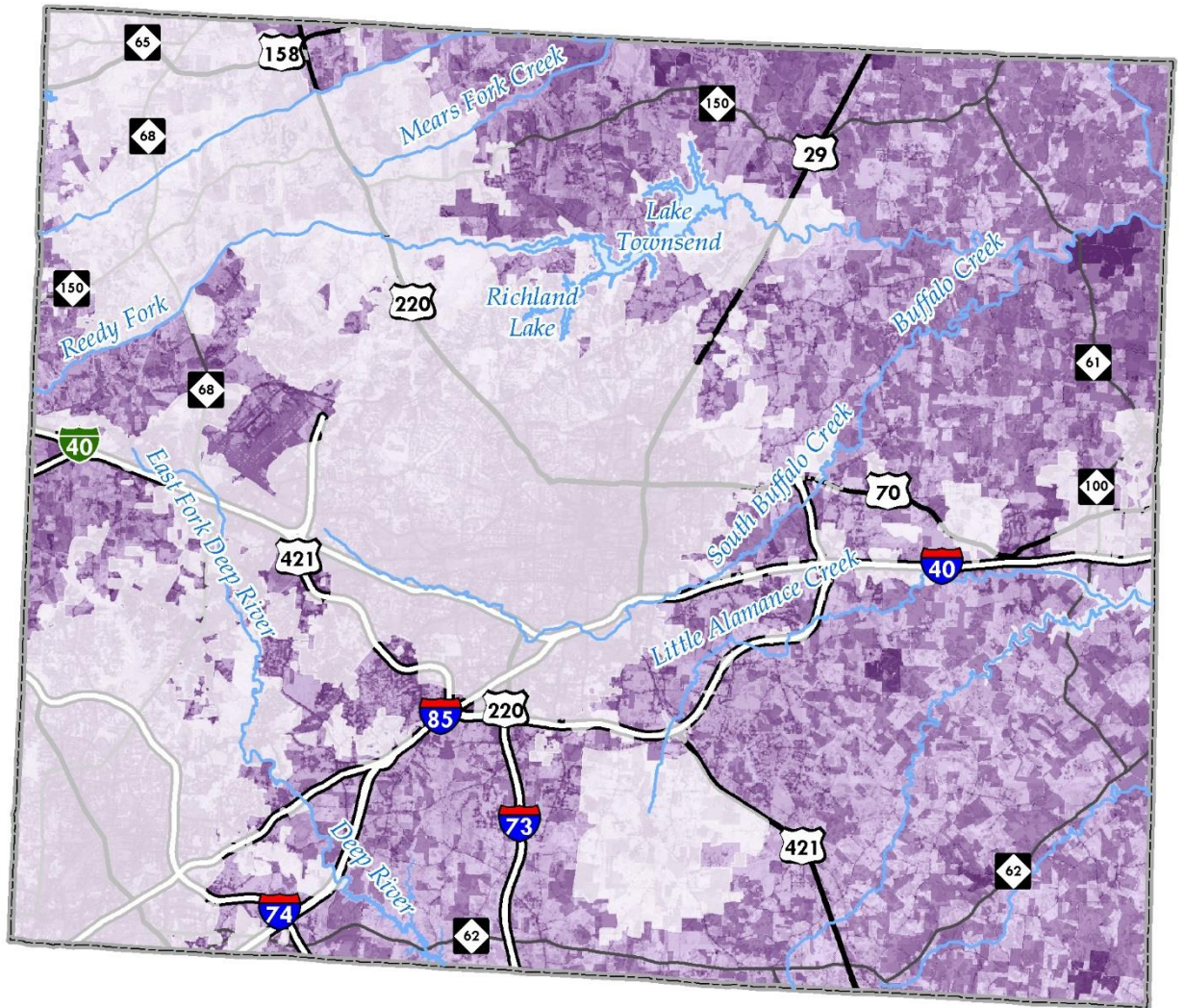
Table 3: Input Data Layers (Version 2)

