

# Yadkin-Pee Dee River Basin Ambient Monitoring System Report

January 1, 2002 through December 31, 2006



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### Evaluation Levels

In order to assist the reader in developing a rapid understanding of the summary statistics provided throughout this data review, concentrations of water quality variables may be compared to an Evaluation Level (EL). Evaluation levels may be a water quality standard, an action level, an ecological threshold, or simply an arbitrary threshold that facilitates a rapid data review. Evaluation levels are further evaluated for frequency to determine if they have been exceeded in more than 10 percent of the observed samples. This summary approach facilitates a rapid and straightforward presentation of the data but may not be appropriate for making specific use support decisions necessary for identification of impaired waters under the Clean Water Act's requirements for 303(d) listings. The reader is advised to review the states 303(d) listing methodology for this purpose. (see [http://h2o.enr.state.nc.us/tmdl/General\\_303d.htm](http://h2o.enr.state.nc.us/tmdl/General_303d.htm)).

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## SUMMARY

A general understanding of human activities and natural forces that affect pollution loads and their potential impacts on water quality can be obtained through routine sampling from fixed water quality monitoring stations. During this assessment period (January 1, 2002 through December 31, 2006) chemical and physical measurements were obtained by DWQ from 42 stations located throughout the Yadkin-Pee Dee River Basin. The Yadkin-Pee Dee River Basin Association (YPDRBA) collected chemical and physical measurements from 82 stations. Thirteen of these stations are monitored by both DWQ and the YPDRBA.

In order to evaluate acceptable water quality criteria at least 10 observations are desired. If at least 10 results were collected for a given site for a given parameter, the results are then compared to water quality evaluation levels. The water quality evaluation level may be an ecological evaluation level, a narrative or a numeric standard. If less than 10 results were collected, then no comparison to evaluation levels was made. When more than 10 percent of the results exceeded the evaluation level, a binomial statistical test was employed to determine how much statistical confidence there is that the results statistically exceed the 10% criteria. If at least 95% confidence was found that a 10% exceedance occurred, then that is termed a statistically significant exceedance (SSE). This method was applied for all parameters with an evaluation level, except for fecal coliform bacteria, which uses a 20% criteria as well as a geomean criteria. See the Parameters section for an explanation of fecal coliform methods. The results of the data analysis are displayed in tables, box plots, scatter plots, and maps. For complete summaries on each station, reference the AMS Station Summary Sheets located in Appendix A.

This review of significant exceedances was performed using all data that were collected between January 1, 2002 and December 31, 2006. Stations with SSEs were found for dissolved oxygen (three sites), pH (two sites), chlorophyll a (one site), turbidity (12 sites), total copper (17 sites), total iron (53 sites), total manganese (four sites), total zinc (two sites), and fecal coliform (14 sites). For all parameters, 55 additional 10 percent violations that were not SSEs also occurred.

**Table 1** gives a summary of the problem areas using these criteria in the basin. While reading the table please note the following: The majority of the parameters listed are compared directly to their standards. There is one exception, however. The fecal coliform standard requires that 5 samples be taken in the span of 30 days, which was not done for this data. Therefore any fecal coliform reviews should be taken as a recommendation to collect the data at a frequency (5 in 30) required by the standard.

**Table 1. Violations and Areas of Concern in the Yadkin-Pee Dee River Basin (1 of 5)**

Agency	Station	Location	Stream Class	Parameter	% Exceed	% Conf
Hydrologic Unit Code 3040101						
YPDRBA	Q0450000	Yadkin Riv At Us 421 Bus At N Wilkesboro	C	Total Copper (>7)	13.8%	84.2%
				Total Iron (>1000)	20.7%	97.8%
NCAMBNT	Q0720000	Yadkin Riv At Sr 2303 At Ronda	WS-IV	Total Iron (>1000)	25.0%	98.9%
YPDRBA	Q0720000	Yadkin Riv At Sr 2303 At Ronda	WS-IV	Total Copper (>7)	10.3%	67.1%
				Total Iron (>1000)	44.8%	100.0%
NCAMBNT	Q0810000	Yadkin Riv At Us 21 Bus At Elkin	C	Total Iron (>1000)	15.0%	86.7%
YPDRBA	Q1065000	Mitchell Riv At Sr 1001 Nr North Elkin	C	Total Iron (>1000)	22.2%	97.2%
YPDRBA	Q1270000	Cody Crk At Nc 268 Nr Fairview	C	Turbidity (>50)	12.5%	78.9%
YPDRBA	Q1350000	Yadkin Riv At Sr 1003 Nr Siloam	C	Total Iron (>1000)	48.9%	100.0%
NCAMBNT	Q1780000	Ararat Riv At Sr 2019 At Ararat	C	Fecal Coliform (20%>400)	21.8%	70.2%
				Total Copper (>7)	20.0%	95.7%
				Total Iron (>1000)	40.0%	100.0%
				Turbidity (>50)	15.7%	95.6%
NCAMBNT	Q1950000	Ararat Riv At Sr 2080 Nr Siloam	WS-IV	Total Iron (>1000)	45.0%	100.0%
				Turbidity (>50)	11.7%	75.2%
				Total Iron (>1000)	57.9%	100.0%
NCAMBNT	Q2040000	Yadkin Riv At Sr 1605 At Enon	WS-IV	Turbidity (>50)	14.7%	93.1%
YPDRBA	Q2090000	N Deep Crk At Sr 1605 Nr Yadkinville	C	Turbidity (>50)	11.7%	75.2%
YPDRBA	Q2120000	N Deep Crk At Sr 1510 Nr Yadkinville	C	Turbidity (>50)	11.7%	75.2%
YPDRBA	Q2135000	S Deep Crk At Sr 1733 Nr Shacktown	WS-IV	Turbidity (>50)	13.3%	85.8%
YPDRBA	Q2180000	Yadkin Riv At Us 158 At Clemmons	WS-IV	Total Iron (>1000)	61.7%	100.0%
				Turbidity (>50)	13.3%	85.8%
YPDRBA	Q2291000	Muddy Crk At I 40 Nr Clemmons	C	Total Iron (>1000)	59.6%	100.0%
YPDRBA	Q2479455	Salem Crk At Sr 2740 Reynolds Park Rd Nr Winston Salem	C	Total Iron (>1000)	61.7%	100.0%
NCAMBNT	Q2510000	Salem Crk At Elledge Wtp At Winston Salem	C	Fecal Coliform (20%>400)	50.0%	100.0%
				Fecal Coliform (Geomean>200)	475	
				Total Copper (>7)	21.1%	96.5%
				Total Iron (>1000)	26.3%	99.1%
				Total Zinc (>50)	15.8%	88.5%
YPDRBA	Q2570000	Salem Crk At Sr 2991 Fraternity Church Rd Nr Winston Salem	C	Total Copper (>7)	21.4%	98.2%
				Total Iron (>1000)	28.6%	99.9%
				Total Zinc (>50)	25.0%	99.5%
NCAMBNT	Q2600000	Muddy Crk At Sr 2995 Nr Muddy Creek	C	Fecal Coliform (20%>400)	42.3%	100.0%
				Fecal Coliform (Geomean>200)	376	
				Total Copper (>7)	21.1%	96.5%
				Total Iron (>1000)	36.8%	100.0%
				Total Zinc (>50)	47.4%	100.0%
NCAMBNT	Q2810000	Yadkin Riv At Us 64 At Yadkin College	WS-IV CA	Fecal Coliform (20%>400)	25.9%	89.7%
				Total Iron (>1000)	50.0%	100.0%
				Turbidity (>50)	15.6%	95.9%
				Total Iron (>1000)	75.6%	100.0%
				Total Manganese (>200)	15.6%	92.4%
Hydrologic Unit Code 3040102						
NCAMBNT	Q3460000	S Yadkin Riv At Sr 1159 Nr Mocksville	WS-IV	Fecal Coliform (20%>400)	36.2%	99.9%
				Fecal Coliform (Geomean>200)	343	
				Total Iron (>1000)	73.7%	100.0%
				Turbidity (>50)	10.5%	65.1%
NCAMBNT	Q3484000	Hunting Crk At Sr 2115 Nr Harmony	WS-III	Fecal Coliform (20%>400)	20.3%	60.2%
				Fecal Coliform (Geomean>200)	204	
				Total Iron (>1000)	31.6%	99.8%
				Turbidity (>50)	16.9%	96.9%

**Table 1 (Continued). Violations and Areas of Concern in the Yadkin-Pee Dee River Basin (2 of 5)**

Agency	Station	Location	Stream Class	Parameter	% Exceed	% Conf
Hydrologic Unit Code 3040102						
YPDRBA	Q3555000	Bear Crk At Sr 1116 Junction Rd Nr Cooleemee	WS-IV	Total Copper (>7)	17.2%	93.6%
				Total Iron (>1000)	89.7%	100.0%
NCAMBNT	Q3735000	Fourth Crk At Sr 2308 Nr Elmwood	C	Fecal Coliform (20%>400)	31.0%	98.5%
				Fecal Coliform (Geomean>200)	363	
				Total Copper (>7)	15.0%	86.7%
				Total Iron (>1000)	55.0%	100.0%
				Turbidity (>50)	18.6%	98.7%
YPDRBA	Q3900000	Third Crk At Sr 2342 Amity Hill Rd Nr Statesville	C	Turbidity (>50)	11.7%	75.2%
YPDRBA	Q3932000	Third Crk At Sr 2359 Bethesda Rd Nr Statesville	C	Turbidity (>50)	11.7%	75.2%
NCAMBNT	Q3934500	Third Crk At Sr 1970 Nr Woodleaf	C	Fecal Coliform (20%>400)	36.8%	99.9%
				Fecal Coliform (Geomean>200)	425	
				Total Copper (>7)	20.0%	95.7%
				Total Iron (>1000)	75.0%	100.0%
				Turbidity (>50)	19.0%	98.9%
YPDRBA	Q3970000	S Yadkin Riv At Us 601 Nr Cooleemee	C	Total Iron (>1000)	85.1%	100.0%
				Turbidity (>50)	16.7%	96.6%
YPDRBA	Q4030000	Second Crk At Sr 1526 Nr Salisbury	C	Total Iron (>1000)	65.5%	100.0%
NCAMBNT	Q4120000	Second Crk At Us 70 Nr Barber	C	Fecal Coliform (20%>400)	35.1%	99.8%
				Fecal Coliform (Geomean>200)	360	
				Total Copper (>7)	15.0%	86.7%
				Total Iron (>1000)	55.0%	100.0%
				Turbidity (>50)	17.2%	97.3%
YPDRBA	Q4165000	Second Crk At Us 601 Nr Salisbury	C	Total Copper (>7)	10.3%	67.1%
				Total Iron (>1000)	86.2%	100.0%
Hydrologic Unit Code 3040103						
NCAMBNT	Q4540000	Grants Crk At Sr 1915 Nr Salisbury	C	Fecal Coliform (20%>400)	40.0%	98.2%
				Fecal Coliform (Geomean>200)	331	
				Turbidity (>50)	20.0%	94.4%
NCAMBNT	Q4600000	Grants Crk Below Salisbury And Spencer Wwtp	C	Fecal Coliform (20%>400)	22.0%	70.4%
				Fecal Coliform (Geomean>200)	266	
				Total Copper (>7)	33.3%	99.8%
				Total Iron (>1000)	60.0%	100.0%
YPDRBA	Q4600000	Grants Crk Below Salisbury And Spencer Wwtp	C	Turbidity (>50)	16.7%	90.2%
NCAMBNT	Q4660000	Yadkin Riv At Nc 150 Nr Spencer	WS-V	Fecal Coliform (20%>400)	26.8%	92.1%
				Total Iron (>1000)	50.0%	100.0%
				Turbidity (>50)	25.9%	100.0%
YPDRBA	Q4660000	Yadkin Riv At Nc 150 Nr Spencer	WS-V	Turbidity (>50)	13.3%	85.8%
NCAMBNT	Q5360000	Town Crk At Sr 2168 Nr Duke	C	Chlorophyll a (>40)	31.4%	100.0%
				Total Iron (>1000)	45.0%	100.0%
				Turbidity (>25)	27.6%	100.0%
NCAMBNT	Q5780000	Rich Fork At Sr 1800 Nr Thomasville	C	Fecal Coliform (20%>400)	43.1%	100.0%
				Fecal Coliform (Geomean>200)	391	
				Total Iron (>1000)	52.6%	100.0%
NCAMBNT	Q5906000	Hamby Crk At Sr 2790 Nr Holly Grove	C	Fecal Coliform (20%>400)	24.1%	83.1%
				Total Copper (>7)	55.0%	100.0%
				Total Iron (>1000)	15.0%	86.7%
NCAMBNT	Q5930000	Abbotts Crk At Sr 1243 At Lexington	C	Fecal Coliform (20%>400)	24.6%	84.8%
				Total Copper (>7)	15.0%	86.7%
				Total Iron (>1000)	65.0%	100.0%
				Turbidity (>50)	11.8%	77.4%

**Table 1 (Continued). Violations and Areas of Concern in the Yadkin-Pee Dee River Basin (3 of 5)**

Agency	Station	Location	Stream Class	Parameter	% Exceed	% Conf
<b>Hydrologic Unit Code 3040103</b>						
NCAMBNT	Q5970000	Abbotts Crk At Nc 47 Nr Cotton Grove	WS-V&B	Chlorophyll a (>40)	11.1%	70.7%
				Total Iron (>1000)	85.0%	100.0%
				Total Manganese (>200)	31.6%	99.8%
YPDRBA	Q5970000	Abbotts Crk At Nc 47 Nr Cotton Grove	WS-V&B	Total Iron (>1000)	69.0%	100.0%
				Total Manganese (>200)	41.4%	100.0%
NCAMBNT	Q6120000	Yadkin Riv At Sr 1002 At High Rock	WS-IV&B CA	Total Iron (>1000)	31.6%	99.8%
YPDRBA	Q6120000	Yadkin Riv At Sr 1002 At High Rock	WS-IV&B CA	Total Iron (>1000)	26.7%	98.7%
YPDRBA	Q6360000	Yadkin Riv At Nc 8 And Nc 49 Nr Richfield	WS-IV&B CA	Total Iron (>1000)	18.8%	96.4%
NCAMBNT	Q6810000	Uwharrie Riv At Nc 109 Nr Uwharrie	WS-IV&B	Total Iron (>1000)	18.8%	93.2%
<b>Hydrologic Unit Code 3040104</b>						
YPDRBA	Q7030000	Pee Dee Riv At Nc 24 Nc 27 And Nc 73 Nr Albemarle	WS-IV&B CA	Total Iron (>1000)	16.7%	90.2%
NCAMBNT	Q9155000	Brown Crk At Sr 1627 Nr Pinkston	C	Dissolved Oxygen (<4)	20.4%	99.2%
				Total Copper (>7)	12.5%	78.9%
				Total Iron (>1000)	87.5%	100.0%
NCAMBNT	Q9160000	Pee Dee Riv At Nc 109 Nr Mangum	WS-V&B	Total Copper (>7)	12.5%	78.9%
				Total Iron (>1000)	31.3%	99.7%
				Turbidity (>50)	14.3%	88.8%
NCAMBNT	Q9200000	Little Riv At Sr 1340 Nr Star	C HWQ	Total Iron (>1000)	25.0%	98.3%
<b>Hydrologic Unit Code 3040105</b>						
NCAMBNT	Q7330000	Rocky Riv At Sr 2420 Nr Davidson	C	Fecal Coliform (20%>400)	45.8%	100.0%
				Fecal Coliform (Geomean>200)	478	
				Total Iron (>1000)	50.0%	100.0%
				Turbidity (>50)	11.9%	76.6%
YPDRBA	Q7330000	Rocky Riv At Sr 2420 Nr Davidson	C	Turbidity (>50)	11.7%	75.2%
YPDRBA	Q7450000	Rocky Riv At Us 29 Nr Harrisburg	C	Turbidity (>50)	11.7%	75.2%
YPDRBA	Q7550000	Mallard Crk At Pavillion Rd Nr Harrisburg	C	Total Copper (>7)	20.7%	97.8%
				Total Iron (>1000)	62.1%	100.0%
				Turbidity (>50)	13.3%	85.8%
YPDRBA	Q7570000	Mallard Crk At Sr 1300 Nr Harrisburg	C	Total Copper (>7)	24.1%	99.4%
				Total Iron (>1000)	34.5%	100.0%
				Turbidity (>50)	13.3%	85.8%
YPDRBA	Q7600000	Rocky Riv At Sr 1304 Nr Harrisburg	C	Total Copper (>7)	23.4%	99.8%
				Total Iron (>1000)	70.2%	100.0%
				Turbidity (>50)	18.3%	98.5%
YPDRBA	Q7700000	Coddle Crk At Sr 1304 Roberta Rd Nr Roberta Mill	C	Turbidity (>50)	16.7%	94.6%
YPDRBA	Q7780000	Rocky Riv At Sr 1132 Nr Harrisburg	C	Turbidity (>50)	15.0%	92.7%
NCAMBNT	Q8090000	Irish Buffalo Crk At Sr 1132 Nr Faggarts	C	Fecal Coliform (20%>400)	28.6%	95.7%
				Fecal Coliform (Geomean>200)	267	
				Total Copper (>7)	21.1%	96.5%
				Total Iron (>1000)	31.6%	99.8%
YPDRBA	Q8200000	Cold Water Crk At Sr 1132 Miami Church Rd Nr Concord	C	Turbidity (>50)	11.7%	75.2%



**Table 1 (Continued). Violations and Areas of Concern in the Yadkin-Pee Dee River Basin (4 of 5)**

Agency	Station	Location	Stream Class	Parameter	% Exceed	% Conf
<b>Hydrologic Unit Code 3040105</b>						
NCAMBNT	Q8210000	Rocky Riv At Us 601 Nr Concord	C	Fecal Coliform (20%>400)	34.9%	99.3%
				Fecal Coliform (Geomean>200)	331	
				Total Copper (>7)	40.0%	100.0%
				Total Iron (>1000)	53.3%	100.0%
				Turbidity (>50)	25.0%	99.9%
YPDRBA	Q8210000	Rocky Riv At Us 601 Nr Concord	C	Turbidity (>50)	13.3%	85.8%
NCAMBNT	Q8220000	Rocky Riv At Sr 1006 Nr Concord	C	Fecal Coliform (20%>400)	26.7%	83.6%
				Fecal Coliform (Geomean>200)	365	
				Turbidity (>50)	20.0%	94.4%
YPDRBA	Q8341000	Clear Crk At Sr 1118 Ben Black Rd Nr Brief	C	Turbidity (>50)	11.1%	70.7%
YPDRBA	Q8342000	Clear Crk At Us 601 Nr Brief	C	Turbidity (>50)	13.3%	85.8%
YPDRBA	Q8355000	Rocky Riv At Sr 1114 Nr Midland	C	Total Copper (>7)	20.7%	97.8%
				Total Iron (>1000)	51.7%	100.0%
				Turbidity (>50)	13.3%	85.8%
NCAMBNT	Q8360000	Goose Crk At Sr 1524 Nr Mint Hill	C	Fecal Coliform (20%>400)	55.9%	100.0%
				Fecal Coliform (Geomean>200)	582	
				Total Iron (>1000)	18.2%	93.8%
YPDRBA	Q8360000	Goose Crk At Sr 1524 Nr Mint Hill	C	Turbidity (>50)	13.3%	85.8%
YPDRBA	Q8385000	Rocky Riv At Sr 1606 Nr Monroe	C	Total Copper (>7)	17.2%	93.6%
				Total Iron (>1000)	55.2%	100.0%
				Total Zinc (>50)	10.3%	67.1%
				Turbidity (>50)	15.0%	92.7%
YPDRBA	Q8386000	N Fork Crooked Crk At Sr 1520 Nr Monroe	C	Fecal Coliform (20%>400)	28.3%	95.7%
				Fecal Coliform (Geomean>200)	215	
				Turbidity (>50)	13.3%	85.8%
YPDRBA	Q8386200	N Fork Crooked Crk At Sr 1514 Nr Monroe	C	Fecal Coliform (20%>400)	26.7%	92.3%
				Fecal Coliform (Geomean>200)	222	
				Turbidity (>50)	11.7%	75.2%
NCAMBNT	Q8720000	Long Crk At Sr 1917 Nr Rocky River Springs	C	Total Copper (>7)	65.0%	100.0%
YPDRBA	Q8850000	Richardson Crk At Sr 1630 Nr Monroe	C	Turbidity (>50)	11.1%	73.4%
NCAMBNT	Q8917000	Richardson Crk At Sr 1649 Nr Fairfield	C	Total Copper (>7)	30.0%	99.8%
YPDRBA	Q9021305	Barkers Branch At Sr 1005 Landsford Rd Nr Marshville	WS-V	Fecal Coliform (20%>400)	33.3%	94.9%
				Fecal Coliform (Geomean>200)	247	
				Total Copper (>7)	22.2%	97.2%
				Total Iron (>1000)	38.9%	100.0%
YPDRBA	Q9021510	Beaverdam Crk At Sr 1005 Nr Marshville	WS-V	Total Manganese (>200)	50.0%	100.0%
				Dissolved Oxygen (<4)	76.0%	100.0%
				Fecal Coliform (20%>400)	33.3%	98.2%
				Fecal Coliform (Geomean>200)	215	
				Total Copper (>7)	16.0%	90.2%
				Total Iron (>1000)	52.0%	100.0%
NCAMBNT	Q9120000	Rocky Riv At Sr 1935 Nr Norwood	C	Total Manganese (>200)	42.9%	100.0%
				Fecal Coliform (20%>400)	23.2%	78.3%
				Total Copper (>7)	23.8%	98.6%
				Total Iron (>1000)	38.1%	100.0%
				Turbidity (>50)	22.4%	99.9%

**Table 1 (Continued). Violations and Areas of Concern in the Yadkin-Pee Dee River Basin (5 of 5)**

Agency	Station	Location	Stream Class	Parameter	% Exceed	% Conf
<b>Hydrologic Unit Code 3040201</b>						
NCAMBNT	Q9400000	Pee Dee Riv At Us 74 Nr Rockingham	C	Dissolved Oxygen (<4)	10.2%	63.5%
YPDRBA	Q9400000	Pee Dee Riv At Us 74 Nr Rockingham	C	Total Iron (>1000)	63.8%	100.0%
NCAMBNT	Q9660000	Hitchcock Crk At Sr 1109 At Cordova	C	pH (<6)	16.7%	95.4%
				Total Iron (>1000)	68.8%	100.0%
NCAMBNT	Q9777000	Jones Crk At Nc 145 Nr Pee Dee	C	Total Copper (>7)	12.5%	78.9%
				Total Iron (>1000)	68.8%	100.0%
NCAMBNT	Q9940000	Marks Crk At Sr 1812 Nr Hamlet	C	Dissolved Oxygen (<4)	29.2%	100.0%
				pH (<6)	38.3%	100.0%
				Total Iron (>1000)	62.5%	100.0%

## INTRODUCTION

The DWQ's Ambient Monitoring System (AMS) network of stream, lake, and estuarine stations strategically located for the collection of physical and chemical water quality data. The stations are located at convenient access points (e.g. bridge crossings) that are sampled on a monthly basis. These locations were chosen to characterize the effects of point source dischargers and nonpoint sources such as agriculture, animal operations, and urbanization within watersheds. In January 2007 the DWQ began collection of samples from randomly determined sites. There are four random sites located in the Yadkin-Pee Dee River Basin. At this time the data collected is insufficient to support analysis. DWQ expects to begin analysis of the random sites data in 2008.