Stress Layers (v2)			Weighted Average	Total Layer Value
Criteria	Data Source	Factors	Integer Values	Layer Percentage
High Impervious Surface Cover	NLCD 2011 Percent Developed Imperviousness (Oct 2014 edition)	1 - 4%	10	18.6%
		5 - 9%	75	
		> 10%	150	
Septic Repair fields	Guilford County	100ft buffer	150	11.9%
Animal Operation Permits	NC DEQ	Parcels	150	11.9%
Farms	Guilford County	Agricultural Land Use	150	11.9%
Highly Erodible Soils	SSURGO (K factor)	0 - 0.23	0	9.5%
		0.24 - 0.39	30	
		0.40 - 0.49	90	
Density of Impact Sites	NC DWQ & VA DEQ	Low (1-7 per sq mile)	27	6.4%
		High (8-48 per sq mi)	54	
Road Density	NCDOT & VDOT	Low	0	6.0%
		Med	0	
		High	76	
Forest Cover	NLCD 2011 Tree Canopy (Feb 2016 edition)	< 50%	66	5.2%
Population Density Change (2000 to 2010)	U.S. Census Bureau	1 - 9%	3	4.7%
		10 - 24%	5	
		25 - 49%	8	
		> 50%	44	
Population Density (Persons Per Acre) (2010)	U.S. Census Bureau	Low (0.01 - 0.24)	6	4.1%
		Med (0.25 - 0.99)	19	
		High (1.00 +)	27	
Small Streams with Less than 50% Canopy Cover	NHD unnamed streams; NLCD canopy cover	Within 100 ft buffer where forest cover <50%	45	3.6%
Steep Slope	USGS NED (1 arc second)	> 15%	37	3.0%
Small Parcel Size	Counties/Municipalities	< 10 Acres	16	1.2%
Zoning (High Impact)	Counties/Municipalities	Commercial, Industrial, High Density Residential, Multi-family, Office & Institutional	14	1.1%
Floodplain	NC Floodplain Mapping Program; VA CDR	Within 500 Year Floodplain	12	0.9%

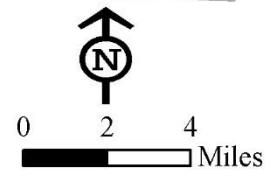
Total Possible Points

1081

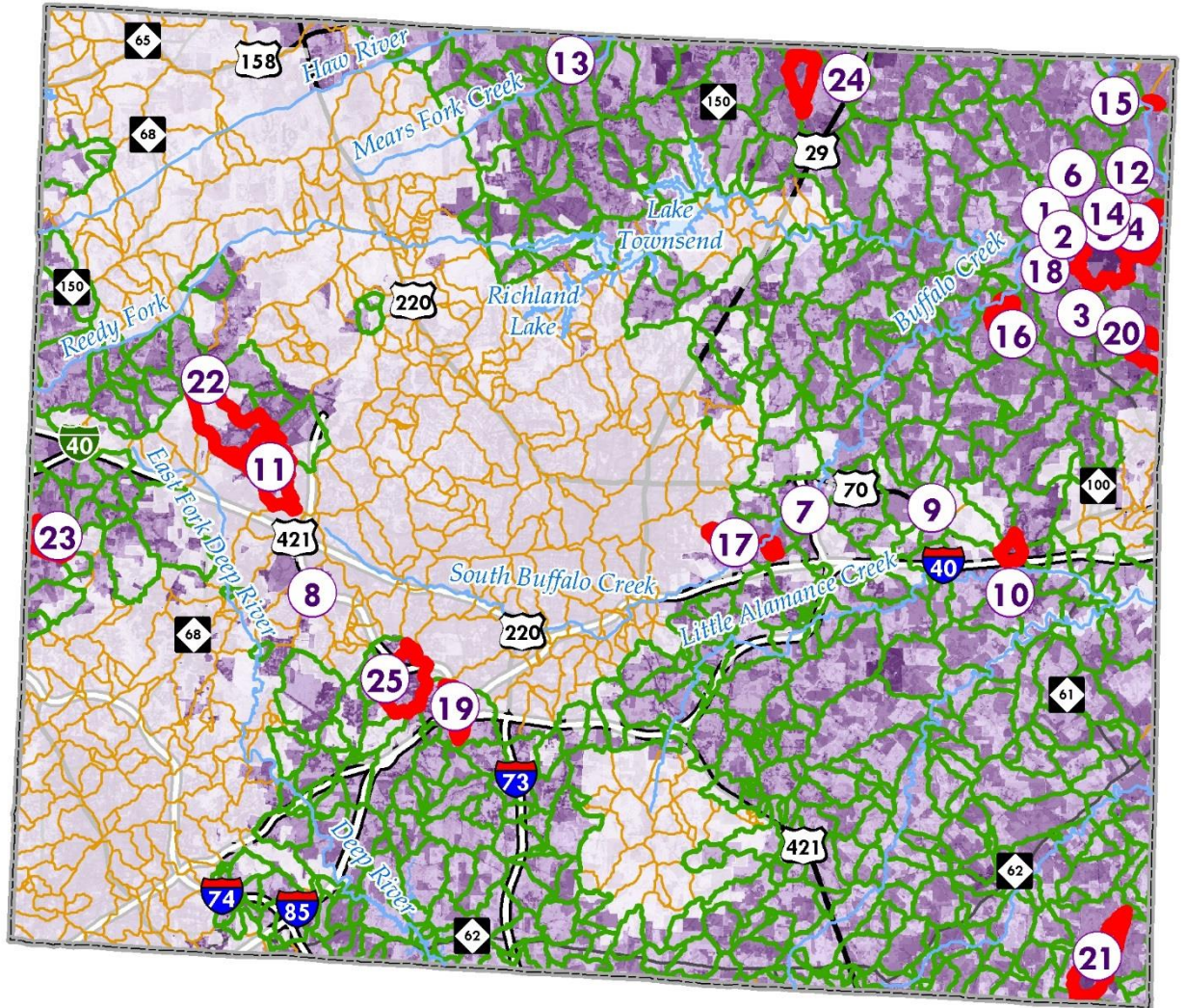
Map 3: Output Analysis (Version 2)