The data are used to identify long term trends within watersheds, to develop Total Maximum Daily Loads (TMDLs) and to compare measured values with water quality standards to identify possible areas of impairment. Parametric coverage is determined by freshwater or saltwater waterbody classification and corresponding water quality standards. Under this arrangement, core parameters are based on Class C waters with additional parameters added when justified (Table 2).

Within this document, an analysis of how monitoring results compare with water quality standards and evaluation levels is presented. A conceptual overview of water quality standards is provided at: <http://www.epa.gov/waterscience/standards>. Specific information on North Carolina water quality standards is provided at: <http://h2o.enr.state.nc.us/csu/swstdsfaq.html>.

Water quality data are evaluated in five year periods. Some stations have little or no data for several parameters over the period. However, for the purpose of standardization, data summaries for each station are included in this report. DWQ monitored water quality and collected samples at 42 stations throughout the basin.

### **The Yadkin-Pee Dee River Basin Association**

Also within the Yadkin-Pee Dee River basin are monitoring stations maintained by the Yadkin-Pee Dee River Basin Association (YPDRBA). The YPDRBA is an organization of municipalities and industries that release treated wastewater into the Yadkin-Pee Dee River. Since its inception in 1998, the YPDRBA has taken an active role in monitoring water quality along the Yadkin-Pee Dee. As an alternative to typical state and federally required in-stream National Pollutant Discharge Elimination System (NPDES) permit monitoring requirements, the members of YPDRBA collect water samples from 82 monitoring stations throughout the basin, under agreement with DWQ. Thirteen of the stations monitored by YPDRBA are also monitored by DWQ.

**Table 2. Parametric coverage for the Ambient Monitoring System.<sup>1</sup>**

Parameter	All Waters	Water Supply
Dissolved oxygen (s)	✓	✓
pH (s)	✓	✓
Specific conductance	✓	✓
Temperature (s)	✓	✓
Total phosphorus <sup>2</sup>	✓	✓
Ammonia as N <sup>2</sup>	✓	✓
Total Kjeldahl as N <sup>2</sup>	✓	✓
Nitrate+nitrite as N <sup>2</sup> (s)	✓	✓
Total suspended solids	✓	✓
Turbidity (s)	✓	✓
Fecal coliform bacteria (s)	✓	✓
Aluminum	✓	✓
Arsenic (s)	✓	✓
Cadmium (s)	✓	✓
Chromium, total (s)	✓	✓
Copper, total (s)	✓	✓
Iron (s)	✓	✓
Lead (s)	✓	✓
Mercury (s)	✓	✓
Nickel (s)	✓	✓
Zinc (s)	✓	✓
Manganese (s)	---	✓
Chlorophyll <i>a</i> <sup>2</sup> (s)	✓	✓

<sup>1</sup>A check (✓) indicates the parameter is collected. 's' indicates the parameter has a standard.

<sup>2</sup>Chlorophyll *a* is collected in Nutrient Sensitive Waters (NSW) and some coastal areas. Since 2001, nutrient sampling likewise is only done in areas of concern, such as NSW, estuaries, and areas with known enrichment issues.

**Table 3. Selected water quality standards<sup>1</sup>**

Parameter (µg/L, unless noted)	Standards for All Freshwater			Standards to Support Additional Uses		
	Aquatic Life	Human Health	Water Supply Classifications	Trout Water	HQW	Swamp Waters
Arsenic		10				
Cadmium	2.0			0.4		
Chloride (mg/l)	230		250			
Chlorophyll <i>a</i> (corrected)	40 <sup>2</sup>			15 <sup>2</sup>		
Chromium, total	50					
Coliform, total (MFTCC/100 ml) <sup>3</sup>			50 <sup>2</sup> (WS-I only)			
Coliform, fecal (MFFCC/100 ml) <sup>4</sup>		200 <sup>2</sup>				
Copper, total	7					
Dissolved oxygen (mg/L)	4.0 <sup>5,6</sup>			6.0		2, 6
Hardness, total (mg/L)			100			
Iron	1,000					
Lead	25 <sup>2</sup>					
Manganese			200			
Mercury	0.012					
Nickel	88		25			
Nitrate nitrogen			10,000			
pH (units)	6.0 - 9.0 <sup>2, 6</sup>					2, 6
Solids, total suspended (mg/L)					10 Trout, 20 other <sup>7</sup>	
Turbidity (NTU)	50, 25 <sup>2</sup>			10 <sup>2</sup>		
Zinc	50					

<sup>1</sup>Standards apply to all classifications. For the protection of water supply and supplemental classifications, standards listed under Standards to Support Additional Uses should be used unless standards for aquatic life or human health are listed and are more stringent. Standards are the same for all water supply classifications (Administrative Code 15A NCAC 2B 0200, eff. August 1, 2004).

<sup>2</sup>Refer to 2B.0211 for narrative description of limits.

<sup>3</sup>Membrane filter total coliform count per 100 ml of sample.

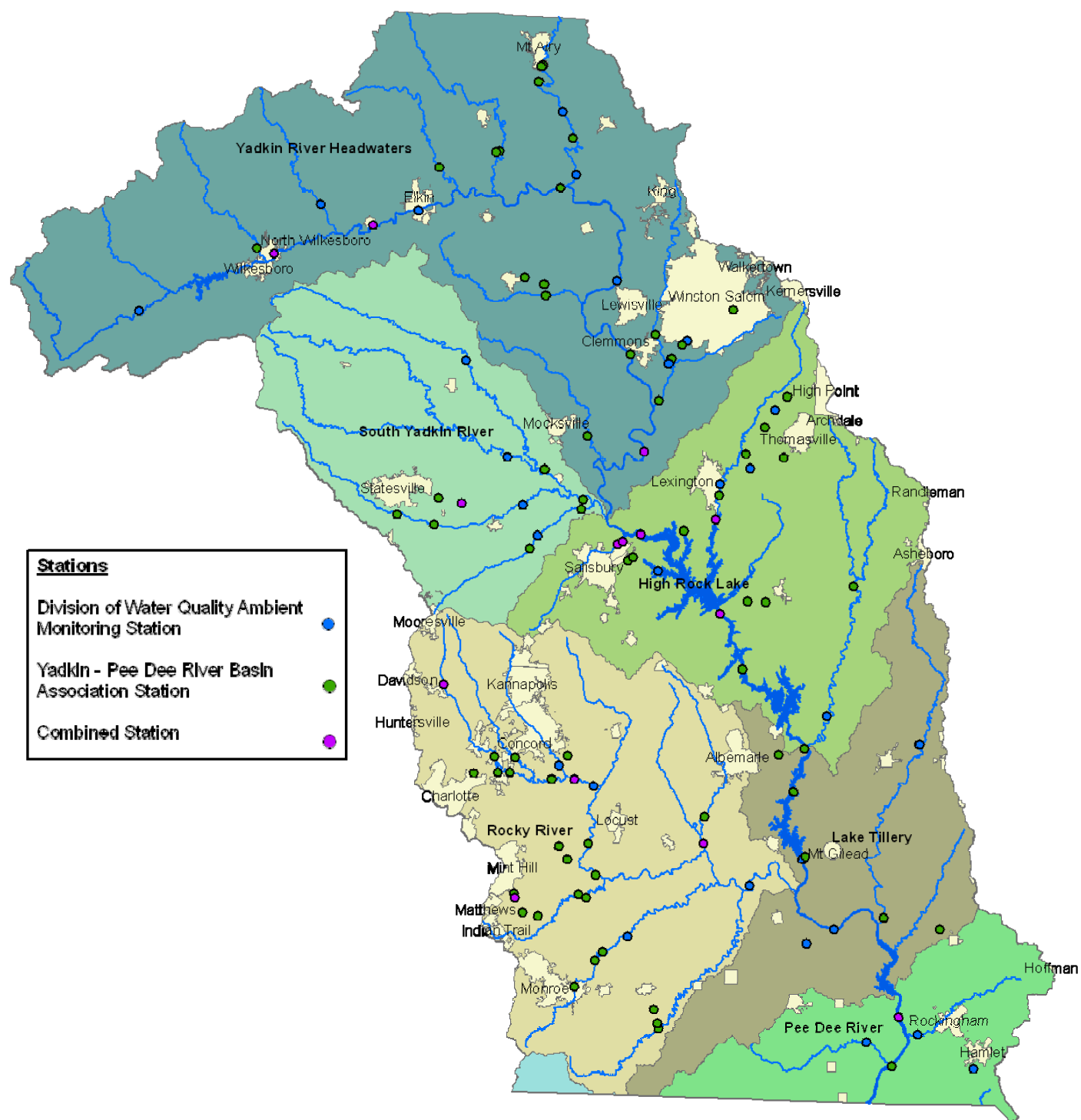
<sup>4</sup>Membrane filter fecal coliform count per 100 ml of sample.

<sup>5</sup>An instantaneous reading may be as low as 4.0 mg/L, but the daily average must be 5.0 mg/L or more.

<sup>6</sup>Designated swamp waters may have a dissolved oxygen less than 5.0 mg/L and a pH as low as 4.3, if due to natural conditions.

<sup>7</sup>For effluent limits only, refer to 2B.0224(1)(b)(ii).

Figure 1. DWQ's Ambient Monitoring System and the YPDRBA monitoring system in the Yadkin-Pee Dee River Basin.



**Table 4. DWQ Monitoring stations in the Yadkin-Pee Dee River Basin, 2002 - 2006. (1 of 3)**

Station	Agency	Location	Stream Class	Latitude	Longitude
<b>Hydrologic Unit Code: 03040101 - Yadkin River Headwaters</b>					
Q0220000	NCDWQ	Elk Crk At Nc 268 At Elkinville	B ORW	36.06952	-81.40237
Q0360000	YPDRBA	Reddies Riv At Sr 1517 At N Wilkesboro	WS II HQW	36.17430	-81.16930
Q0450000	Combined	Yadkin Riv At Us 421 Bus At N Wilkesboro	C	36.16597	-81.13447
Q0660000	NCDWQ	Roaring Riv At Sr 1990 Nr Roaring River	B	36.24802	-81.04303
Q0720000	Combined	Yadkin Riv At Sr 2303 At Ronda	WS-IV	36.21548	-80.93678
Q0810000	NCDWQ	Yadkin Riv At Us 21 Bus At Elkin	C	36.24176	-80.84734
Q1065000	YPDRBA	Mitchell Riv At Sr 1001 Nr North Elkin	C	36.31137	-80.80656
Q1215000	YPDRBA	Fisher Riv At Nc 268 Nr Fairview	C	36.33953	-80.68520
Q1270000	YPDRBA	Cody Crk At Nc 268 Nr Fairview	C	36.33803	-80.69287
Q1350000	YPDRBA	Yadkin Riv At Sr 1003 Nr Siloam	C	36.28238	-80.56223
Q1500000	YPDRBA	Ararat Riv At Us 52 Nr Mt Airy	C	36.47995	-80.60035
Q1550000	YPDRBA	Ararat Riv At Wwtp Rd At Mt Airy Wwtp	C	36.47703	-80.60452
Q1725000	YPDRBA	Ararat Riv At Sr 2119 Nr Mt Airy	C	36.45172	-80.60915
Q1780000	NCDWQ	Ararat Riv At Sr 2019 At Ararat	C	36.40361	-80.56113
Q1935000	YPDRBA	Ararat Riv At Sr 2044 Nr Pilot Mountain	C	36.36262	-80.53938
Q1950000	NCDWQ	Ararat Riv At Sr 2080 Nr Siloam	WS-IV	36.30235	-80.53159
Q2040000	NCDWQ	Yadkin Riv At Sr 1605 At Enon	WS-IV	36.13279	-80.44539
Q2090000	YPDRBA	N Deep Crk At Sr 1605 Nr Yadkinville	C	36.13618	-80.63003
Q2120000	YPDRBA	N Deep Crk At Sr 1510 Nr Yadkinville	C	36.12590	-80.59183
Q2135000	YPDRBA	S Deep Crk At Sr 1733 Nr Shacktown	WS-IV	36.10648	-80.58765
Q2180000	YPDRBA	Yadkin Riv At Us 158 At Clemmons	WS-IV	36.01437	-80.41637
Q2291000	YPDRBA	Muddy Crk At I 40 Nr Clemmons	C	36.04700	-80.36623
Q2479455	YPDRBA	Salem Crk At Sr 2740 Reynolds Park Rd Nr Winston Salem	C	36.08843	-80.21208
Q2510000	NCDWQ	Salem Crk At Elledge Wtp At Winston Salem	C	36.03878	-80.30416
Q2540000	YPDRBA	Salem Crk At Sr 1120 Clemmons Rd At Winston Salem	C	36.03115	-80.31372
Q2570000	YPDRBA	Salem Crk At Sr 2991 Fraternity Church Rd Nr Winston Salem	C	36.00855	-80.33528
Q2600000	NCDWQ	Muddy Crk At Sr 2995 Nr Muddy Creek	C	36.00001	-80.34000
Q2720000	YPDRBA	Muddy Crk At Sr 1485 Nr Winston Salem	C	35.94020	-80.35800
Q2810000	Combined	Yadkin Riv At Us 64 At Yadkin College	WS-IV CA	35.85700	-80.38628
Q3105000	YPDRBA	Dutchman Crk At Us 64 Nr Mocksville	C	35.88107	-80.50118
<b>Hydrologic Unit Code: 03040102 - South Yadkin River</b>					
Q3460000	NCDWQ	S Yadkin Riv At Sr 1159 Nr Mocksville	WS-IV	35.84478	-80.65910
Q3484000	NCDWQ	Hunting Crk At Sr 2115 Nr Harmony	WS-III	36.00024	-80.74562
Q3555000	YPDRBA	Bear Crk At Sr 1116 Junction Rd Nr Cooleemee	WS-IV	35.82560	-80.58500
Q3720000	YPDRBA	Fourth Crk At Sr 2316 Bell Farm Rd Nr Statesville	C	35.77607	-80.79582
Q3735000	Combined	Fourth Crk At Sr 2308 Nr Elmwood	C	35.76841	-80.74978
Q3900000	YPDRBA	Third Crk At Sr 2342 Amity Hill Rd Nr Statesville	C	35.74920	-80.87748
Q3932000	YPDRBA	Third Crk At Sr 2359 Bethesda Rd Nr Statesville	C	35.73302	-80.80395
Q3934500	NCDWQ	Third Crk At Sr 1970 Nr Woodleaf	C	35.76742	-80.62609
Q3970000	YPDRBA	S Yadkin Riv At Us 601 Nr Cooleemee	C	35.77838	-80.50673
Q4030000	YPDRBA	Second Crk At Sr 1526 Nr Salisbury	C	35.69702	-80.61172
Q4120000	NCDWQ	Second Crk At Us 70 Nr Barber	C	35.71840	-80.59538
Q4165000	YPDRBA	Second Crk At Us 601 Nr Salisbury	C	35.76247	-80.51075

**Table 4 (Continued) DWQ Monitoring stations in the Yadkin-Pee Dee River Basin, 2002 - 2006. (2 of 3)**

Station	Agency	Location	Stream Class	Latitude	Longitude
<b>Hydrologic Unit Code: 03040103 - High Rock Lake</b>					
Q4540000	Combined	Grants Crk At Sr 1915 Nr Salisbury	C	35.70718	-80.43608
Q4600000	Combined	Grants Crk Below Salisbury And Spencer Wwtp	C	35.71085	-80.42597
Q4660000	Combined	Yadkin Riv At Nc 150 Nr Spencer	WS-V	35.72303	-80.39050
Q4660000	YPDRBA	Yadkin Riv At Nc 150 Nr Spencer	WS-V	35.72303	-80.39050
Q5135000	YPDRBA	Swearing Crk At Sr 1272 Jersey Church Rd Nr Linwood	C	35.72911	-80.30566
Q5210000	YPDRBA	Town Crk At Sr 1915 Andrews St At Spencer	C	35.67981	-80.41552
Q5240000	YPDRBA	Town Crk At I 85 Nr Spencer	C	35.68635	-80.40520
Q5360000	NCDWQ	Town Crk At Sr 2168 Nr Duke	C	35.66353	-80.35418
Q5750000	YPDRBA	Rich Fork Crk At Sr 1755 Nr High Point	C	35.94891	-80.10170
Q5780000	NCDWQ	Rich Fork At Sr 1800 Nr Thomasville	C	35.92668	-80.12464
Q5785000	YPDRBA	Rich Fork Crk At Sr 1792 Nr High Point	C	35.89843	-80.14540
Q5790000	YPDRBA	Rich Fork Crk At Sr 2123 Nr High Point	C	35.85433	-80.18215
Q5860000	YPDRBA	Hamby Crk At Sr 2775 Old Emanuel Church Rd Nr Thomasville	C	35.85009	-80.10637
Q5906000	NCDWQ	Hamby Crk At Sr 2790 Nr Holly Grove	C	35.83240	-80.17472
Q5930000	NCDWQ	Abbotts Crk At Sr 1243 At Lexington	C	35.80629	-80.23488
Q5940000	YPDRBA	Abbotts Crk At I 85 Nr Lexington	C	35.78730	-80.23565
Q5970000	Combined	Abbotts Crk At Nc 47 Nr Cotton Grove	WS-V&B	35.74795	-80.24140
Q6120000	Combined	Yadkin Riv At Sr 1002 At High Rock	WS-IV&B CA	35.59680	-80.23128
Q6140000	YPDRBA	Lick Crk At Sr 1002 Nr Healing Springs	WS-IV	35.61638	-80.17543
Q6180000	YPDRBA	Ut To Lick Crk At Sr 2505 Nr Denton	WS-IV	35.61596	-80.14043
Q6360000	YPDRBA	Yadkin Riv At Nc 8 And Nc 49 Nr Richfield	WS-IV&B CA	35.50602	-80.18413
Q6705000	YPDRBA	Uwharrie Riv At Nc 49 Nr Farmer	C	35.64212	-79.96502
Q6810000	NCDWQ	Uwharrie Riv At Nc 109 Nr Uwharrie	WS-IV&B	35.43121	-80.01640
<b>Hydrologic Unit Code: 03040104 - Lake Tillery</b>					
Q6950000	YPDRBA	Little Mountain Crk At Nc 1798 Nr Badin	WS-IV	35.36928	-80.11088
Q6960000	YPDRBA	Pee Dee Riv At Boat Ramp At Morrow Mountain State Park	WS-IV&B CA	35.37970	-80.06130
Q7030000	YPDRBA	Pee Dee Riv At Nc 24 Nc 27 And Nc 73 Nr Albemarle	WS-IV&B CA	35.30825	-80.07972
Q7150000	NCDWQ	Pee Dee Riv At Nc 731 Nr Shankle	WS-V&B	35.20052	-80.06248
Q7210000	YPDRBA	Clarks Crk At Sr 1187 Nr Mount Gilead	C	35.20438	-80.05752
Q9155000	NCDWQ	Brown Crk At Sr 1627 Nr Pinkston	C	35.06372	-80.05283
Q9160000	NCDWQ	Pee Dee Riv At Nc 109 Nr Mangum	WS-V&B	35.08591	-79.99888
Q9200000	NCDWQ	Little Riv At Sr 1340 Nr Star	C HQW	35.38722	-79.83152
Q9320000	YPDRBA	Little Riv At Sr 1148 Nr Ellerbe	WS-IV	35.10633	-79.89895
Q9340000	YPDRBA	Toms Branch At Sr 1310 Nr Ellerbe	C	35.08783	-79.78942

**Table 4 (Continued) DWQ Monitoring stations in the Yadkin-Pee Dee River Basin, 2002 - 2006. (3 of 3)**

Station	Agency	Location	Stream Class	Latitude	Longitude
<b>Hydrologic Unit Code: 03040105 - Rocky River</b>					
Q7330000	Combined	Rocky Riv At Sr 2420 Nr Davidson	C	35.47490	-80.77948
Q7450000	YPDRBA	Rocky Riv At Us 29 Nr Harrisburg	C	35.35897	-80.67506
Q7550000	YPDRBA	Mallard Crk At Pavillion Rd Nr Harrisburg	C	35.33232	-80.71573
Q7570000	YPDRBA	Mallard Crk At Sr 1300 Nr Harrisburg	C	35.33378	-80.66817
Q7600000	YPDRBA	Rocky Riv At Sr 1304 Nr Harrisburg	C	35.33445	-80.64435
Q7700000	YPDRBA	Coddle Crk At Sr 1304 Roberta Rd Nr Roberta Mill	C	35.35919	-80.63469
Q7780000	YPDRBA	Rocky Riv At Sr 1132 Nr Harrisburg	C	35.32443	-80.56033
Q8090000	NCDWQ	Irish Buffalo Crk At Sr 1132 Nr Faggarts	C	35.34730	-80.54769
Q8200000	YPDRBA	Cold Water Crk At Sr 1132 Miami Church Rd Nr Concord	C	35.36242	-80.53033
Q8210000	Combined	Rocky Riv At Us 601 Nr Concord	C	35.32445	-80.51537
Q8220000	NCDWQ	Rocky Riv At Sr 1006 Nr Concord	C	35.31397	-80.47864
Q8341000	YPDRBA	Clear Crk At Sr 1118 Ben Black Rd Nr Brief	C	35.21628	-80.54555
Q8342000	YPDRBA	Clear Crk At Us 601 Nr Brief	C	35.19465	-80.52928
Q8355000	YPDRBA	Rocky Riv At Sr 1114 Nr Midland	C	35.22117	-80.48712
Q8359500	YPDRBA	Goose Crk In Hunley Creek Subdivision	C	35.13855	-80.63363
Q8360000	Combined	Goose Crk At Sr 1524 Nr Mint Hill	C	35.13090	-80.63105
Q8385000	YPDRBA	Rocky Riv At Sr 1606 Nr Monroe	C	35.16987	-80.47277
Q8386000	YPDRBA	N Fork Crooked Crk At Sr 1520 Nr Monroe	C	35.10785	-80.61538
Q8386200	YPDRBA	N Fork Crooked Crk At Sr 1514 Nr Monroe	C	35.10235	-80.58428
Q8388000	YPDRBA	Crooked Crk At Nc 218 Nr Monroe	C	35.13302	-80.48958
Q8388900	YPDRBA	Crooked Crk At Sr 1601 Nr Monroe	C	35.13808	-80.50538
Q8715000	YPDRBA	Long Crk At Sr 1968 Nr Oakboro	C	35.26667	-80.25693
Q8720000	Combined	Long Crk At Sr 1917 Nr Rocky River Springs	C	35.22392	-80.25857
Q8800000	YPDRBA	Richardson Crk At Sr 1751 Walkup Ave At Monroe	C	34.98970	-80.50965
Q8820000	YPDRBA	Richardson Crk At Sr 1006 Nr Monroe	C	35.03220	-80.47163
Q8850000	YPDRBA	Richardson Crk At Sr 1630 Nr Monroe	C	35.04597	-80.45607
Q8917000	NCDWQ	Richardson Crk At Sr 1649 Nr Fairfield	C	35.07111	-80.40662
Q9021300	YPDRBA	Lanes Crk At Sr 1005 Landsford Rd Nr Marshville	WS-V	34.92316	-80.34210
Q9021305	YPDRBA	Barkers Branch At Sr 1005 Landsford Rd Nr Marshville	WS-V	34.93202	-80.34358
Q9021510	YPDRBA	Beaverdam Crk At Sr 1005 Nr Marshville	WS-V	34.95439	-80.35166
Q9120000	NCDWQ	Rocky Riv At Sr 1935 Nr Norwood	C	35.15688	-80.16583
<b>Hydrologic Unit Code: 03040201 - Pee Dee River</b>					
Q9400000	Combined	Pee Dee Riv At Us 74 Nr Rockingham	C	34.94567	-79.86910
Q9660000	NCDWQ	Hitchcock Crk At Sr 1109 At Cordova	C	34.91837	-79.83003
Q9777000	NCDWQ	Jones Crk At Nc 145 Nr Pee Dee	C	34.90432	-79.93047
Q9830000	YPDRBA	Pee Dee Riv App 6 Mi Dns Of Nc 74 Nr Rockingham	C	34.86595	-79.87927
Q9940000	NCDWQ	Marks Crk At Sr 1812 Nr Hamlet	C	34.86257	-79.71915



## DATA ASSESSMENT AND INTERPRETATION

Monitoring and sampling results considered in this report represent samples collected or measurements taken at less than one-meter depth.

Percentile statistics were calculated for most of the data using JMP statistical software (version 5.01; SAS Institute, Cary, NC). Values less than the minimum reporting level (non-detects) were evaluated as equal to the reporting level. Box and whisker plots (constructed using SigmaPlot version 9) and maps are presented for most water quality parameters collected at each monitoring station. Significant trends in water quality parameters (constructed using Microsoft Excel) are illustrated as scatterplots. Significant trends are found by assessing the probability that the linear model explains the data no better than chance. If that chance is 5% or less (an observed significance probability of 0.05 or less) then that is considered evidence of a regression effect in this document. The strength of the regression effect is given as an  $r^2$  value, the portion of the data that is explained by the linear model. There are many other types of modeling (non-linear) that can be used to explore trends, but they were not used in this document.

### Analytical Considerations

One issue has been noted by the DWQ Laboratory Section as part of the analytical processes during this assessment period:

Chlorophyll a samples collected between 4/11/05 and 8/23/05 were incorrectly prepared for analysis, to the extent that the accuracy of the results is unknown. Therefore, the chlorophyll a results for this period were omitted from the dataset.

### Providing Confidence in the Exceedances of Water Quality Standards

NC DWQ uses guidance provided by the US EPA for determining when the number of results that exceed a water quality standard indicate potential water quality issues. Historically, the US EPA has suggested that management actions be implemented when 10 percent of the results exceeded a water quality standard. This interpretation is the same whether 1 out of 10, or 5 out of 50, or 25 out of 250 results exceed a standard. Evaluating exceedances in this manner is termed the “raw-score” approach. Although this “10 percent exceedance criterion” defines a point where potential water quality issues may be present, it does not consider uncertainty. Some results are subject to chance or other factors such as calibration errors or sample mishandling. Uncertainty levels change with sample size. The smaller the sample size, the greater the uncertainty.

This document uses a nonparametric procedure (Lin *et al.* 2000) to identify when a sufficient number of exceedances have occurred that indicate a true exceedance probability of 10 percent. Calculating the minimum number of exceedances needed for a particular sample size was done using the BINOMDIST function in Microsoft Excel®. This statistical function suggests that at least three exceedances need to be observed in a sample of 10 in order to be [about] 95 percent confident that the results statistically exceed the water quality standard more than 10% of the time. For example, there is less statistical confidence associated with a 1 exceedance out of 10 (73 percent) than when there are 3 exceedances out of 10 (93 percent confidence) (Table 5).

Table 5. Exceedance Confidence

Number of Samples	Number of Exceedances																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
10	74%	93%	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>							
12	66%	89%	<b>97%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>					
14	58%	84%	<b>96%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>			
16	51%	79%	93%	<b>98%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	
18	45%	73%	90%	<b>97%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
20	39%	68%	87%	<b>96%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
22	34%	62%	83%	94%	<b>98%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
24	29%	56%	79%	91%	<b>97%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
26	25%	51%	74%	89%	<b>96%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
28	22%	46%	69%	86%	94%	<b>98%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
30	18%	41%	65%	82%	93%	<b>97%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
32	16%	37%	60%	79%	91%	<b>96%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
34	13%	33%	55%	75%	88%	<b>95%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
36	11%	29%	51%	71%	85%	94%	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
38	10%	25%	46%	67%	83%	92%	<b>97%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
40	8%	22%	42%	63%	79%	90%	<b>96%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
42	7%	20%	38%	59%	76%	88%	<b>95%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
44	6%	17%	35%	55%	73%	85%	93%	<b>97%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
46	5%	15%	31%	51%	69%	83%	92%	<b>96%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
48	4%	13%	28%	47%	65%	80%	90%	<b>95%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
50	3%	11%	25%	43%	62%	77%	88%	94%	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
52	3%	10%	22%	40%	58%	74%	86%	93%	<b>97%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
54	2%	8%	20%	36%	54%	71%	83%	91%	<b>96%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
56	2%	7%	18%	33%	51%	67%	81%	90%	<b>95%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
58	2%	6%	16%	30%	47%	64%	78%	88%	94%	<b>97%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
60	1%	5%	14%	27%	44%	61%	75%	86%	93%	<b>97%</b>	<b>99%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
62	1%	5%	12%	24%	40%	57%	72%	84%	91%	<b>96%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
64	1%	4%	11%	22%	37%	54%	69%	81%	90%	<b>95%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
66	1%	3%	9%	20%	34%	51%	66%	79%	88%	94%	<b>97%</b>	<b>99%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
68	1%	3%	8%	18%	31%	47%	63%	76%	86%	93%	<b>96%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
70	1%	2%	7%	16%	29%	44%	60%	74%	84%	91%	<b>96%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
72	0%	2%	6%	14%	26%	41%	57%	71%	82%	90%	<b>95%</b>	<b>97%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
74	0%	2%	5%	13%	24%	38%	54%	68%	80%	88%	94%	<b>97%</b>	<b>99%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
76	0%	1%	5%	11%	22%	35%	51%	65%	77%	86%	93%	<b>96%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
78	0%	1%	4%	10%	20%	33%	48%	62%	75%	85%	91%	<b>95%</b>	<b>98%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
80	0%	1%	4%	9%	18%	30%	45%	59%	72%	83%	90%	<b>95%</b>	<b>97%</b>	<b>99%</b>	<b>99%</b>	<b>100%</b>	<b>100%</b>

Note: Bold entries indicate that there is at least 95% confidence that at least 10% of the possible samples exceed the evaluation level.

## Methods Used to Summarize Results

Methods used to summarize the results in this report encompass both tabular and graphical formats. Individual summary sheets for each station provide details on station location, stream classification, along with specifics on what parameters were measured, the number of samples taken (i.e. sample size), the number of results below reporting levels, the number of results exceeding a water quality standard or evaluation level, statistical confidence that 10% of results exceeded the evaluation level, and a general overview of the distribution of the results using percentiles. These station summary sheets provide the greatest details on a station-by-station basis. They are included as **Appendix A** to this report.

## Use Support Assessment Considerations

The freshwater dissolved oxygen concentrations of 5.0 and 4.0 mg/L are presented as evaluation levels. Instantaneous concentrations of 4.0 mg/L or less (5.0 mg/L in salt water) are in violation of the standard unless caused by natural (e.g. swampy) conditions. The 5.0 mg/L evaluation level is based upon a freshwater standard which specifies "not less than a daily average of 5.0" (15A NCAC 2B.0200).

Specific information on water quality standards and action levels can be found in 15A NCAC 2B.0200 (August 1, 2004).

## PARAMETERS

### Dissolved Oxygen

Dissolved oxygen is one of the most important of all the chemical measurements. Dissolved oxygen provides valuable information about the ability of the water to support aquatic life and the capacity of water to assimilate point and nonpoint discharges. Water quality standards for dissolved oxygen vary depending on the classification of the body of water [see, for example: 15A NCAC 02B.0211(1)(b) and 15A NCAC 02B.0220 (1)(b)] but generally results less than 4.0 mg/L can be problematic. Consistent patterns of low concentrations of dissolved oxygen can be subject to intense management review and corrective actions, although patterns of low dissolved oxygen can occur naturally in and near swamp waters.

### pH

The pH of natural waters can vary throughout the state. Low values ( $\ll$  7.0 s.u.) can be found in waters rich in dissolved organic matter, such as swamp lands, whereas high values ( $\gg$  7.0 s.u.) may be found during algal blooms. Point source dischargers can also influence the pH of a stream. The measurement of pH is relatively easy; however the accuracy of field measurements is limited by the abilities of the field equipment, which is generally accurate to within 0.2 S.U. This is due, in part, because the scale for measuring pH is logarithmic (i.e. a pH of 8 is ten times less concentrated in hydrogen ions than a pH of 7). The water quality standards for pH in freshwaters consider values less than 6.0 s.u. or greater than 9.0 s.u. to warrant attention.

### Conductivity

In this report, conductivity is synonymous with specific conductance. It is reported in micromhos per centimeter ( $\mu$ mhos/cm) at 25°C. Conductivity is a measure of the ability of water to conduct an electric current. The presence of ions and temperature are major factors in the ability of water to conduct a current. Clean freshwater has a low conductivity, whereas high conductivities may indicate polluted water or saline conditions. Measurements reported are corrected for temperature, thus the range of values reported over a period of time indicate the relative presence of ions in water. Conductivities in US fresh waters commonly vary between 50 to 1,500  $\mu$ mhos/cm (APHA 1998). North Carolina freshwater streams have a natural conductance range of 17-65  $\mu$ mhos/cm, however (USGS 1992).

Conductivity can be used to evaluate variations in dissolved mineral concentrations (ions) among sites with varying degrees of impact resulting from point source discharges. Generally, impacted sites show elevated and widely ranging values for conductivity. Water bodies that contain saltwater will also have high conductivities.

Therefore those wishing to use conductivity as an indicator for problems must first account for salinity. There are no saltwaters in the Yadkin-Pee Dee River Basin.

### **Turbidity**

Turbidity data may denote episodic high values on particular dates or within narrow time periods. These can often be the result of intense or sustained rainfall events; however elevated values can occur at other times. In coastal areas, tidal surges can also disturb shallow estuarine sediments and naturally increase turbidity. The are no coastal areas in the Yadkin-Pee Dee River Basin.

### **Metals**

A number of metals are essential micronutrients for the support of aquatic life. However, there are threshold concentrations over which metals can be toxic. Currently the DWQ monitors total (not dissolved) concentrations for aluminum, arsenic, cadmium, chromium, copper, iron, lead, mercury, manganese (Water Supply waters only), nickel, and zinc. Aluminum and iron are commonly found in soils.

### **Nutrients**

Compounds of nitrogen and phosphorus are major components of living organisms and thus are essential to maintain life. These compounds are collectively referred to as “nutrients.” Nitrogen compounds include ammonia-nitrogen ( $\text{NH}_3\text{-N}$ ), total Kjeldahl nitrogen (TKN) and nitrite+nitrate nitrogen ( $\text{NO}_2+\text{NO}_3\text{-N}$ ). Phosphorus is measured as total phosphorus. When nutrients are introduced to an aquatic ecosystem from municipal and industrial treatment processes, or runoff from urban or agricultural land, the excessive growth of algae (algal blooms) and other plants may be accelerated.

In addition to the possibility of causing algal blooms, ammonia-nitrogen may combine with high pH water to form  $\text{NH}_4\text{OH}$ , a form toxic to fish and other aquatic organisms.

### **Fecal Coliform Bacteria**

Concentrations of fecal coliform bacteria can vary greatly. The descriptive statistics used to evaluate fecal coliform bacteria data include the geometric mean and the median depending on the classification of the waterbody. For all sites in the Yadkin-Pee Dee River Basin, the standard specified in Administrative Code 15A NCAC 02B.0211 (3)(e) (May 1, 2007) is applicable:

*"Organisms of the coliform group: fecal coliforms shall not exceed a geometric mean of 200/100ml (MF count) based upon at least five consecutive samples examined during any 30 day period, nor exceed 400/100ml in more than 20 percent of the samples examined during such period; violations of the fecal coliform standard are expected during rainfall events and, in some cases, this violation is expected to be caused by uncontrollable nonpoint source pollution; all coliform concentrations are to be analyzed using the membrane filter technique unless high turbidity or other adverse conditions necessitate the tube dilution method; in case of controversy over results, the MPN 5-tube dilution technique shall be used as the reference method."*

The application of the standard is often hindered because the monthly (*circa* 30 day) sampling frequency employed for water quality monitoring usually does not provide more than one sample per 30-day period. However, water quality problems can be screened using monthly sampling.

Sites where the geometric mean was greater than 200 colonies/100ml, or where greater than 20 percent of the results exceed 400 colonies/100ml are indicated on the respective station summary sheets.

**Table 6. Summary of Evaluation Level Exceedances (1 of 3)**

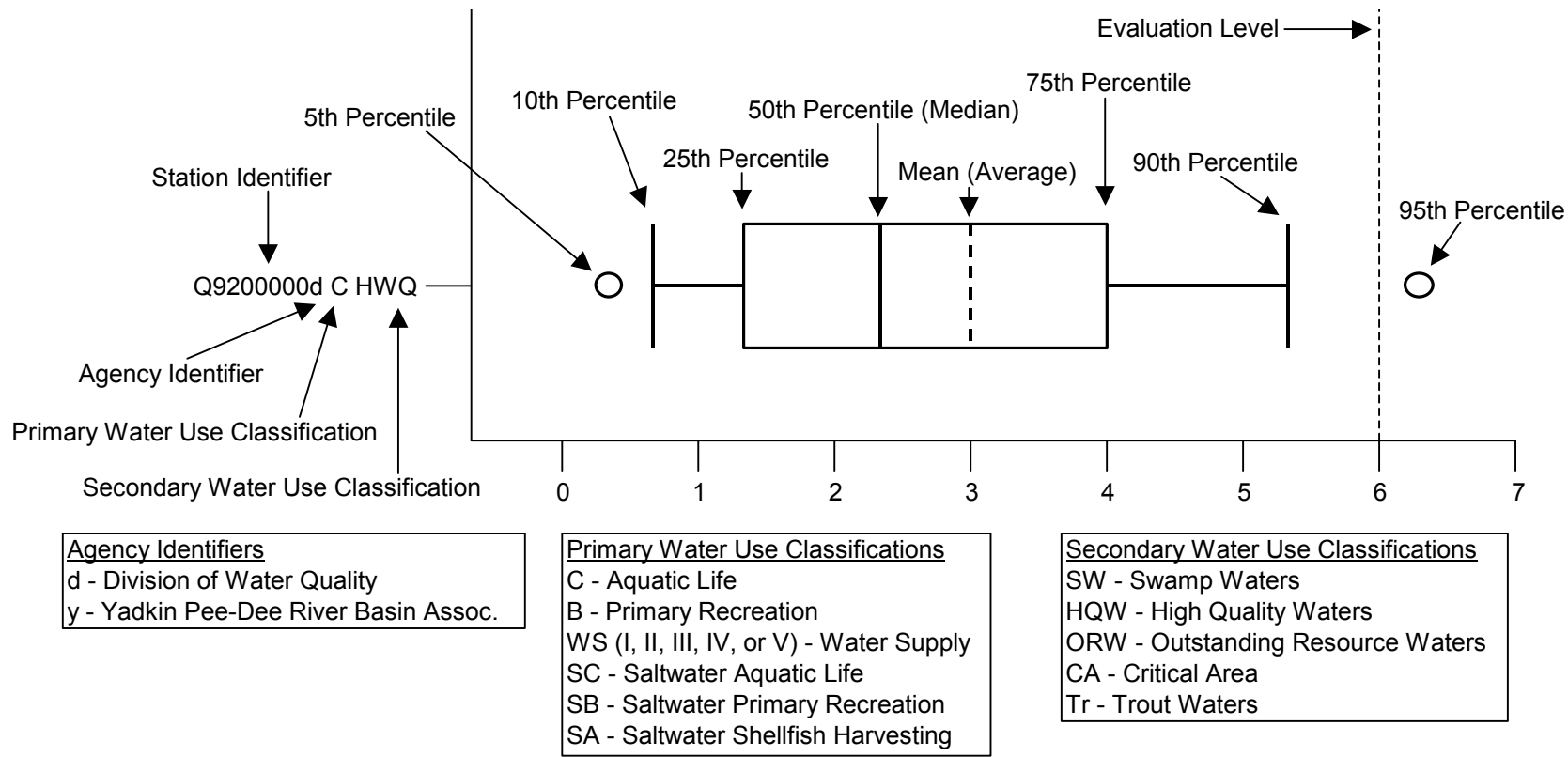
Agency	Station	Location	Class	Water Temperature (>29)	Water Temperature (>32)	Dissolved Oxygen (<4)	pH (<6)	pH (>9)	Turbidity (>25)	Turbidity (>50)	Chlorophyll a (>40)	Fecal Coliform (>400)	Total Arsenic (>10)	Total Cadmium (>2)	Total Chromium (>50)	Total Copper (>7)	Total Iron (>1000)	Total Lead (>25)	Total Manganese (>200)	Total Mercury (>0.012)	Total Nickel (>25)	Total Zinc (>50)
<b>Hydrologic Unit Code 3040101</b>																						
NCAMBNT	Q0220000	Elk Crk At Nc 268 At Elkville	B ORW	0.0%		0.0%	0.0%	0.0%	1.7%			14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%		0.0%
YPRBBA	Q0360000	Reddies Riv At Sr 1517 At N Wilkesboro	WS II HQW	0.0%		0.0%	0.0%	0.0%	1.7%			8.3%										
NCAMBNT	Q0450000	Yadkin Riv At Us 421 Bus At N Wilkesboro	C	0.0%		0.0%	0.0%	0.0%	5.1%			5.0%										
YPRBBA	Q0450000	Yadkin Riv At Us 421 Bus At N Wilkesboro	C	0.0%		0.0%	0.0%	0.0%	3.3%			5.0%	0.0%	0.0%	0.0%	13.8%	20.7%	0.0%		0.0%		0.0%
NCAMBNT	Q0660000	Roaring Riv At Sr 1990 Nr Roaring River	B	0.0%		0.0%	0.0%	0.0%	6.5%			13.2%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%		0.0%		0.0%
NCAMBNT	Q0720000	Yadkin Riv At Sr 2303 At Ronda	WS-IV	0.0%		0.0%	0.0%	0.0%	1.7%			17.9%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	5.0%
YPRBBA	Q0720000	Yadkin Riv At Sr 2303 At Ronda	WS-IV	0.0%		0.0%	0.0%	0.0%	3.3%			0.0%	0.0%	0.0%	0.0%	10.3%	44.8%	0.0%	0.0%	0.0%	0.0%	0.0%
NCAMBNT	Q0810000	Yadkin Riv At Us 21 Bus At Elkin	C	0.0%		0.0%	0.0%	0.0%	5.3%			12.5%	0.0%	0.0%	0.0%	0.0%	15.0%	0.0%		0.0%		0.0%
YPRBBA	Q1065000	Mitchell Riv At Sr 1001 Nr North Elkin	C	0.0%		0.0%	0.0%	4.7%	3.3%			8.3%	0.0%	0.0%	0.0%	0.0%	22.2%	0.0%		0.0%		0.0%
YPRBBA	Q1215000	Fisher Riv At Nc 268 Nr Fairview	C	0.0%		0.0%	0.0%	0.0%	7.1%			0.0%										
YPRBBA	Q1270000	Cody Crk At Nc 268 Nr Fairview	C	0.0%		0.0%	0.0%	0.0%	12.5%			15.6%										
YPRBBA	Q1350000	Yadkin Riv At Sr 1003 Nr Siloam	C	0.0%		0.0%	0.0%	0.0%	6.7%			5.0%	0.0%	0.0%	0.0%	6.4%	48.9%	0.0%		0.0%		2.1%
YPRBBA	Q1500000	Ararat Riv At Us 52 Nr Mt Airy	C	0.0%		0.0%	0.0%	0.0%	6.7%			6.7%										
YPRBBA	Q1550000	Ararat Riv At Wwtp Rd At Mt Airy Wwtp	C	0.0%		0.0%	0.0%	0.0%	8.3%			8.3%										
YPRBBA	Q1725000	Ararat Riv At Sr 2119 Nr Mt Airy	C	0.0%		0.0%	0.0%	0.0%	6.7%			8.3%										
NCAMBNT	Q1780000	Ararat Riv At Sr 2019 At Ararat	C	0.0%		0.0%	0.0%	0.0%	15.7%			21.8%	0.0%	0.0%	0.0%	20.0%	40.0%	0.0%		0.0%		5.0%
YPRBBA	Q1935000	Ararat Riv At Sr 2044 Nr Pilot Mountain	C	0.0%		0.0%	0.0%	0.0%	5.0%			10.0%										
NCAMBNT	Q1950000	Ararat Riv At Sr 2080 Nr Siloam	WS-IV	1.7%		0.0%	0.0%	0.0%	11.7%			19.3%	0.0%	0.0%	0.0%	10.0%	45.0%	0.0%	5.0%	0.0%	0.0%	0.0%
NCAMBNT	Q2040000	Yadkin Riv At Sr 1605 At Enon	WS-IV	2.7%		0.0%	0.0%	1.3%	14.7%			14.8%	0.0%	0.0%	0.0%	5.3%	57.9%	0.0%	5.3%	0.0%	0.0%	5.3%
YPRBBA	Q2090000	N Deep Crk At Sr 1605 Nr Yadkinville	C	0.0%		0.0%	0.0%	0.0%	11.7%			15.0%										
YPRBBA	Q2120000	N Deep Crk At Sr 1510 Nr Yadkinville	C	0.0%		0.0%	0.0%	0.0%	11.7%			10.0%										
YPRBBA	Q2135000	S Deep Crk At Sr 1733 Nr Shacktown	WS-IV	0.0%		0.0%	0.0%	0.0%	13.3%			10.0%										
YPRBBA	Q2180000	Yadkin Riv At Us 158 At Clemmons	WS-IV		0.0%	0.0%	0.0%	0.0%	13.3%			6.7%	0.0%	0.0%	0.0%	8.5%	61.7%	0.0%	0.0%	0.0%	0.0%	2.1%
YPRBBA	Q2291000	Muddy Crk At I 40 Nr Clemmons	C		0.0%	0.0%	0.0%	0.0%	6.7%			3.3%	0.0%	0.0%	0.0%	4.3%	59.6%	0.0%		2.1%		0.0%
YPRBBA	Q2479455	Salem Crk At Sr 2740 Reynolds Park Rd Nr Winston Salem	C	0.0%		0.0%	0.0%	0.0%	1.7%			5.0%	0.0%	0.0%	0.0%	0.0%	61.7%	0.0%		0.0%		0.0%
NCAMBNT	Q2510000	Salem Crk At Elledge Wtp At Winston Salem	C	0.0%		0.0%	0.0%	0.0%	7.0%			50.0%	0.0%	0.0%	0.0%	21.1%	26.3%	0.0%		0.0%		15.8%
YPRBBA	Q2540000	Salem Crk At Sr 1120 Clemmons Rd At Winston Salem	C	0.0%		0.0%	0.0%	0.0%	3.3%			8.3%										
YPRBBA	Q2570000	Salem Crk At Sr 2991 Fraternity Church Rd Nr Winston Salem	C	0.0%		0.0%	0.0%	0.0%	3.4%			8.5%	0.0%	0.0%	0.0%	21.4%	28.6%	3.6%		0.0%		25.0%
NCAMBNT	Q2600000	Muddy Crk At Sr 2995 Nr Muddy Creek	C		0.0%	0.0%	0.0%	0.0%	5.3%			42.3%	0.0%	0.0%	0.0%	21.1%	36.8%	5.3%		0.0%		47.4%
YPRBBA	Q2720000	Muddy Crk At Sr 1485 Nr Winston Salem	C		0.0%	0.0%	0.0%	0.0%	8.3%			3.3%										
NCAMBNT	Q2810000	Yadkin Riv At Us 64 At Yadkin College	WS-IV CA		0.0%	0.0%	0.0%	0.0%	15.6%			25.9%	0.0%	0.0%	0.0%	5.0%	50.0%	0.0%	0.0%	0.0%	0.0%	10.0%
YPRBBA	Q2810000	Yadkin Riv At Us 64 At Yadkin College	WS-IV CA		0.0%	0.0%	0.0%	0.0%	8.6%			6.9%	0.0%	0.0%	0.0%	8.9%	75.6%	0.0%	15.6%	0.0%	0.0%	2.2%
YPRBBA	Q3105000	Dutchman Crk At Us 64 Nr Mocksville	C		0.0%	0.0%	0.0%	0.0%	8.3%			11.7%										
<b>Hydrologic Unit Code 3040102</b>																						
NCAMBNT	Q3460000	S Yadkin Riv At Sr 1159 Nr Mocksville	WS-IV		0.0%	0.0%	0.0%	0.0%	10.5%		0.0%	36.2%	0.0%	0.0%	0.0%	0.0%	73.7%	0.0%	5.3%	0.0%	0.0%	0.0%
NCAMBNT	Q3484000	Hunting Crk At Sr 2115 Nr Harmony	WS-III		0.0%	0.0%	8.5%	0.0%	16.9%			20.3%	0.0%	0.0%	0.0%	5.3%	31.6%	0.0%	5.3%	0.0%	0.0%	0.0%
YPRBBA	Q3555000	Bear Crk At Sr 1116 Junction Rd Nr Cooleemee	WS-IV		0.0%	0.0%	0.0%	0.0%	6.7%			6.7%	0.0%	0.0%	0.0%	17.2%	89.7%	0.0%	6.9%	0.0%	0.0%	0.0%
YPRBBA	Q3720000	Fourth Crk At Sr 2316 Bell Farm Rd Nr Statesville	C		0.0%	0.0%	0.0%	0.0%	5.0%			5.0%										
NCAMBNT	Q3735000	Fourth Crk At Sr 2308 Nr Elmwood	C		0.0%	0.0%	1.7%	0.0%	18.6%			31.0%	0.0%	5.0%	5.0%	15.0%	55.0%	0.0%		0.0%		10.0%
YPRBBA	Q3735000	Fourth Crk At Sr 2308 Nr Elmwood	C		0.0%	0.0%	0.0%	0.0%	6.7%			10.0%										
YPRBBA	Q3900000	Third Crk At Sr 2342 Amity Hill Rd Nr Statesville	C		0.0%	0.0%	0.0%	0.0%	11.7%			10.0%										
YPRBBA	Q3932000	Third Crk At Sr 2359 Bethesda Rd Nr Statesville	C		0.0%	0.0%	0.0%	0.0%	11.7%			5.0%										
NCAMBNT	Q3934500	Third Crk At Sr 1970 Nr Woodleaf	C		0.0%	0.0%	0.0%	0.0%	19.0%			36.8%	0.0%	0.0%	0.0%	20.0%	75.0%	5.0%		0.0%		5.0%
YPRBBA	Q3970000	S Yadkin Riv At Us 601 Nr Cooleemee	C		0.0%	0.0%	0.0%	0.0%	16.7%			10.0%	0.0%	0.0%	0.0%	8.5%	85.1%	0.0%		0.0%		4.3%
YPRBBA	Q4030000	Second Crk At Sr 1526 Nr Salisbury	C		0.0%	0.0%	0.0%	0.0%	6.7%			10.0%	0.0%	0.0%	0.0%	6.9%	65.5%	0.0%		0.0%		0.0%
NCAMBNT	Q4120000	Second Crk At Us 70 Nr Barber	C		0.0%	1.7%	0.0%	0.0%	17.2%			35.1%	0.0%	0.0%	0.0%	15.0%	55.0%	5.0%		0.0%		5.0%
YPRBBA	Q4165000	Second Crk At Us 601 Nr Salisbury	C		0.0%	0.0%	0.0%	0.0%	6.8%			10.0%	0.0%	0.0%	0.0%	10.3%	86.2%	0.0%		0.0%		0.0%