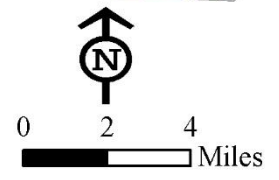
Stress Analysis



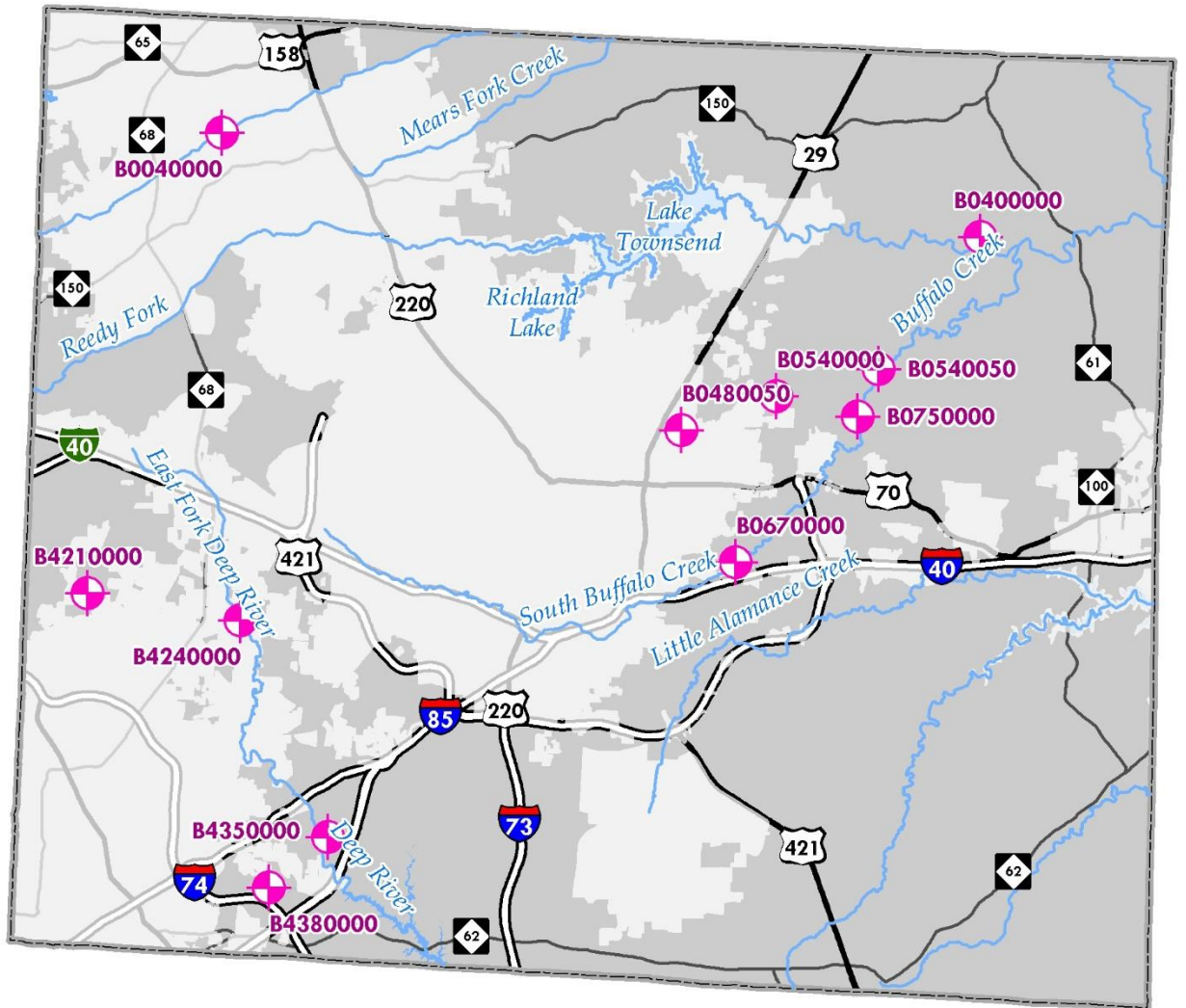
Map 4: Top 25 Catchments (Version 2)



Stress Analysis



Map 5: Fecal Monitoring Stations



 Monitoring Stations

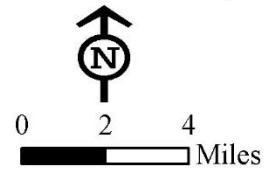


Figure 1: Fecal Coliform Monitoring Data (cfm/100 mL) (Limit = 400cfm/100mL)