**Table 6 (Continued). Summary of Evaluation Level Exceedances (2 of 3)**

Agency	Station	Location	Class	Water Temperature (>29)	Water Temperature (>32)	Dissolved Oxygen (<4)	pH (<6)	pH (>9)	Turbidity (>25)	Turbidity (>50)	Chlorophyll a (>40)	Fecal Coliform (>400)	Total Arsenic (>10)	Total Cadmium (>2)	Total Chromium (>50)	Total Copper (>7)	Total Iron (>1000)	Total Lead (>25)	Total Manganese (>200)	Total Mercury (>0.012)	Total Nickel (>25)	Total Zinc (>50)
<b>Hydrologic Unit Code 3040103</b>																						
NCAMBNT	Q4540000	Grants Crk At Sr 1915 Nr Salisbury	C		0.0%	6.7%	0.0%	0.0%		20.0%		40.0%	0.0%	0.0%	0.0%	40.0%	60.0%	0.0%		0.0%		40.0%
YPRDBA	Q4540000	Grants Crk At Sr 1915 Nr Salisbury	C		0.0%	0.0%	0.0%	0.0%		5.0%		8.3%										
NCAMBNT	Q4600000	Grants Crk Below Salisbury And Spencer Wwtp	C		0.0%	0.0%	0.0%	0.0%		9.5%		22.0%	0.0%	0.0%	0.0%	33.3%	60.0%	6.7%		0.0%		6.7%
YPRDBA	Q4600000	Grants Crk Below Salisbury And Spencer Wwtp	C		0.0%	0.0%	0.0%	0.0%		16.7%	0.0%	11.1%										
NCAMBNT	Q4660000	Yadkin Riv At Nc 150 Nr Spencer	WS-V		0.0%	0.0%	6.8%	0.0%		25.9%		26.8%	0.0%	0.0%	0.0%	5.0%	50.0%	0.0%	5.0%	5.0%	0.0%	5.0%
YPRDBA	Q4660000	Yadkin Riv At Nc 150 Nr Spencer	WS-V		0.0%	0.0%	0.0%	0.0%		13.3%	4.0%	5.0%										
YPRDBA	Q5135000	Swearing Crk At Sr 1272 Jersey Church Rd Nr Linwood	C		0.0%	0.0%	0.0%	0.0%		5.0%		16.9%										
YPRDBA	Q5210000	Town Crk At Sr 1915 Andrews St At Spencer	C		0.0%	0.0%	0.0%	0.0%		3.6%		0.0%										
YPRDBA	Q5240000	Town Crk At I 85 Nr Spencer	C		0.0%	0.0%	0.0%	0.0%		6.9%		10.3%										
NCAMBNT	Q5360000	Town Crk At Sr 2168 Nr Duke	C		1.7%	3.4%	1.7%	3.4%	27.6%		31.4%	10.7%	0.0%	0.0%	0.0%	10.0%	45.0%	0.0%		0.0%		5.0%
YPRDBA	Q5750000	Rich Fork Crk At Sr 1755 Nr High Point	C		0.0%	0.0%	0.0%	0.0%		5.0%		8.3%										
NCAMBNT	Q5780000	Rich Fork At Sr 1800 Nr Thomasville	C		0.0%	0.0%	0.0%	0.0%		6.8%		43.1%	0.0%	0.0%	0.0%	10.0%	52.6%	0.0%		0.0%		5.0%
YPRDBA	Q5785000	Rich Fork Crk At Sr 1792 Nr High Point	C		0.0%	7.1%	0.0%	0.0%		3.3%		8.3%										
YPRDBA	Q5790000	Rich Fork Crk At Sr 2123 Nr High Point	C		0.0%	0.0%	0.0%	0.0%		3.3%		8.3%										
YPRDBA	Q5860000	Hamby Crk At Sr 2775 Old Emanuel Church Rd Nr Thomasville	C		0.0%	0.0%	0.0%	0.0%		3.6%		0.0%										
NCAMBNT	Q5906000	Hamby Crk At Sr 2790 Nr Holly Grove	C		0.0%	0.0%	0.0%	0.0%		5.1%		24.1%	0.0%	0.0%	5.0%	55.0%	15.0%	5.0%		0.0%		5.0%
NCAMBNT	Q5930000	Abbotts Crk At Sr 1243 At Lexington	C		0.0%	0.0%	0.0%	0.0%		11.8%		24.6%	0.0%	0.0%	0.0%	15.0%	65.0%	0.0%		0.0%		5.0%
YPRDBA	Q5940000	Abbotts Crk At I 85 Nr Lexington	C		0.0%	0.0%	0.0%	0.0%		5.0%		8.3%										
NCAMBNT	Q5970000	Abbotts Crk At Nc 47 Nr Cotton Grove	WS-V&B		1.7%	0.0%	0.0%	0.0%		8.6%	11.1%	14.3%	0.0%	0.0%	0.0%	10.0%	85.0%	0.0%	31.6%	0.0%	0.0%	5.0%
YPRDBA	Q5970000	Abbotts Crk At Nc 47 Nr Cotton Grove	WS-V&B		0.0%	1.0%	0.0%	0.0%		5.0%	9.5%	15.0%	0.0%	0.0%	0.0%	6.9%	69.0%	0.0%	41.4%	0.0%	0.0%	0.0%
NCAMBNT	Q6120000	Yadkin Riv At Sr 1002 At High Rock	WS-IV&B CA		0.0%	6.9%	3.4%	0.0%		7.0%		3.7%	0.0%	0.0%	0.0%	0.0%	31.6%	0.0%	0.0%	0.0%	0.0%	0.0%
YPRDBA	Q6120000	Yadkin Riv At Sr 1002 At High Rock	WS-IV&B CA		0.0%	0.0%	0.0%	0.0%		3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.7%	0.0%	0.0%	0.0%	0.0%	0.0%
YPRDBA	Q6140000	Lick Crk At Sr 1002 Nr Healing Springs	WS-IV		0.0%	0.0%	0.0%	0.0%		2.1%		8.3%										
YPRDBA	Q6180000	Ut To Lick Crk At Sr 2505 Nr Denton	WS-IV		0.0%	0.0%	0.0%	0.0%		0.0%		0.0%										
YPRDBA	Q6360000	Yadkin Riv At Nc 8 And Nc 49 Nr Richfield	WS-IV&B CA		0.0%	0.0%	0.0%	0.0%		3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	18.8%	0.0%	0.0%	0.0%	0.0%	0.0%
YPRDBA	Q6705000	Uwharrie Riv At Nc 49 Nr Farmer	C		0.0%	0.0%	0.0%	0.0%		5.0%		6.7%										
NCAMBNT	Q6810000	Uwharrie Riv At Nc 109 Nr Uwharrie	WS-IV&B		0.0%	2.1%	0.0%	0.0%		4.2%		4.4%	0.0%	0.0%	0.0%	6.3%	18.8%	0.0%	0.0%	6.3%	0.0%	0.0%
<b>Hydrologic Unit Code 3040104</b>																						
YPRDBA	Q6950000	Little Mountain Crk At Nc 1798 Nr Badin	WS-IV		0.0%	0.0%	0.0%	0.0%		5.5%		3.6%										
YPRDBA	Q6960000	Pee Dee Riv At Boat Ramp At Morrow Mountain State Park	WS-IV&B CA		0.0%	0.0%	0.0%	0.0%		1.7%	0.0%	5.0%										
YPRDBA	Q7030000	Pee Dee Riv At Nc 24 Nc 27 And Nc 73 Nr Albemarle	WS-IV&B CA		0.0%	0.0%	0.0%	0.0%		3.3%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%		0.0%	5.6%	0.0%
NCAMBNT	Q7150000	Pee Dee Riv At Nc 731 Nr Shankle	WS-V&B		0.0%	6.9%	5.2%	0.0%		1.7%		0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	10.0%	0.0%	0.0%	5.0%
YPRDBA	Q7210000	Clarks Crk At Sr 1187 Nr Mount Gilead	C		0.0%	0.0%	0.0%	0.0%		5.0%		6.7%										
NCAMBNT	Q9155000	Brown Crk At Sr 1627 Nr Pinkston	C		0.0%	20.4%	2.1%	0.0%		6.1%		12.8%	0.0%	0.0%	0.0%	12.5%	87.5%	0.0%		0.0%		0.0%
NCAMBNT	Q9160000	Pee Dee Riv At Nc 109 Nr Mangum	WS-V&B		0.0%	4.1%	2.1%	0.0%		14.3%		17.0%	0.0%	0.0%	0.0%	12.5%	31.3%	0.0%	6.3%	0.0%	0.0%	0.0%
NCAMBNT	Q9200000	Little Riv At Sr 1340 Nr Star	C HQW		0.0%	0.0%	0.0%	0.0%		0.0%		11.1%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%		0.0%		0.0%
YPRDBA	Q9320000	Little Riv At Sr 1148 Nr Ellerbe	WS-IV		0.0%	0.0%	0.0%	0.0%		5.0%		1.7%										
YPRDBA	Q9340000	Toms Branch At Sr 1310 Nr Ellerbe	C		0.0%	0.0%	0.0%	0.0%		6.9%		8.6%										

**Table 6. (Continued) Summary of Evaluation Level Exceedances (3 of 3)**

Agency	Station	Location	Class	Water Temperature (>29)	Water Temperature (>32)	Dissolved Oxygen (<4)	pH (<6)	pH (>9)	Turbidity (>25)	Turbidity (>50)	Chlorophyll a (>40)	Fecal Coliform (>400)	Total Arsenic (>10)	Total Cadmium (>2)	Total Chromium (>50)	Total Copper (>7)	Total Iron (>1000)	Total Lead (>25)	Total Manganese (>200)	Total Mercury (>0.012)	Total Nickel (>25)	Total Zinc (>50)
<b>Hydrologic Unit Code 3040105</b>																						
NCAMBNT	Q7330000	Rocky Riv At Sr 2420 Nr Davidson	C		0.0%	0.0%	0.0%	0.0%		11.9%		45.8%	0.0%	0.0%	0.0%	10.0%	50.0%	0.0%		0.0%		0.0%
YPRBA	Q7330000	Rocky Riv At Sr 2420 Nr Davidson	C		0.0%	0.0%	0.0%	0.0%		11.7%		8.3%										
YPRBA	Q7450000	Rocky Riv At Us 29 Nr Harrisburg	C		0.0%	0.0%	0.0%	0.0%		11.7%		6.7%										
YPRBA	Q7550000	Mallard Crk At Pavillion Rd Nr Harrisburg	C		0.0%	0.0%	0.0%	0.0%		13.3%		3.3%	0.0%	0.0%	0.0%	20.7%	62.1%	0.0%		0.0%		3.4%
YPRBA	Q7570000	Mallard Crk At Sr 1300 Nr Harrisburg	C		0.0%	0.0%	0.0%	0.0%		13.3%		6.7%	0.0%	3.4%	0.0%	24.1%	34.5%	0.0%		0.0%		3.4%
YPRBA	Q7600000	Rocky Riv At Sr 1304 Nr Harrisburg	C		0.0%	0.0%	0.0%	0.0%		18.3%		8.3%	0.0%	0.0%	0.0%	23.4%	70.2%	0.0%		0.0%		0.0%
YPRBA	Q7700000	Coddle Crk At Sr 1304 Roberta Rd Nr Roberta Mill	C		0.0%	0.0%	0.0%	0.0%		16.7%		2.4%										
YPRBA	Q7780000	Rocky Riv At Sr 1132 Nr Harrisburg	C		0.0%	0.0%	0.0%	0.0%		15.0%		5.0%										
NCAMBNT	Q8090000	Irish Buffalo Crk At Sr 1132 Nr Faggarts	C		0.0%	0.0%	0.0%	1.7%		8.5%		28.6%	0.0%	0.0%	0.0%	21.1%	31.6%	0.0%		0.0%		0.0%
YPRBA	Q8200000	Cold Water Crk At Sr 1132 Miami Church Rd Nr Concord	C		0.0%	0.0%	0.0%	0.0%		11.7%		8.3%										
NCAMBNT	Q8210000	Rocky Riv At Us 601 Nr Concord	C		0.0%	0.0%	2.3%	0.0%		25.0%		34.9%	0.0%	0.0%	0.0%	40.0%	53.3%	0.0%		0.0%		6.7%
YPRBA	Q8210000	Rocky Riv At Us 601 Nr Concord	C		0.0%	0.0%	0.0%	0.0%		13.3%		1.7%										
NCAMBNT	Q8220000	Rocky Riv At Sr 1006 Nr Concord	C		0.0%	0.0%	0.0%	0.0%		20.0%		26.7%	0.0%	0.0%	0.0%	20.0%	60.0%	0.0%		0.0%		20.0%
YPRBA	Q8341000	Clear Crk At Sr 1118 Ben Black Rd Nr Brief	C		0.0%	0.0%	0.0%	0.0%		11.1%		7.4%										
YPRBA	Q8342000	Clear Crk At Us 601 Nr Brief	C		0.0%	0.0%	0.0%	0.0%		13.3%		6.7%										
YPRBA	Q8355000	Rocky Riv At Sr 1114 Nr Midland	C		0.0%	0.0%	0.0%	0.0%		13.3%		6.7%	0.0%	0.0%	0.0%	20.7%	51.7%	0.0%		0.0%		6.9%
YPRBA	Q8359500	Goose Crk In Hunley Creek Subdivision	C		0.0%	0.0%	0.0%	0.0%		10.0%		8.3%										
NCAMBNT	Q8360000	Goose Crk At Sr 1524 Nr Mint Hill	C		0.0%	6.7%	1.7%	0.0%		6.7%		55.9%	0.0%	0.0%	0.0%	9.1%	18.2%	0.0%		0.0%		4.5%
YPRBA	Q8360000	Goose Crk At Sr 1524 Nr Mint Hill	C		0.0%	2.0%	0.0%	0.0%		13.3%		15.0%										
YPRBA	Q8385000	Rocky Riv At Sr 1606 Nr Monroe	C		0.0%	0.0%	0.0%	0.0%		15.0%		3.3%	0.0%	0.0%	3.4%	17.2%	55.2%	0.0%		0.0%		10.3%
YPRBA	Q8386000	N Fork Crooked Crk At Sr 1520 Nr Monroe	C		0.0%	5.1%	0.0%	0.0%		13.3%		28.3%										
YPRBA	Q8386200	N Fork Crooked Crk At Sr 1514 Nr Monroe	C		0.0%	5.1%	0.0%	0.0%		11.7%		26.7%										
YPRBA	Q8388000	Crooked Crk At Nc 218 Nr Monroe	C		0.0%	0.0%	0.0%	0.0%		8.3%		8.3%										
YPRBA	Q8388900	Crooked Crk At Sr 1601 Nr Monroe	C		0.0%	0.0%	0.0%	0.0%		8.3%		11.7%										
YPRBA	Q8715000	Long Crk At Sr 1968 Nr Oakboro	C		0.0%	1.2%	0.0%	0.0%		1.7%		15.0%										
NCAMBNT	Q8720000	Long Crk At Sr 1917 Nr Rocky River Springs	C		0.0%	0.0%	1.7%	0.0%		5.2%	0.0%	17.9%	0.0%	0.0%	0.0%	65.0%	5.0%	0.0%		0.0%		0.0%
YPRBA	Q8720000	Long Crk At Sr 1917 Nr Rocky River Springs	C		0.0%	2.4%	0.0%	0.0%		1.7%		18.3%										
YPRBA	Q8800000	Richardson Crk At Sr 1751 Walkup Ave At Monroe	C		0.0%	0.0%	0.0%	0.0%		3.3%		5.1%										
YPRBA	Q8820000	Richardson Crk At Sr 1006 Nr Monroe	C		0.0%	0.0%	0.0%	0.0%		6.7%		3.3%										
YPRBA	Q8850000	Richardson Crk At Sr 1630 Nr Monroe	C		0.0%	0.0%	0.0%	0.0%		11.1%		11.1%										
NCAMBNT	Q8917000	Richardson Crk At Sr 1649 Nr Fairfield	C		0.0%	0.0%	0.0%	0.0%		5.3%		16.4%	0.0%	0.0%	0.0%	30.0%	5.0%	0.0%		0.0%		0.0%
YPRBA	Q9021300	Lanes Crk At Sr 1005 Landsford Rd Nr Marshville	WS-V		0.0%	33.3%	0.0%	0.0%		66.7%		0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	0.0%	0.0%	100.0%
YPRBA	Q9021305	Barkers Branch At Sr 1005 Landsford Rd Nr Marshville	WS-V		0.0%	0.0%	0.0%	0.0%		5.6%		33.3%	0.0%	0.0%	0.0%	22.2%	38.9%	0.0%	50.0%	0.0%	0.0%	0.0%
YPRBA	Q9021510	Beaverdam Crk At Sr 1005 Nr Marshville	WS-V		0.0%	76.0%	0.0%	0.0%		0.0%		33.3%	4.0%	0.0%	0.0%	16.0%	52.0%	0.0%	42.9%	0.0%	0.0%	0.0%
NCAMBNT	Q9120000	Rocky Riv At Sr 1935 Nr Norwood	C		0.0%	0.0%	0.0%	1.7%		22.4%		23.2%	0.0%	0.0%	0.0%	23.8%	38.1%	0.0%		0.0%		0.0%
<b>Hydrologic Unit Code 3040201</b>																						
NCAMBNT	Q9400000	Pee Dee Riv At Us 74 Nr Rockingham	C		0.0%	10.2%	0.0%	0.0%		6.1%		10.6%	0.0%	0.0%	0.0%	6.3%	6.3%	0.0%		0.0%		0.0%
YPRBA	Q9400000	Pee Dee Riv At Us 74 Nr Rockingham	C		0.0%	0.0%	0.0%	0.0%		5.0%		3.3%	0.0%	0.0%	0.0%	6.4%	63.8%	0.0%		0.0%		0.0%
NCAMBNT	Q9660000	Hitchcock Crk At Sr 1109 At Cordova	C		0.0%	2.0%	16.7%	0.0%		2.0%		14.9%	0.0%	0.0%	0.0%	6.3%	68.8%	0.0%		0.0%		0.0%
NCAMBNT	Q9777000	Jones Crk At Nc 145 Nr Pee Dee	C		0.0%	0.0%	2.1%	0.0%		4.1%		14.9%	0.0%	0.0%	0.0%	12.5%	68.8%	0.0%		0.0%		0.0%
YPRBA	Q9830000	Pee Dee Riv App 6 Mi Dns Of Nc 74 Nr Rockingham	C		0.0%	0.0%	0.0%	0.0%		6.3%		15.6%										
NCAMBNT	Q9940000	Marks Crk At Sr 1812 Nr Hamlet	C		0.0%	29.2%	38.3%	0.0%		0.0%		4.4%	0.0%	0.0%	0.0%	0.0%	62.5%	0.0%		0.0%		0.0%



**Figure 2. An Example Box Plot**



## DWQ & YPDRBA Data: A Comparison

Because the DWQ and the YPDRBA share 13 monitoring sites in the Yadkin-Pee Dee basin, the datasets can be compared. Following are comparisons of pH and turbidity collected by DWQ and YPDRBA at these 13 sites for the period 2002-2006. For the most part the data are comparable, which provides assurance that each program is properly measuring and collecting samples. Variation at some sites can be explained by differences in equipment, laboratories, and specific sampling locations. In situations where large differences are apparent, having the two datasets to compare can help identify errors. For these reasons, DWQ and YPDRBA data are kept separate for assessment purposes.

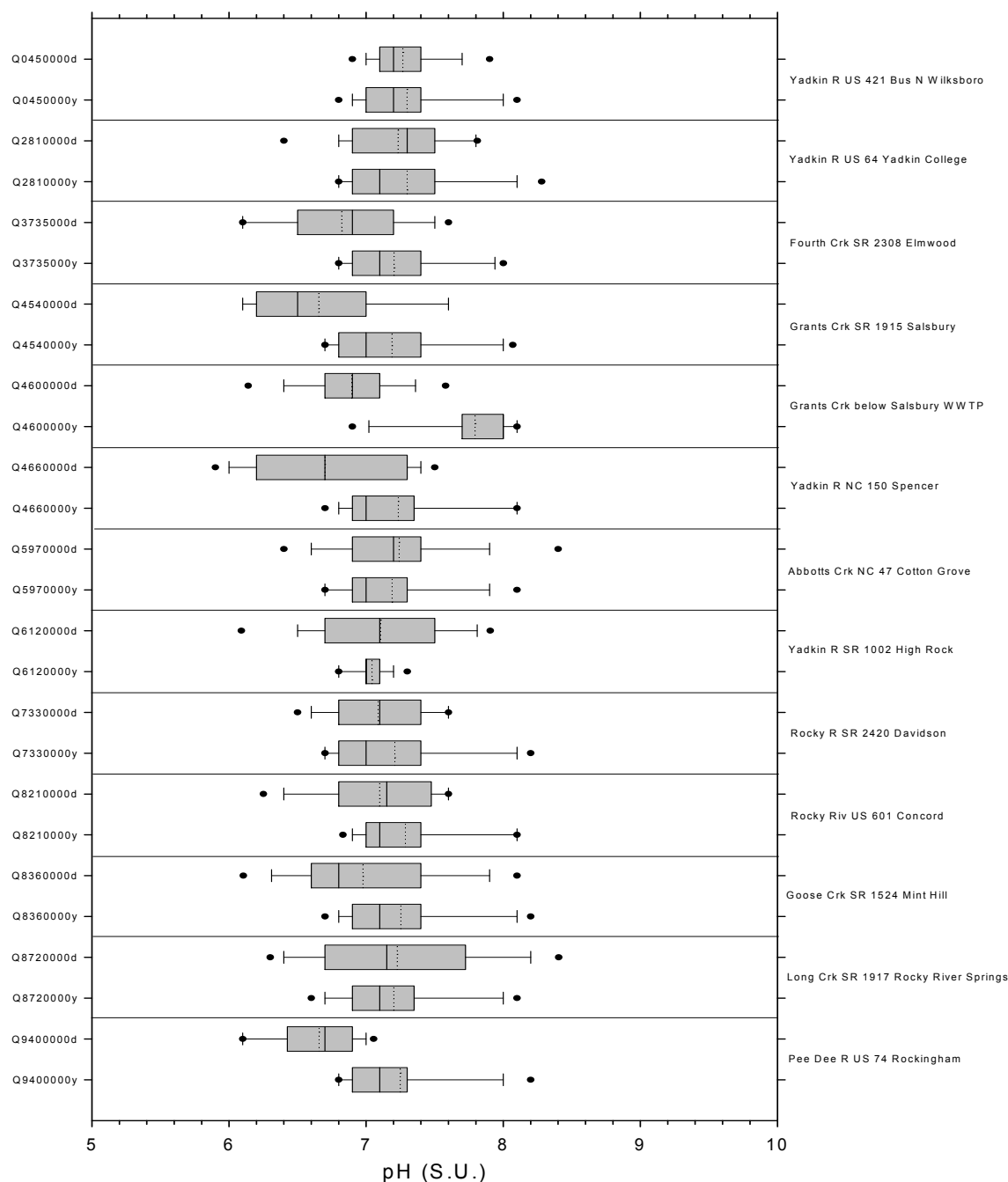
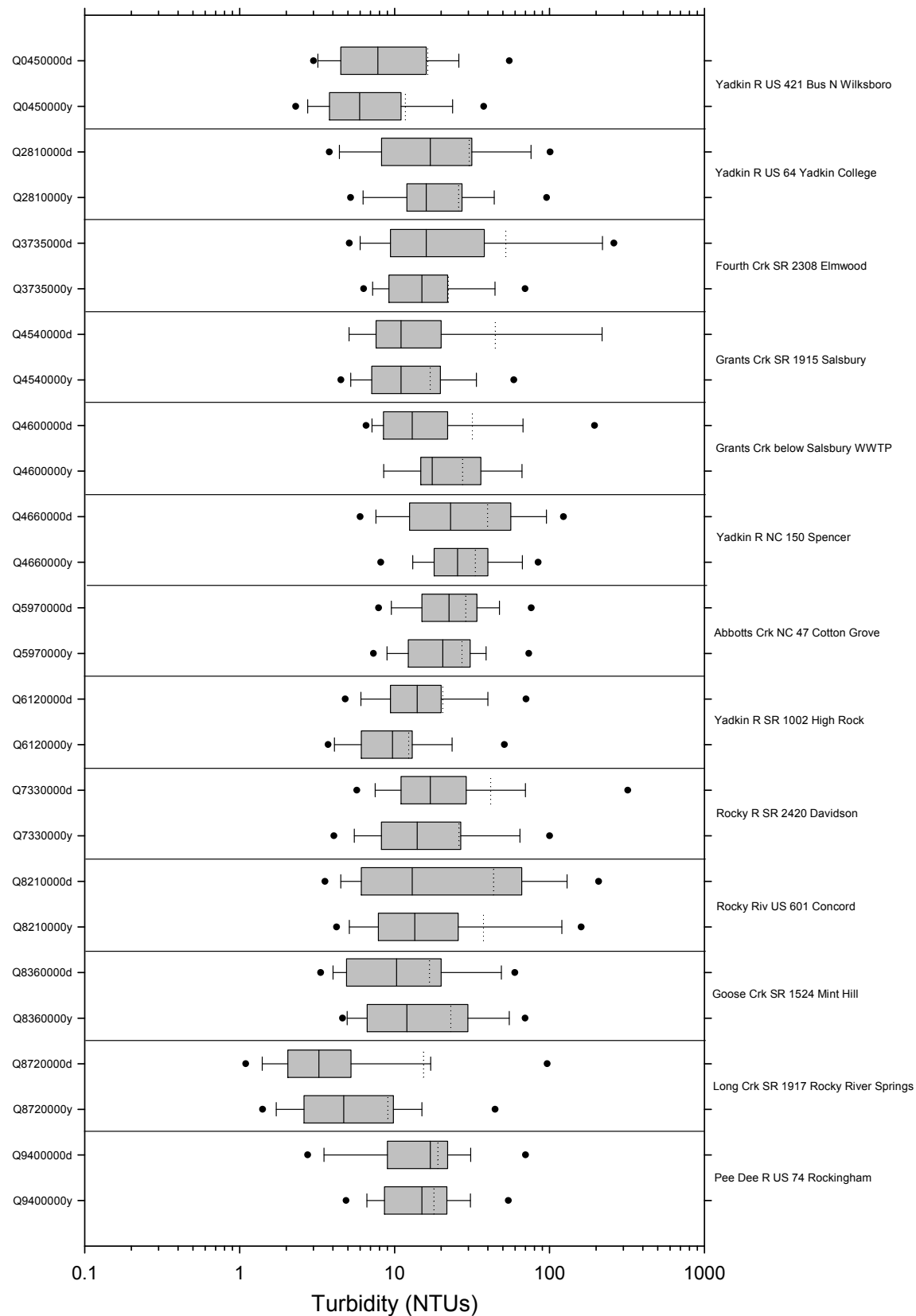


Figure 3. A Comparison of DWQ and YPDRBA pH data in the Yadkin-Pee Dee River, 2002-2006.



**Figure 4. A Comparison of DWQ and YPDRBA turbidity data in the Yadkin-Pee Dee River Basin, 2002-2006.**

## **WATER QUALITY PATTERNS IN THE YADKIN-PEE DEE RIVER BASIN**

Box and whisker plots, scatterplots, and maps were used to depict data for a variety of water quality parameters throughout the basin. While graphs portray information visually, specific and accurate details can only be conveyed in tables. Individual station summary sheets should be consulted when exact information is needed. For the box plots, stations with fewer than 10 data points for a given parameter were not included. This occasionally occurred when a new station was added or an old station was moved in the basin.

Box and whisker plots were generated for each station for each water quality parameter that has an evaluation level, plus specific conductance, total nitrate/nitrite, total kjeldahl nitrogen, total ammonia, and total phosphorus. Maps were also generated for parameters with the most exceedances. In addition, a series of change over time graphs were generated which divided the basin into six hydrologic units (HUs), in order to observe basic regional differences that might be present in this large basin.

### **Regional Trends and Comparisons**

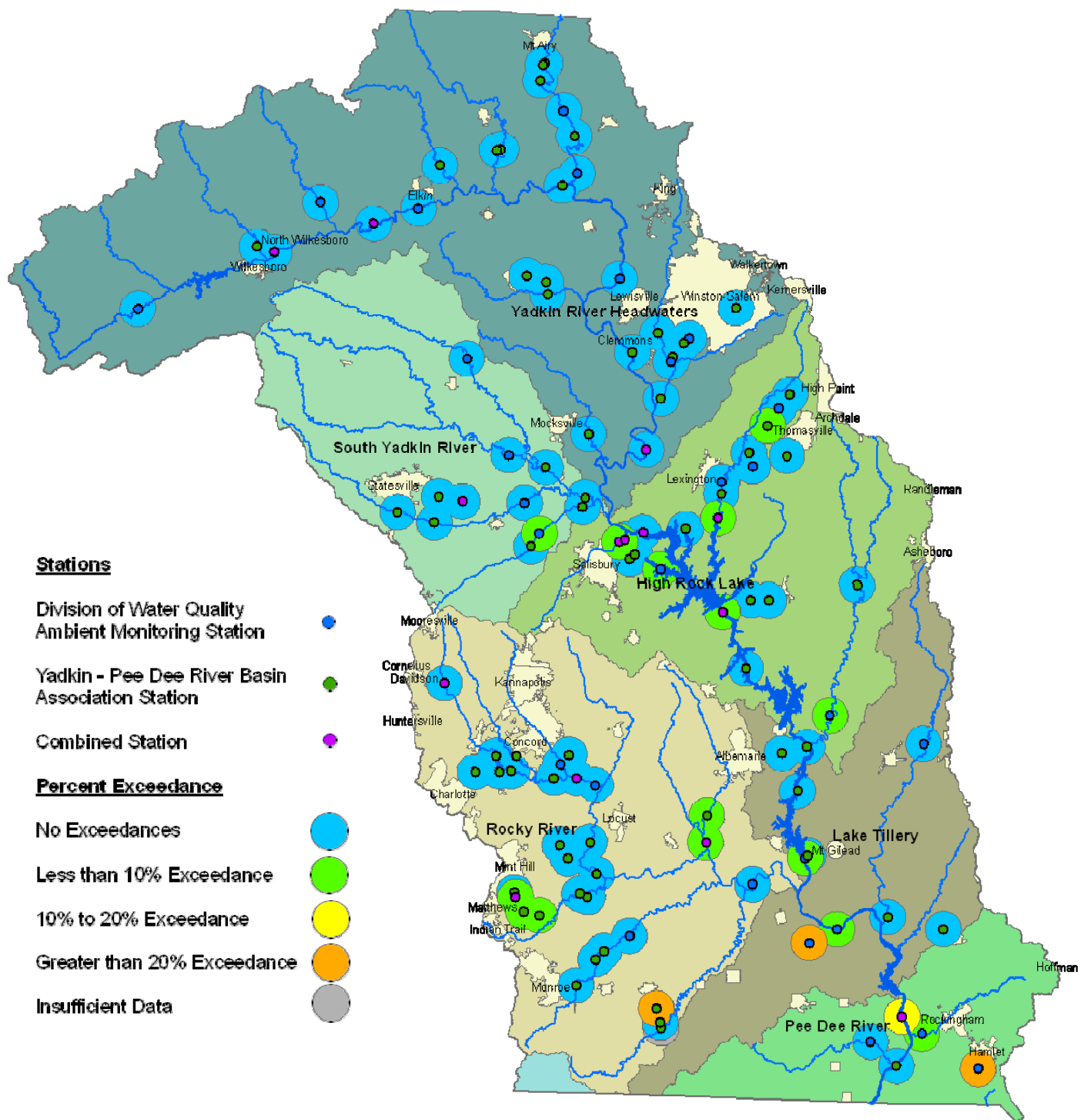
Change over time trends are illustrated in the following scatterplots. If there is at least 95% confidence that a particular linear trend explains the data better than chance ( $\text{Prob} > F$  of 0.05 or less) then that linear trend was included on the graph. The percentage of variance explained by the linear model ( $r^2$  value) is displayed for each trend.

Comparisons of the six hydrologic units yielded the following:

- **Drought Effect:** The majority of North Carolina, including the Yadkin-Pee Dee River Basin, experienced drought in 2002, and significant rains in 2003. The low-flow drought, followed by a high-flow rainy period, has impacted trends for many parameters, including temperature, specific conductance, dissolved oxygen, pH, turbidity, and fecal coliform. The trends illustrated in the scatterplots are reflecting the effect of drought primarily.
- **Temperature:** The majority of variation in temperature is caused by seasonal and daily variation in solar radiation and air temperature. A slight increasing trend was detected in the South Yadkin HU, which may be related to the end of the drought in 2003. There was no discernable trend in the other five HUs.
- **Specific Conductance:** Conductance peaked in 2002 during the drought. Similarly it reached its lowest point during 2003 and the end of the drought. By 2005 conductance had returned to a level between the highs and lows. Downward trends in conductivity values in the Yadkin River Headwaters, the Rocky River, and the Pee Dee River reflect the end of the drought. The upward trend in the Lake Tillery watershed is possible because conductance in the Lake Tillery HU was less affected by the 2002 drought.
- **Dissolved Oxygen:** Dissolved Oxygen was at its lowest during the 2002 drought. Increasing trends in three HUs reflect the end of the drought. Dissolved Oxygen most commonly dropped below the evaluation level in the Pee Dee River, Rocky River, and Lake Tillery HUs.
- **pH:** The ending of the drought in 2003 caused a steep decline in pH values throughout the basin. This resulted in downward trends in each of the six HUs.
- **Turbidity** is trending downward in the South Yadkin and High Rock Lake HUs, but trending upward in the Rocky River HU. Turbidity was depressed during the 2002 drought, rose in 2003, and has stayed relatively even since then.
- **Fecal Coliform** peaked during the 2003 rains, and has decreased since then. Significant downward trends are present in the Yadkin River Headwaters, the South Yadkin River, the High Rock Lake, and the Lake Tillery HUs.
- **Ammonia** concentrations are trending downward slightly in the Yadkin River Headwaters and the South Yadkin River HUs and do not appear to be related to the drought.
- **Total kjeldahl nitrogen** concentrations are trending downward in the Yadkin River Headwaters HU and do not appear to be related to the drought.

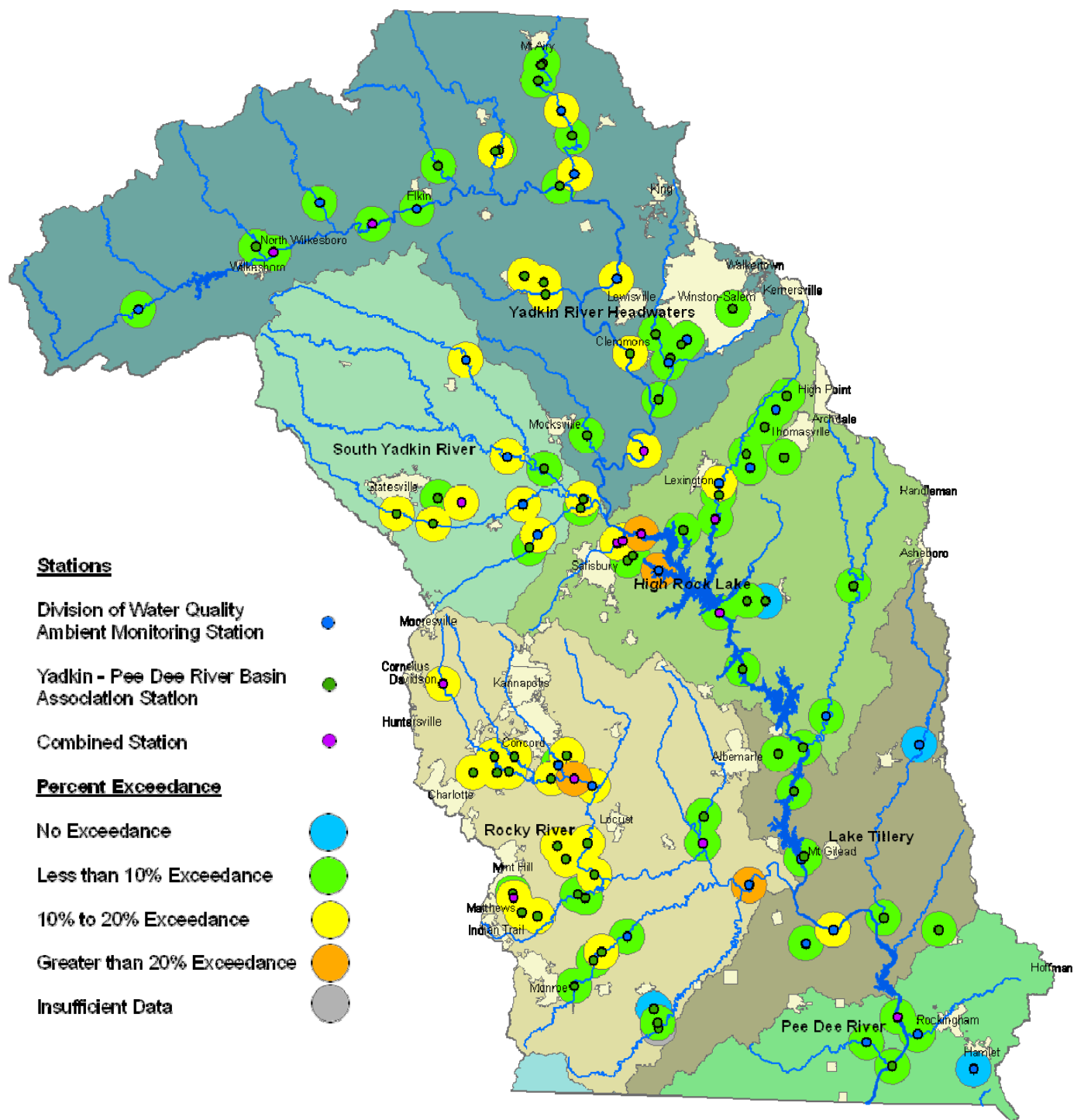
- Total Nitrate and Nitrite concentrations peaked during the drought and are trending downward slightly in the Yadkin River Headwaters and South Yadkin River HUs. The Lake Tillery HU is trending upwards slightly. These trends represent small changes and that may have been caused by the drought.
- Total Phosphorus concentrations are trending downward in the Yadkin River Headwaters, the South Yadkin River, the High Rock Lake, and the Rocky River HUs. Concentrations were slightly higher during the drought. Concentrations tended to be higher in the Rocky River HU than in the rest of the HUs.

In general, problem areas were scattered throughout the basin. 85% of stations in the South Yadkin River HU, 83% of stations in the Pee Dee River HU, 77% of Stations in the Rocky River HU, 64% of stations in the Yadkin River Headwaters HU, 56% of stations in the High Rock Lake HU, and 40% of stations in the Lake Tiller HU were observed to have at least one 10% exceedance. In five of six HUs, the most common violation was for total iron. In the Rocky River HU, the most common violation was turbidity. Total iron, total copper and turbidity together comprise 73% of all the violations in the basin. Turbidity is highly correlated with both total iron and total copper concentrations in the basin. Turbidity may explain over 74% ( $r^2 = 0.74359$ ) of the variation in total iron, and over 54% ( $r^2 = 0.5465$ ) of the variation in total copper. This may indicate that the majority of the total iron and copper in the water in this basin is caused by suspended particulates, i.e. muddy water.



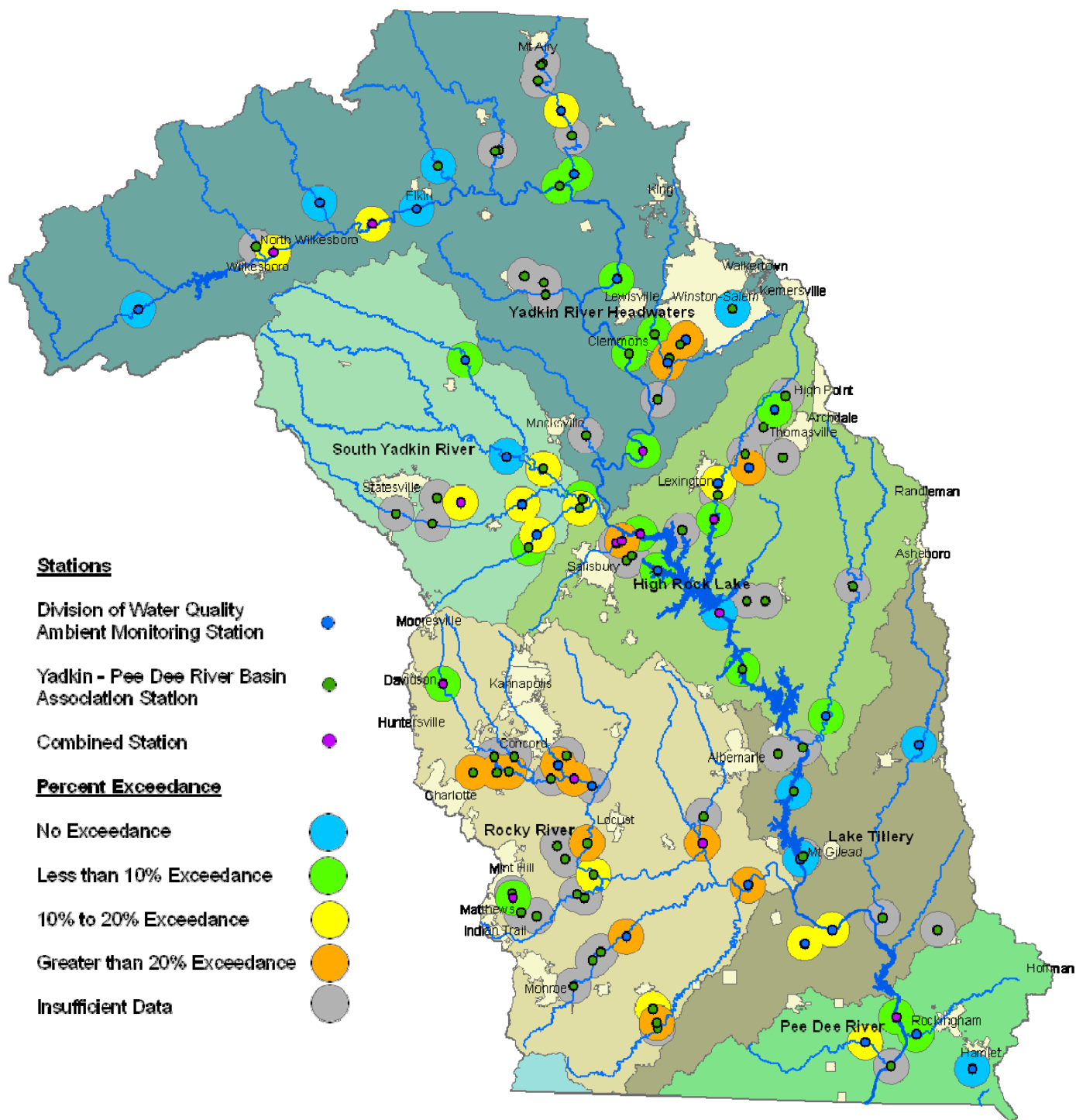
**Figure 5. Dissolved Oxygen in the Yadkin-Pee Dee River Basin**  
The evaluation level for dissolved oxygen concentrations displayed on this map is 4 mg/L.





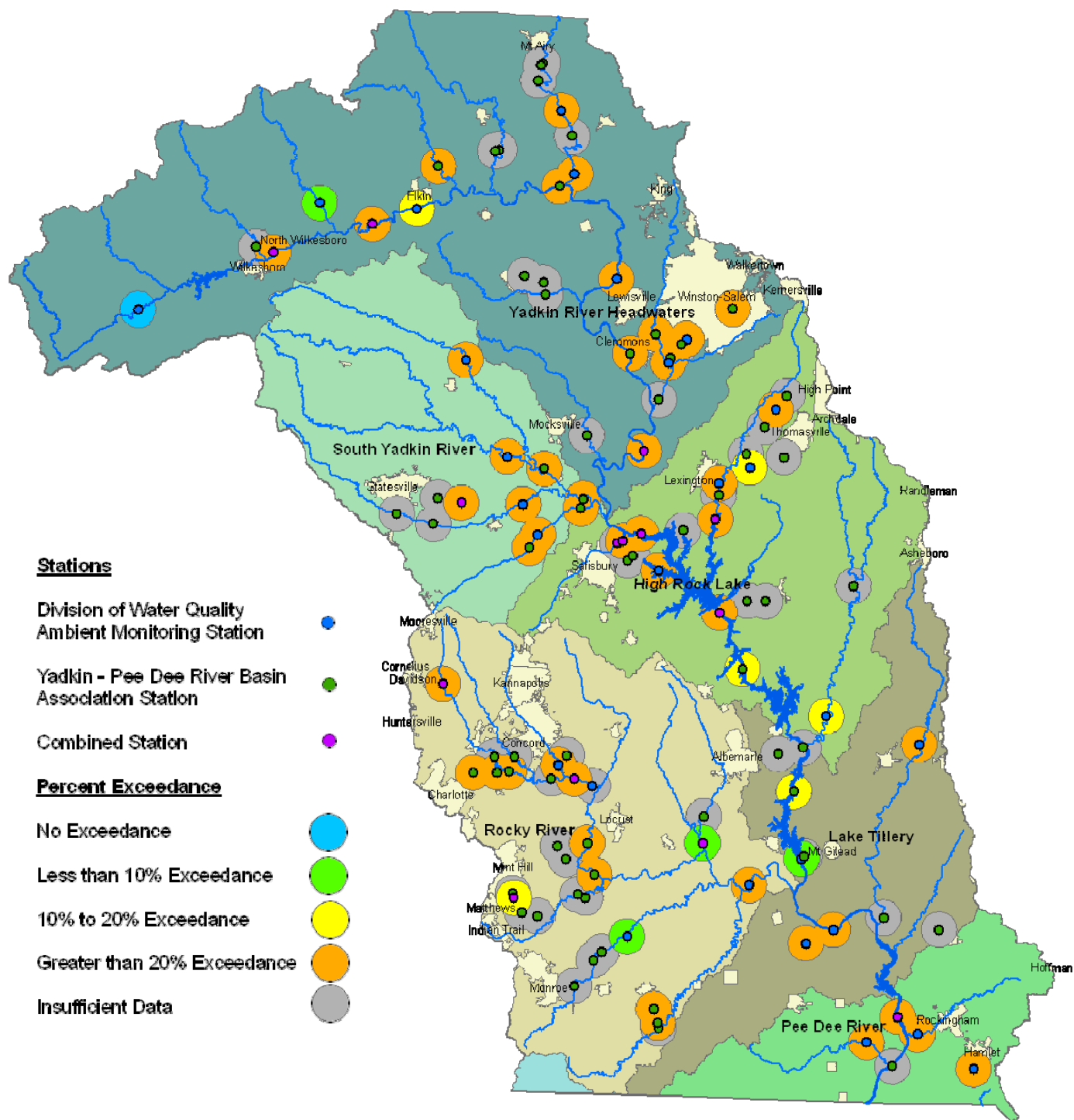
**Figure 7. Turbidity in the Yadkin-Pee Dee River Basin**

The evaluation level for turbidity concentrations displayed on this map is 50 NTU, except for one site classified as a lake, which is evaluated at 25 NTU.

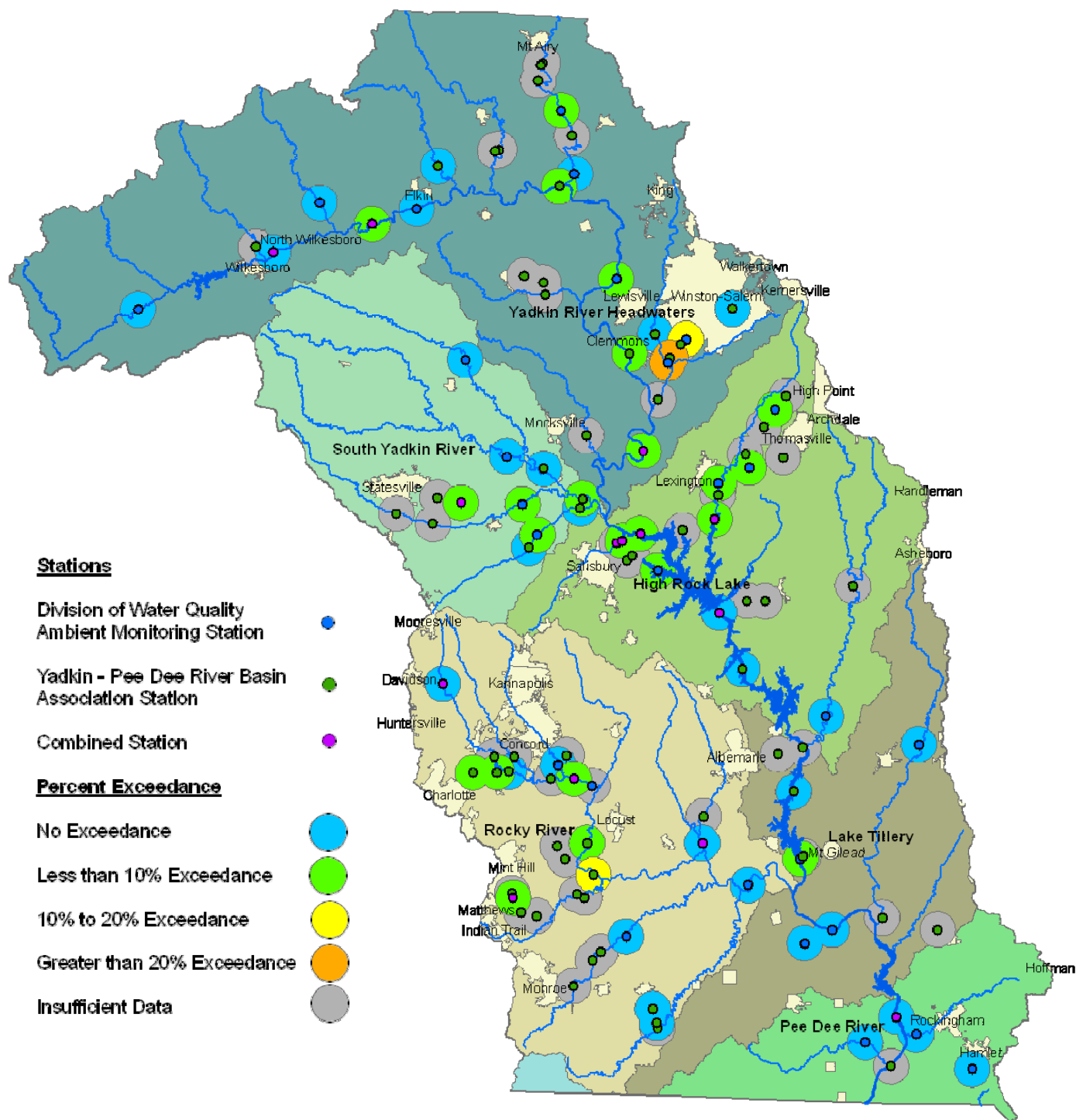


**Figure 8. Total Copper in the Yadkin-Pee Dee River Basin**  
 The evaluation level for total copper concentrations displayed on this map is 7 mg/L.





**Figure 9. Total Iron in the Yadkin-Pee Dee River Basin**  
The evaluation level for total iron concentrations displayed on this map is 1,000 mg/L.



**Figure 10. Total Zinc in the Yadkin-Pee Dee River Basin**  
 The evaluation level for total zinc concentrations displayed on this map is 50 mg/L.

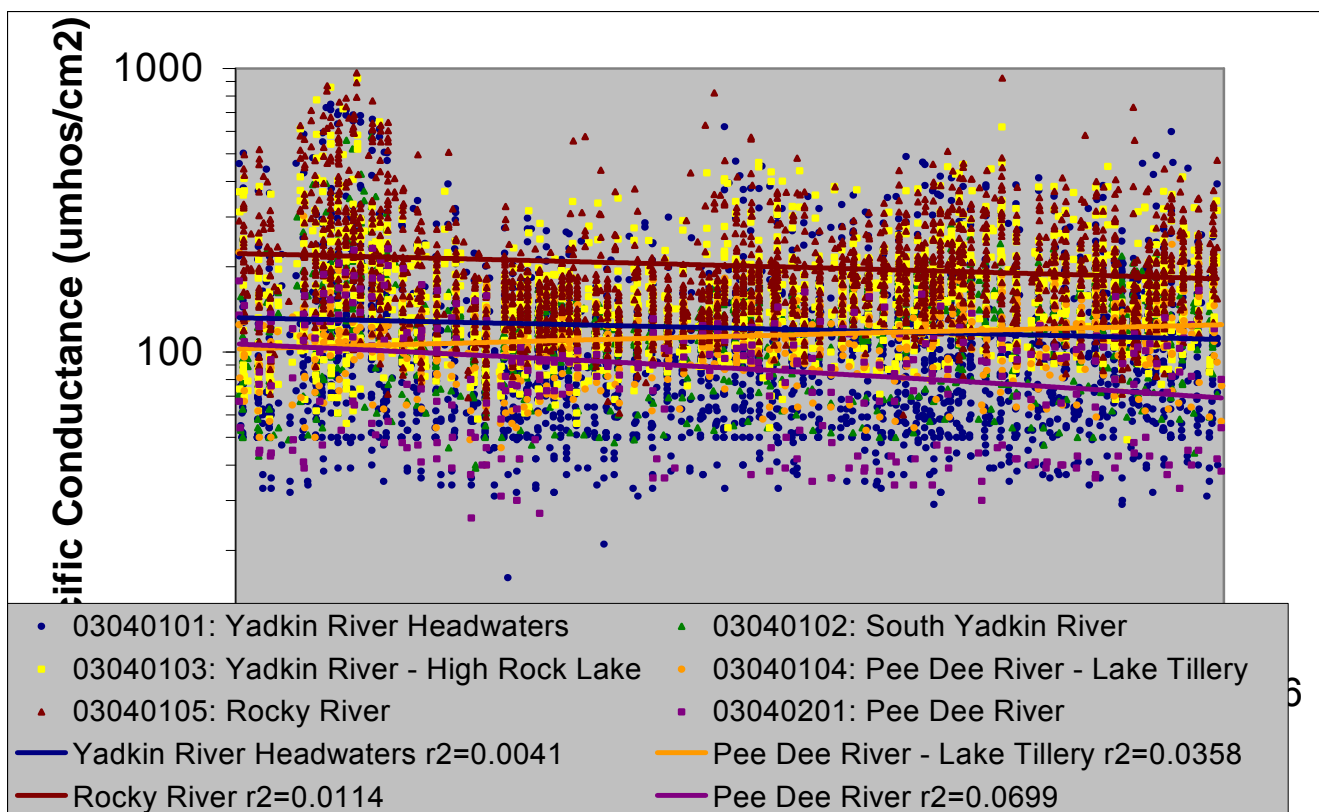
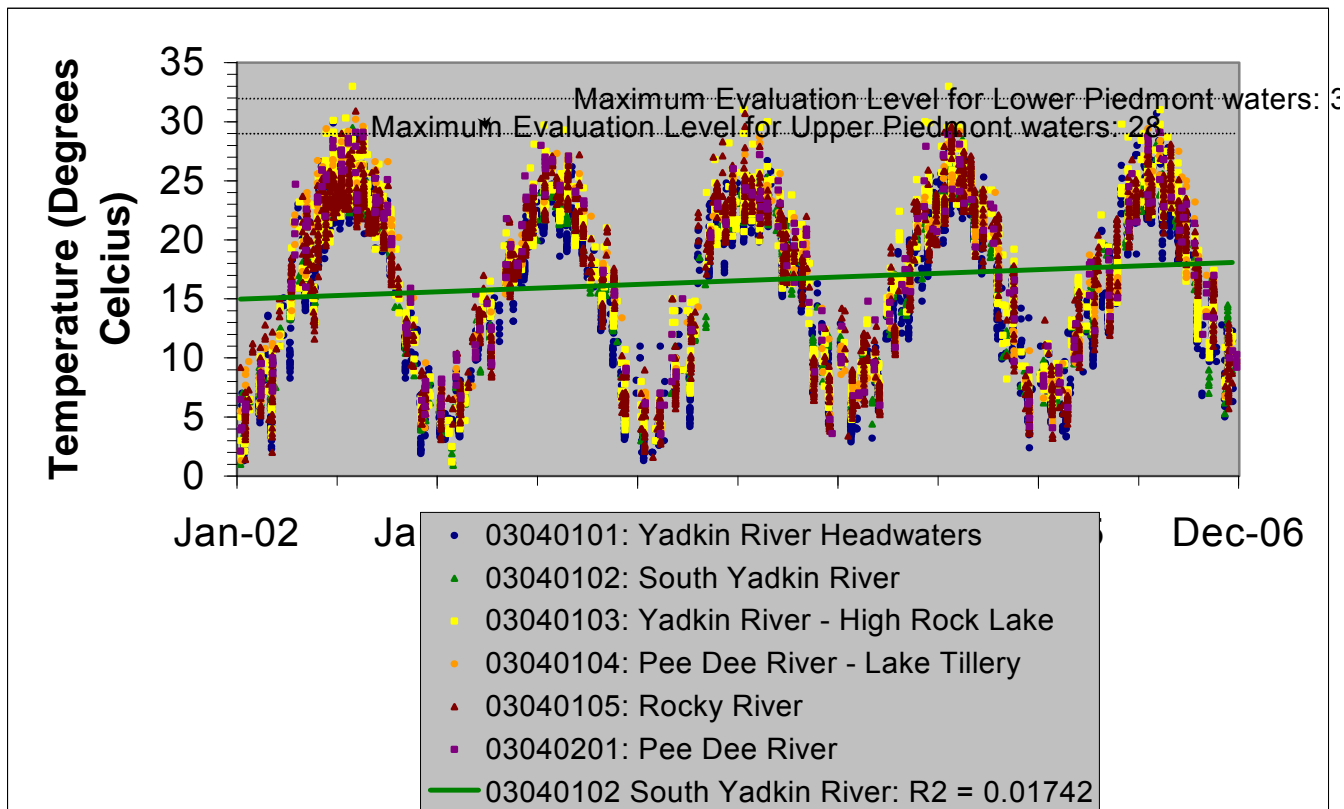


Figure 11. Water Temperature and Specific Conductance over time in the Yadkin-Pee Dee River Basin

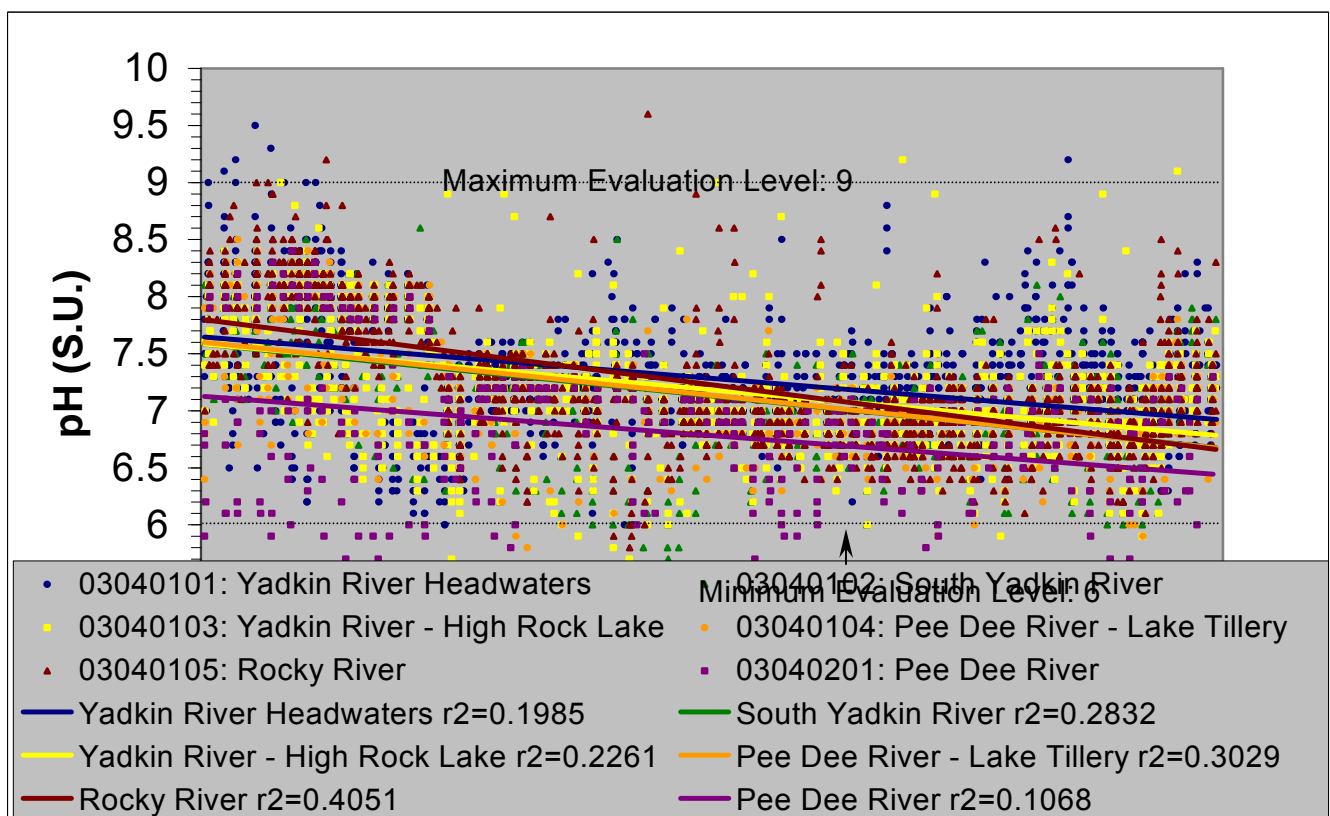
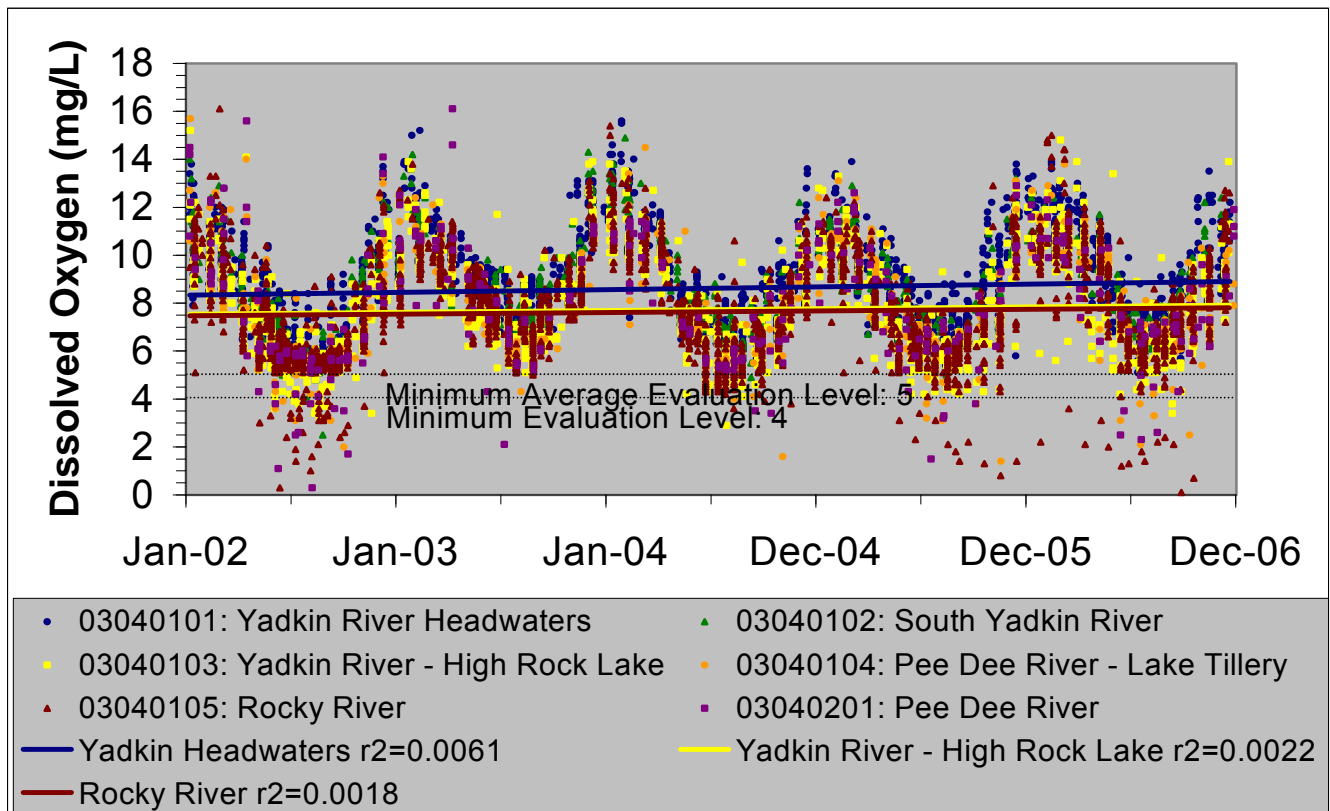
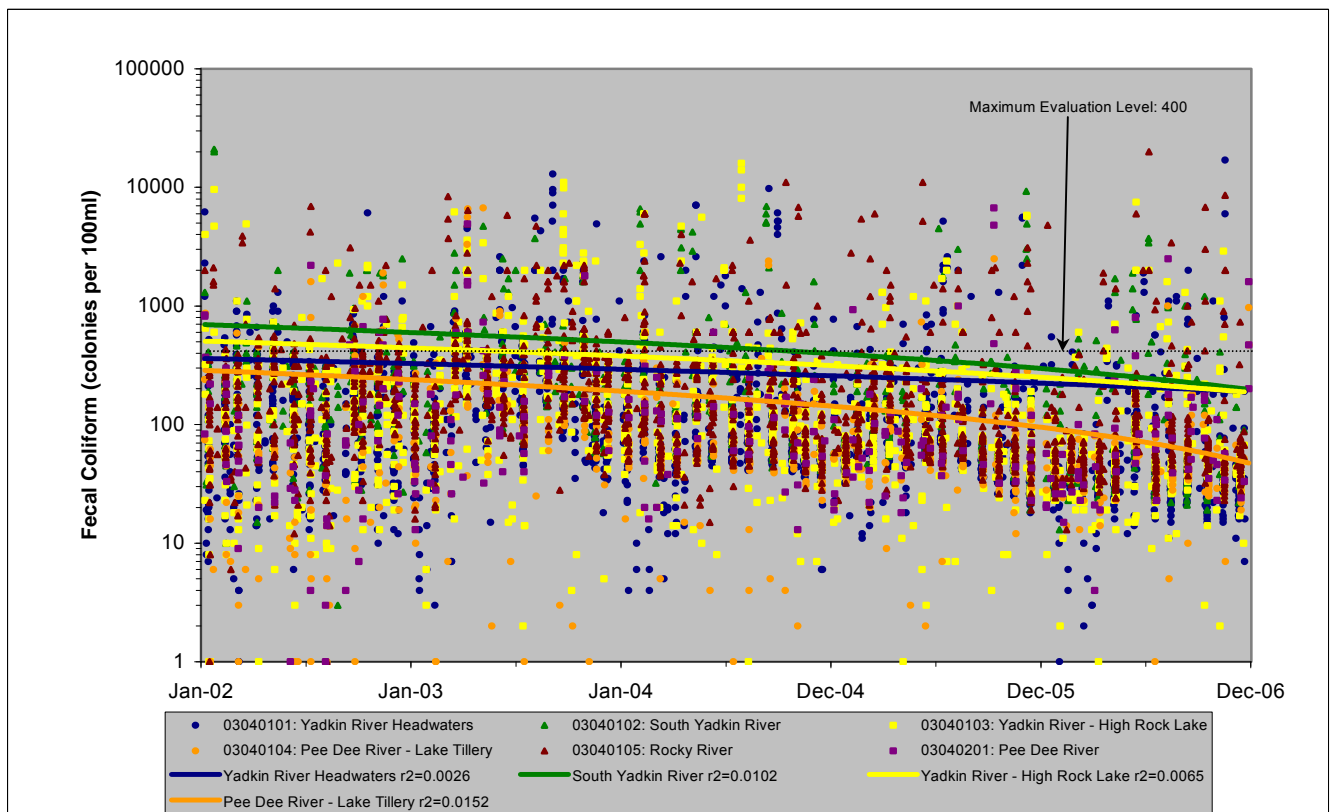
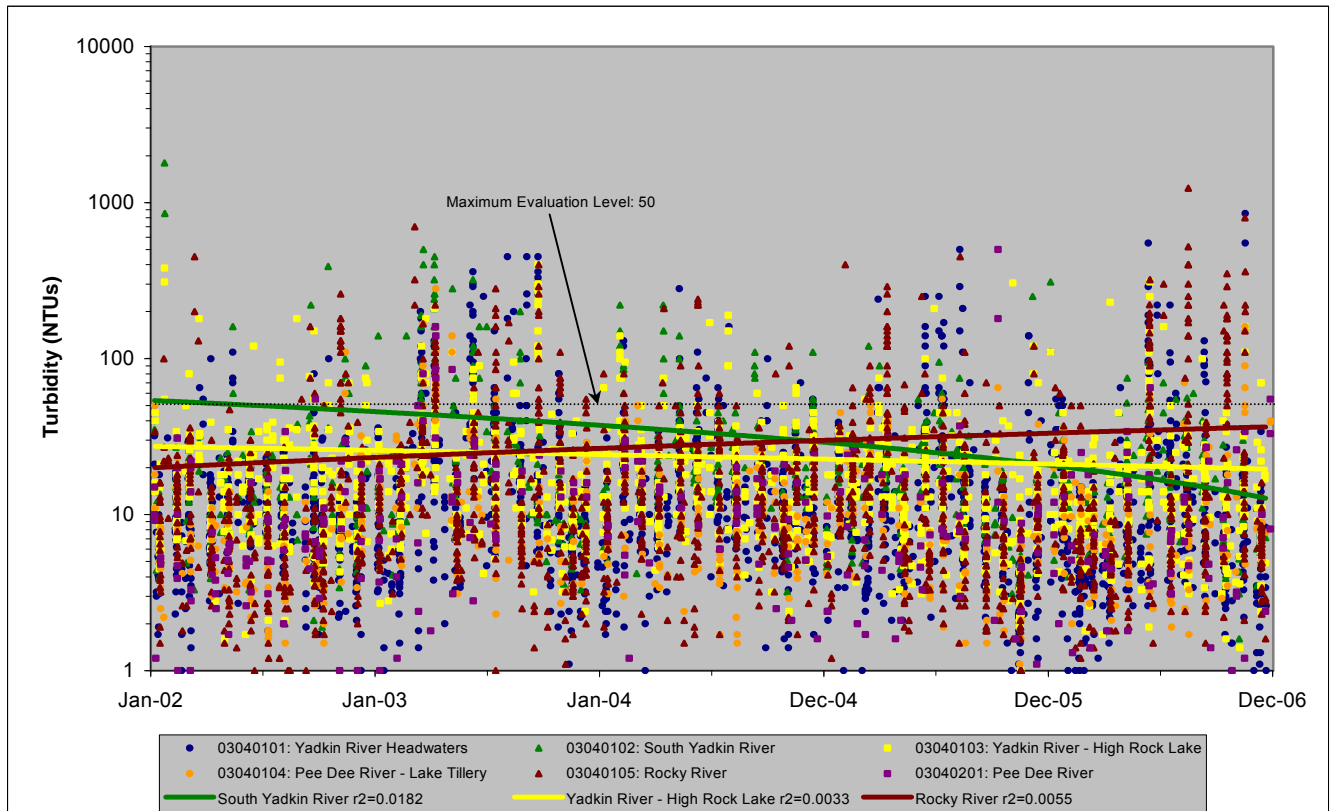
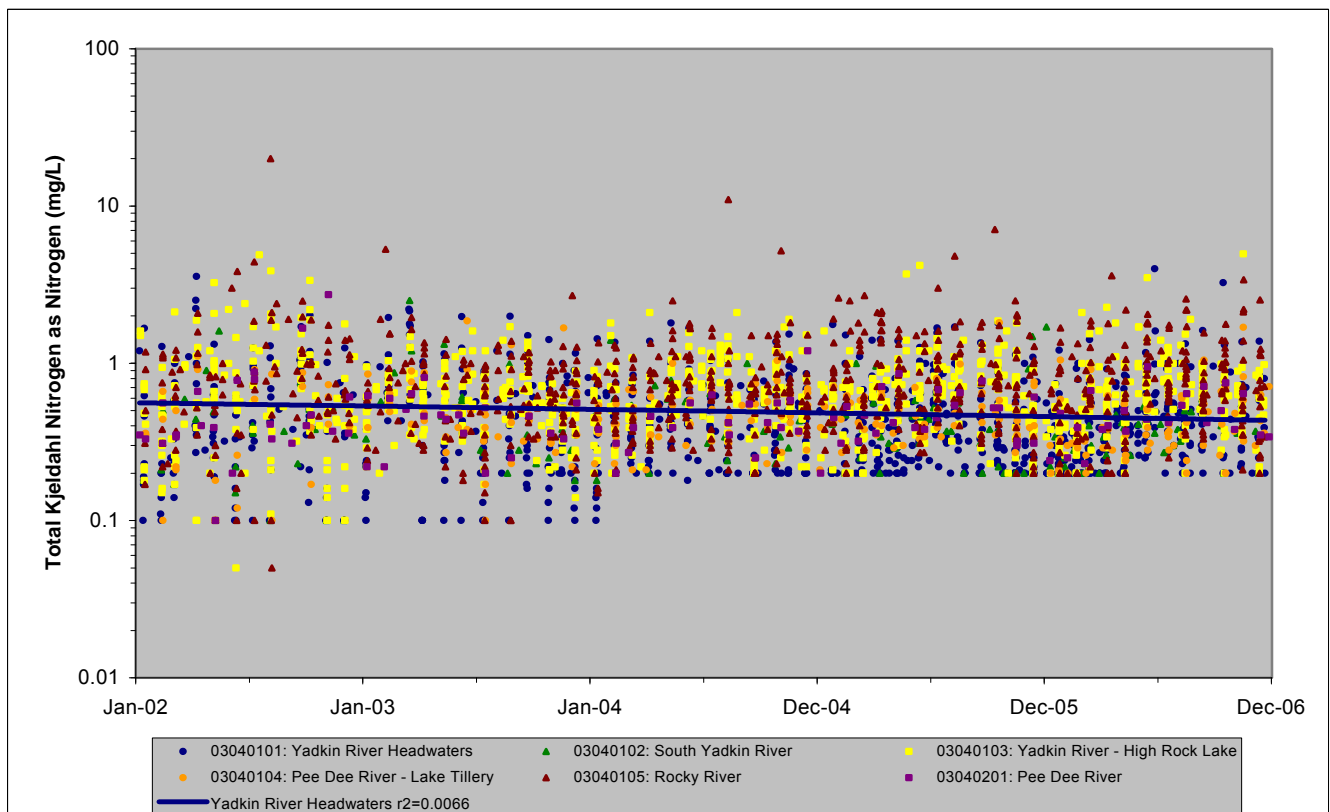
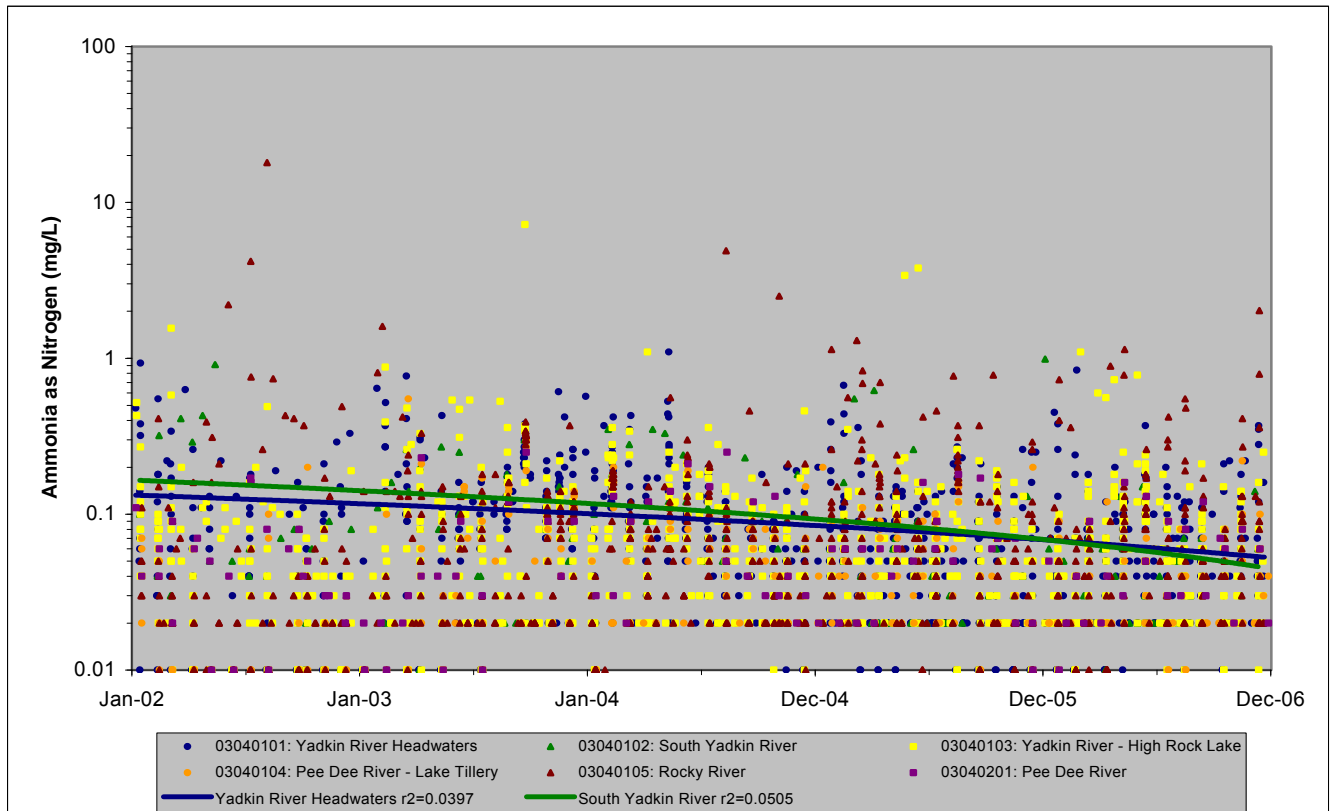


Figure 12. Dissolved Oxygen and pH over time in the Yadkin-Pee Dee River Basin

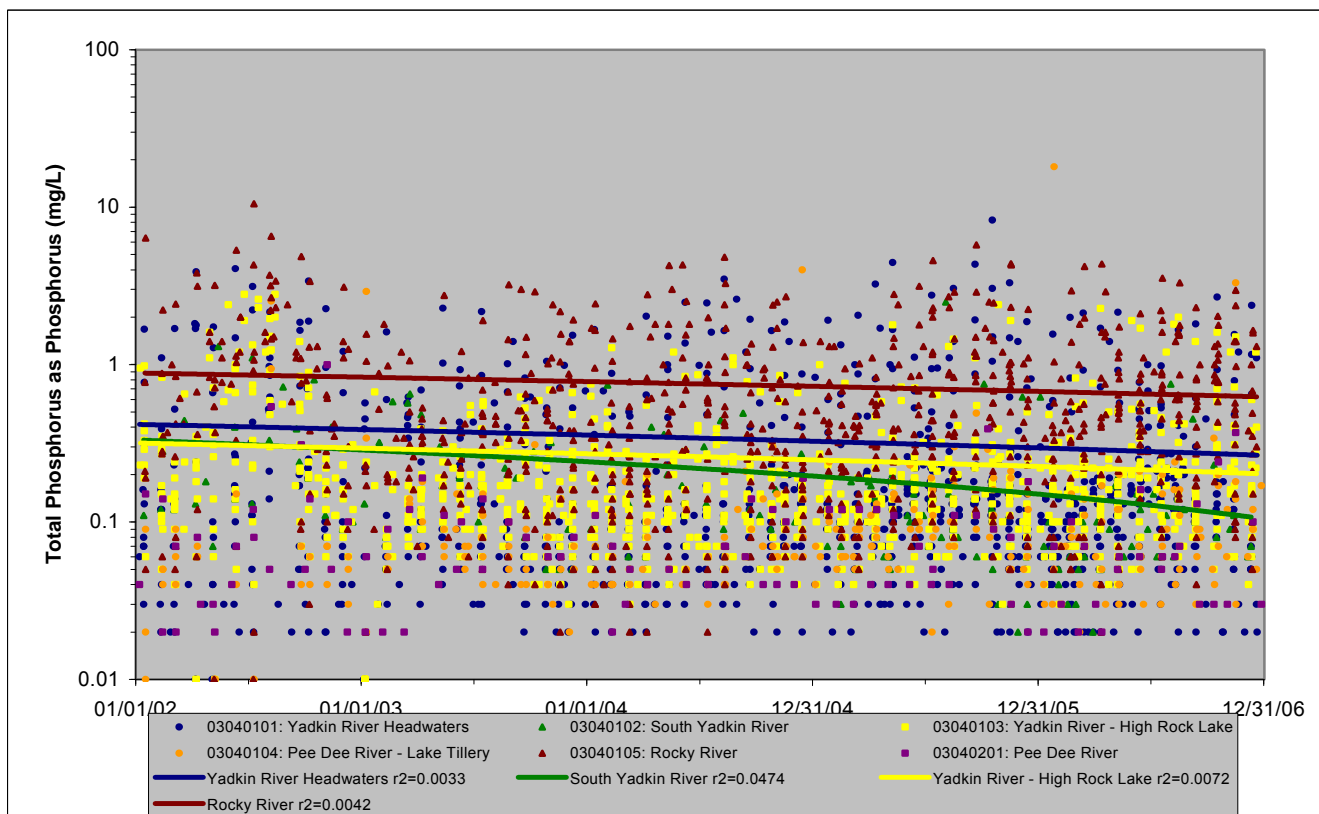


**Figure 13. Turbidity and Fecal Coliform over time in the Yadkin-Pee Dee River Basin**

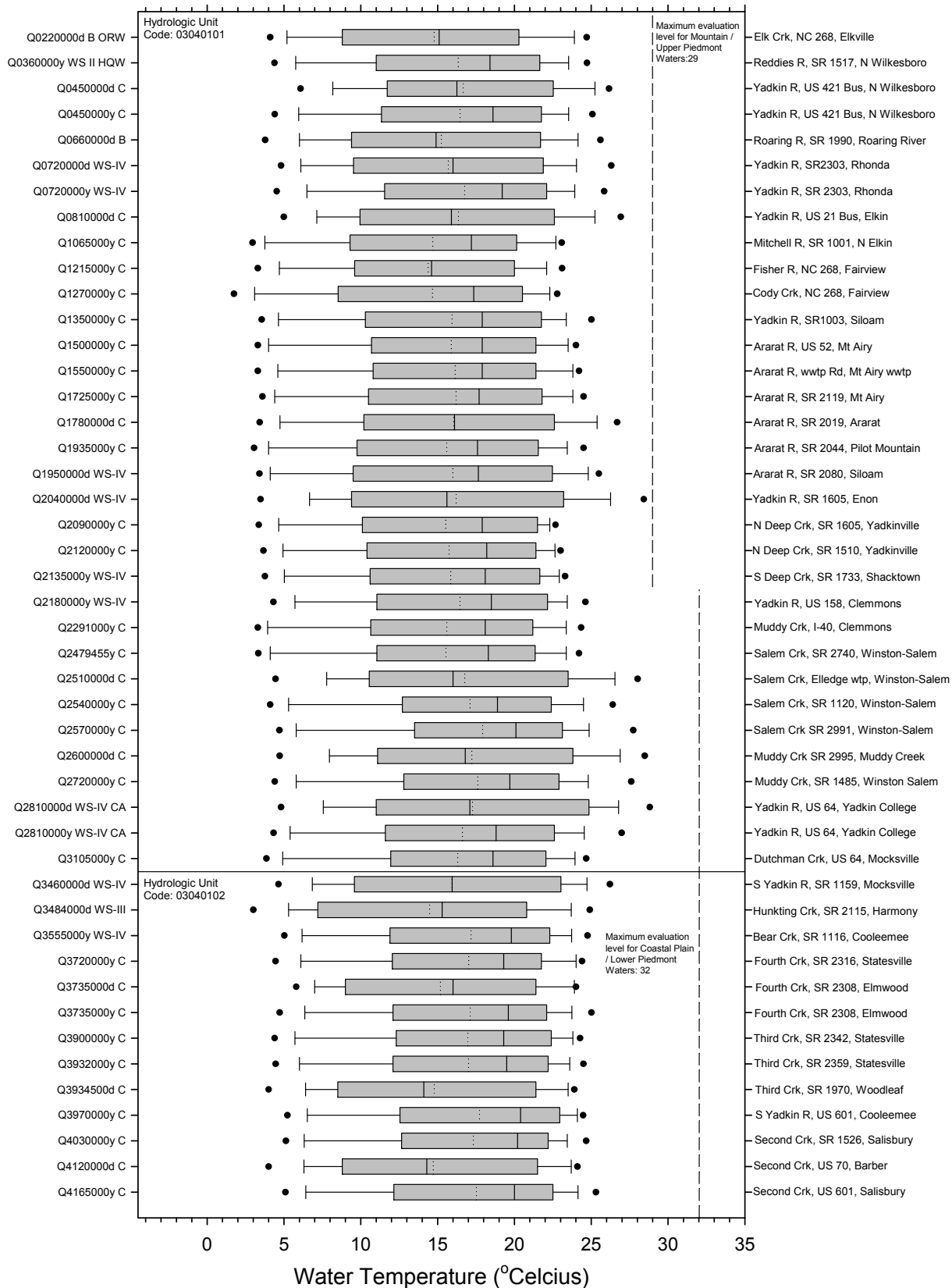


**Figure 14. Ammonia and TKN over time in the Yadkin-Pee Dee River Basin**





**Figure 15. Nitrate/Nitrite and Total Phosphorus over time in the Yadkin-Pee Dee River Basin**



**Figure 16. Box Plots of Water Temperature in the Yadkin River Headwaters and South Yadkin River HUs**



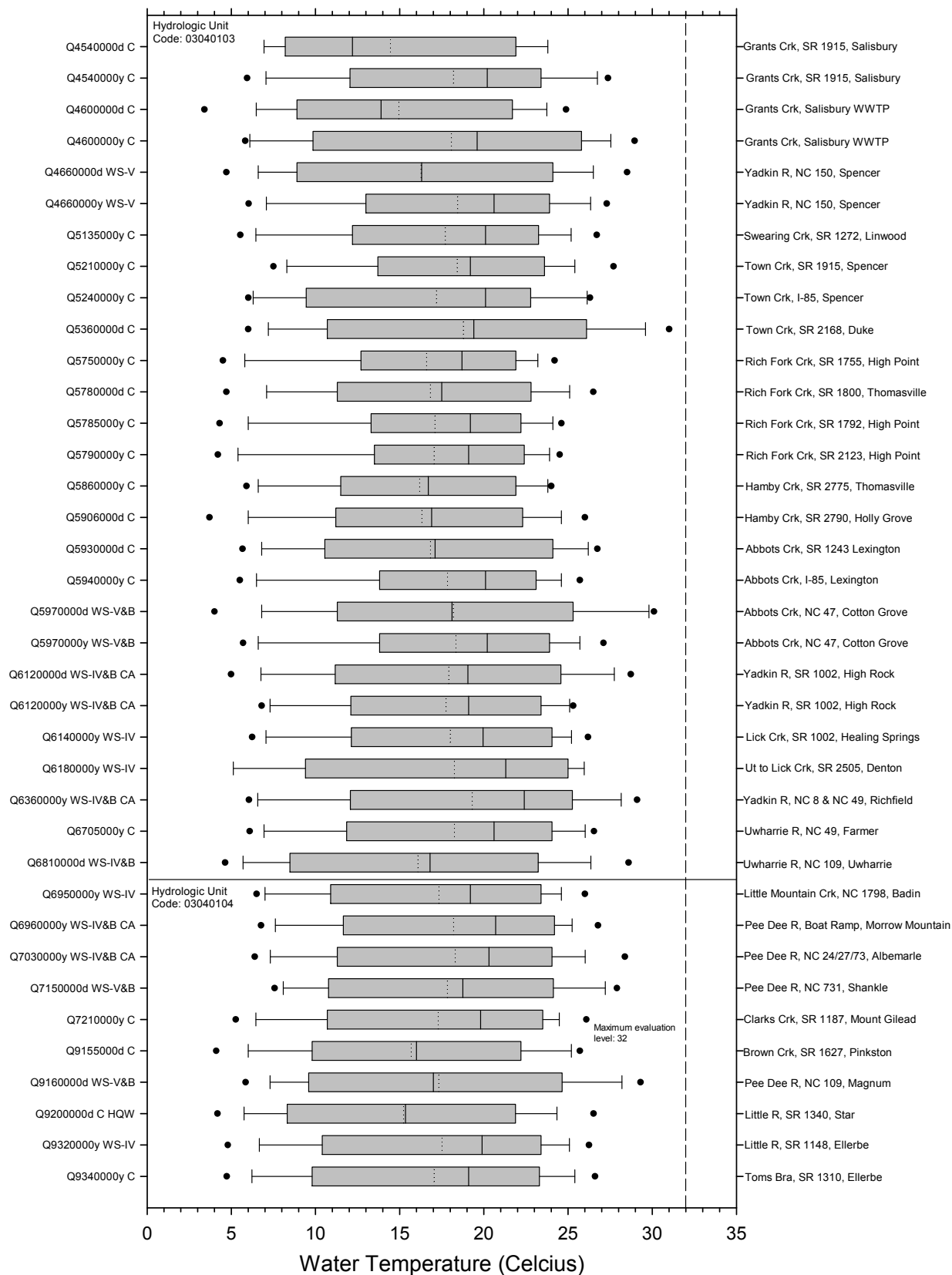
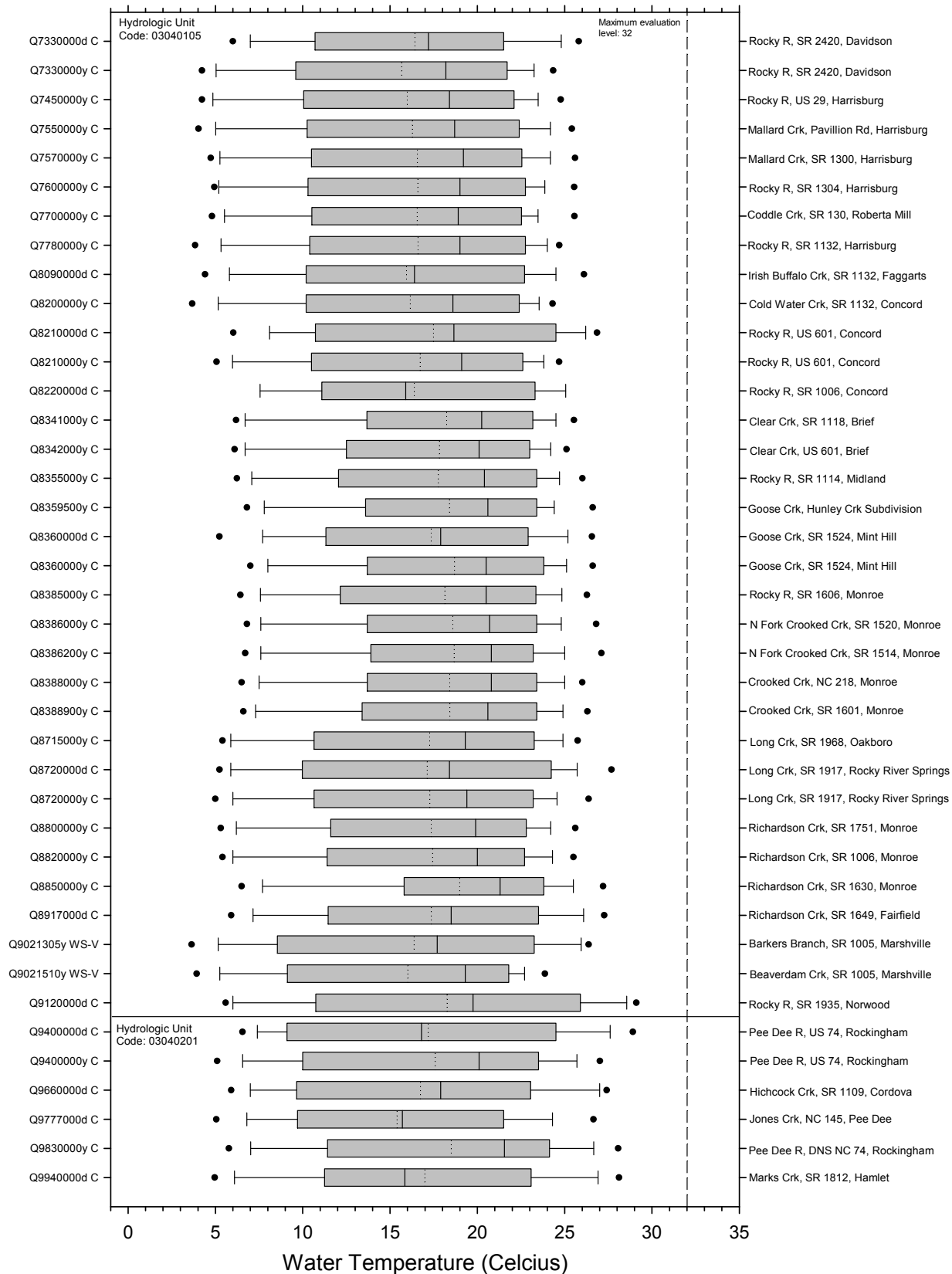
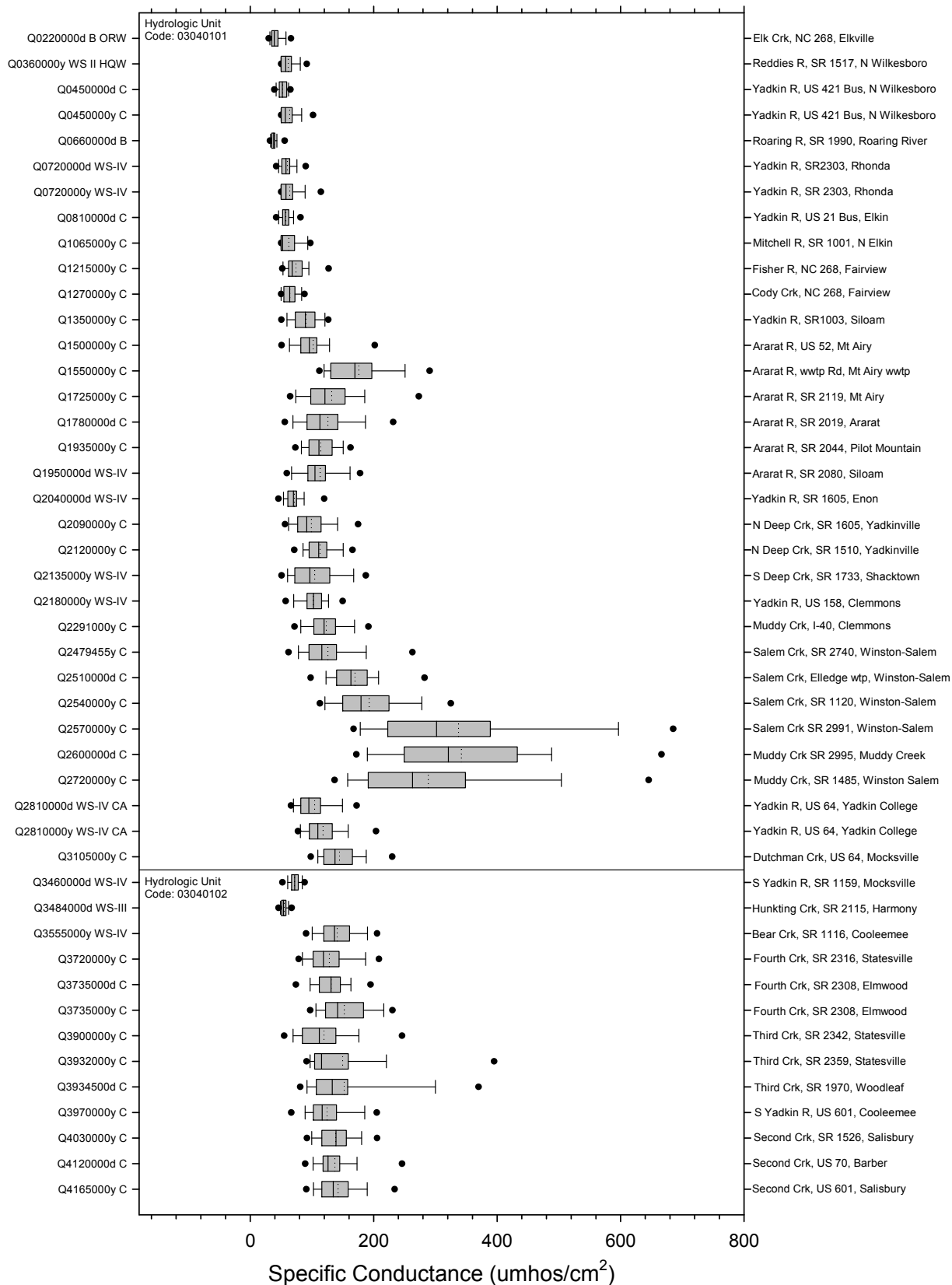
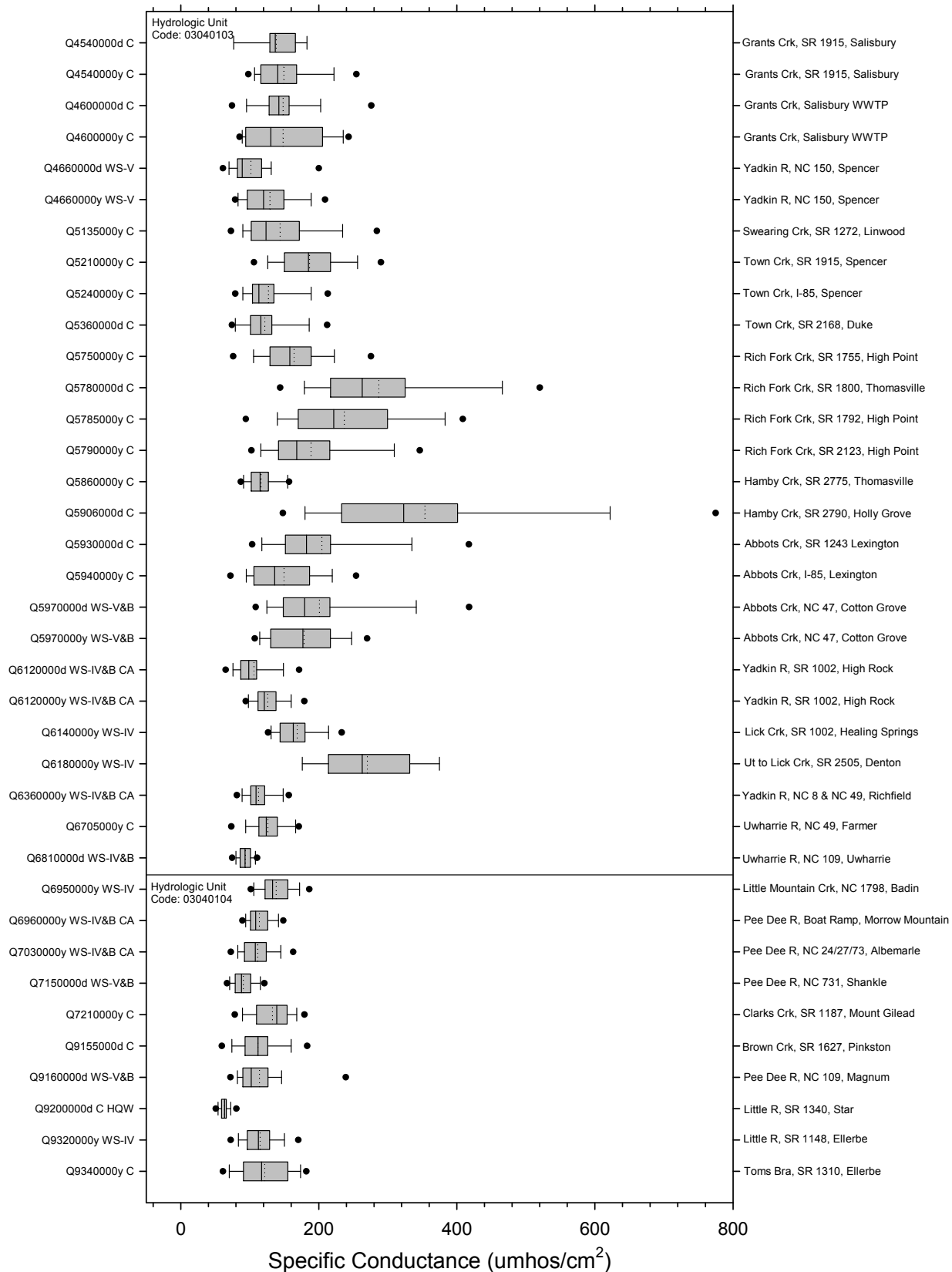


Figure 17. Box Plots of Water Temperature in the High Rock Lake and Lake Tillery HUs

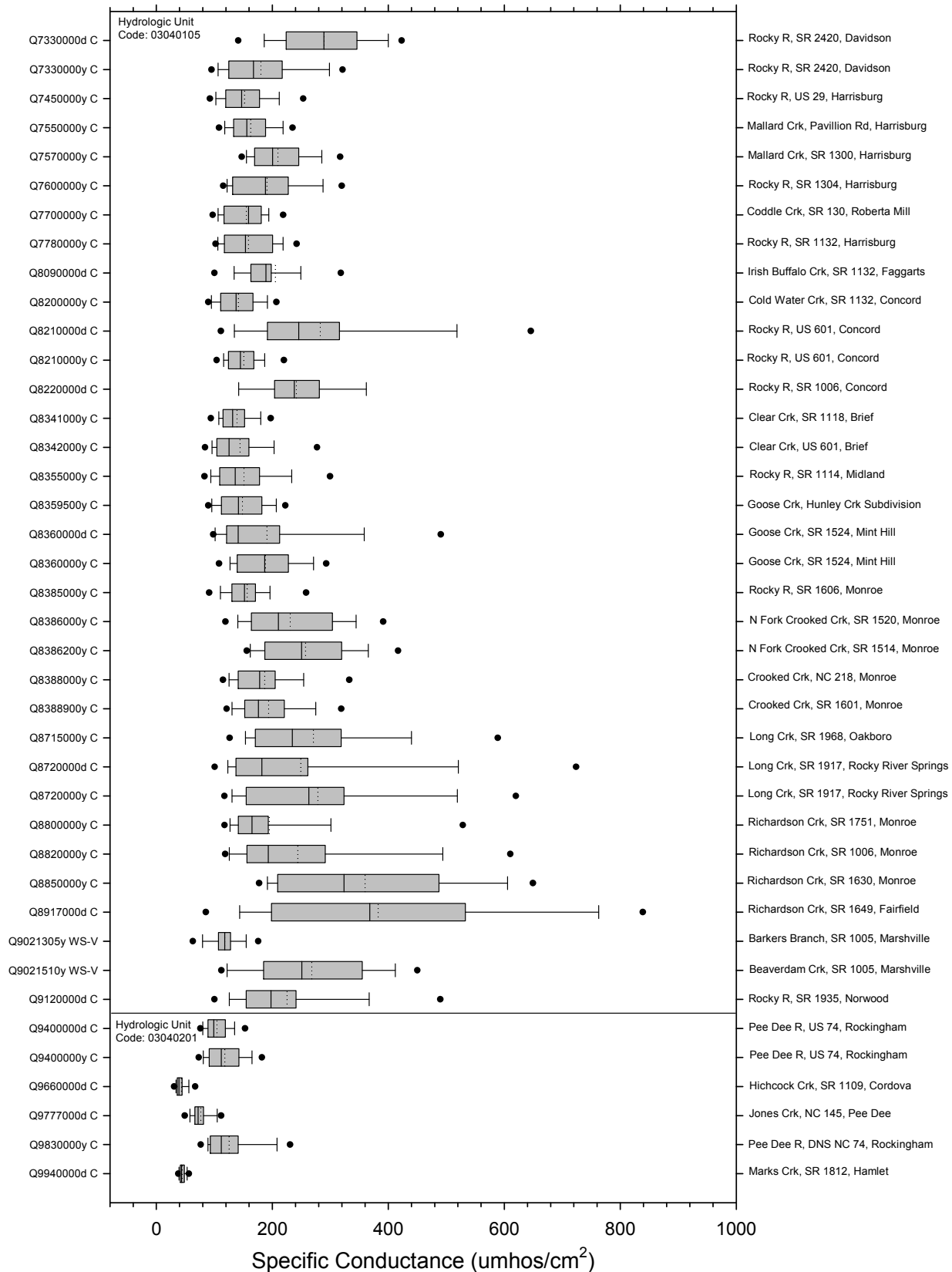


**Figure 18. Box Plots of Water Temperature in the Rocky River and Pee Dee River HUs**

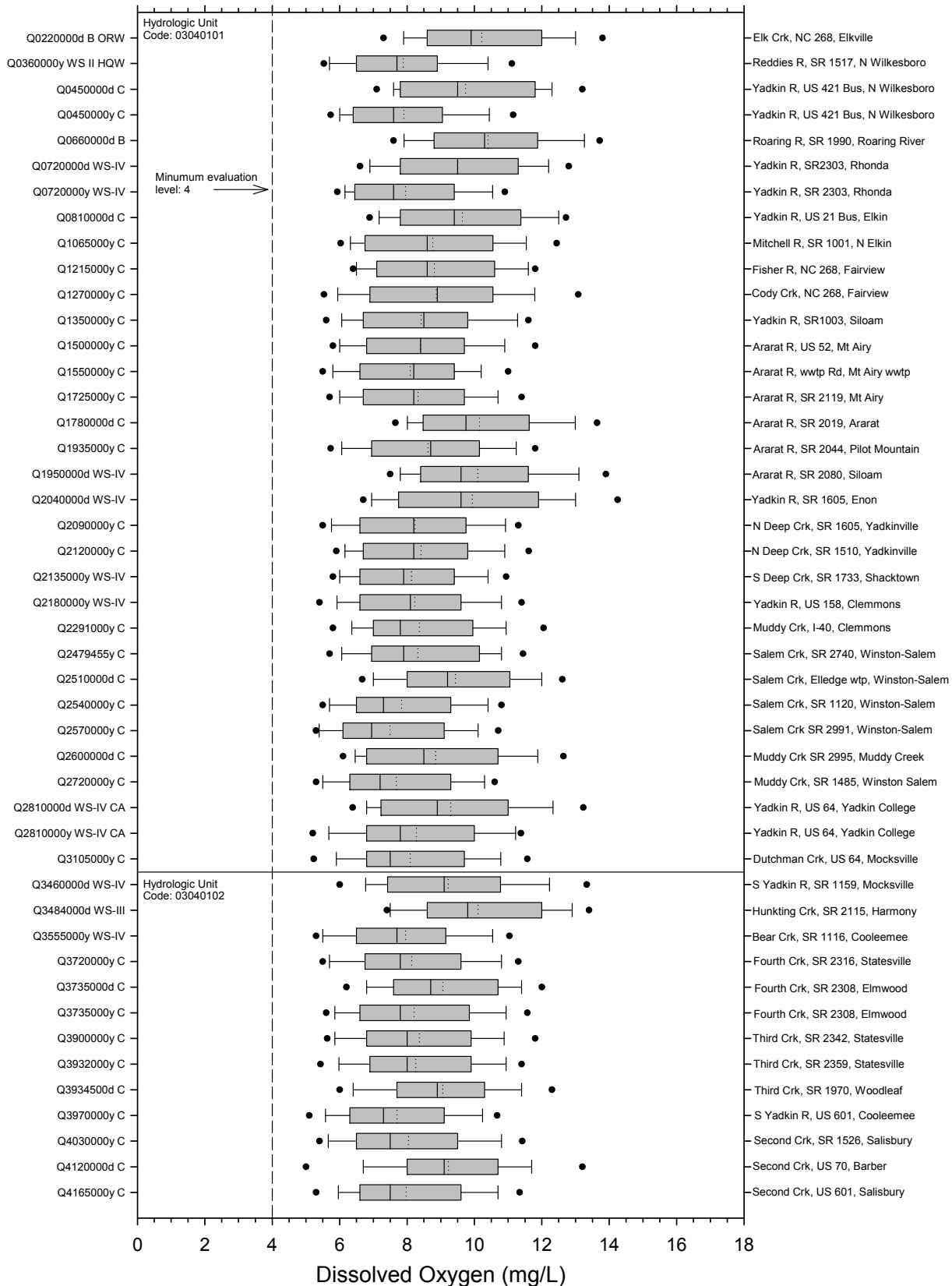




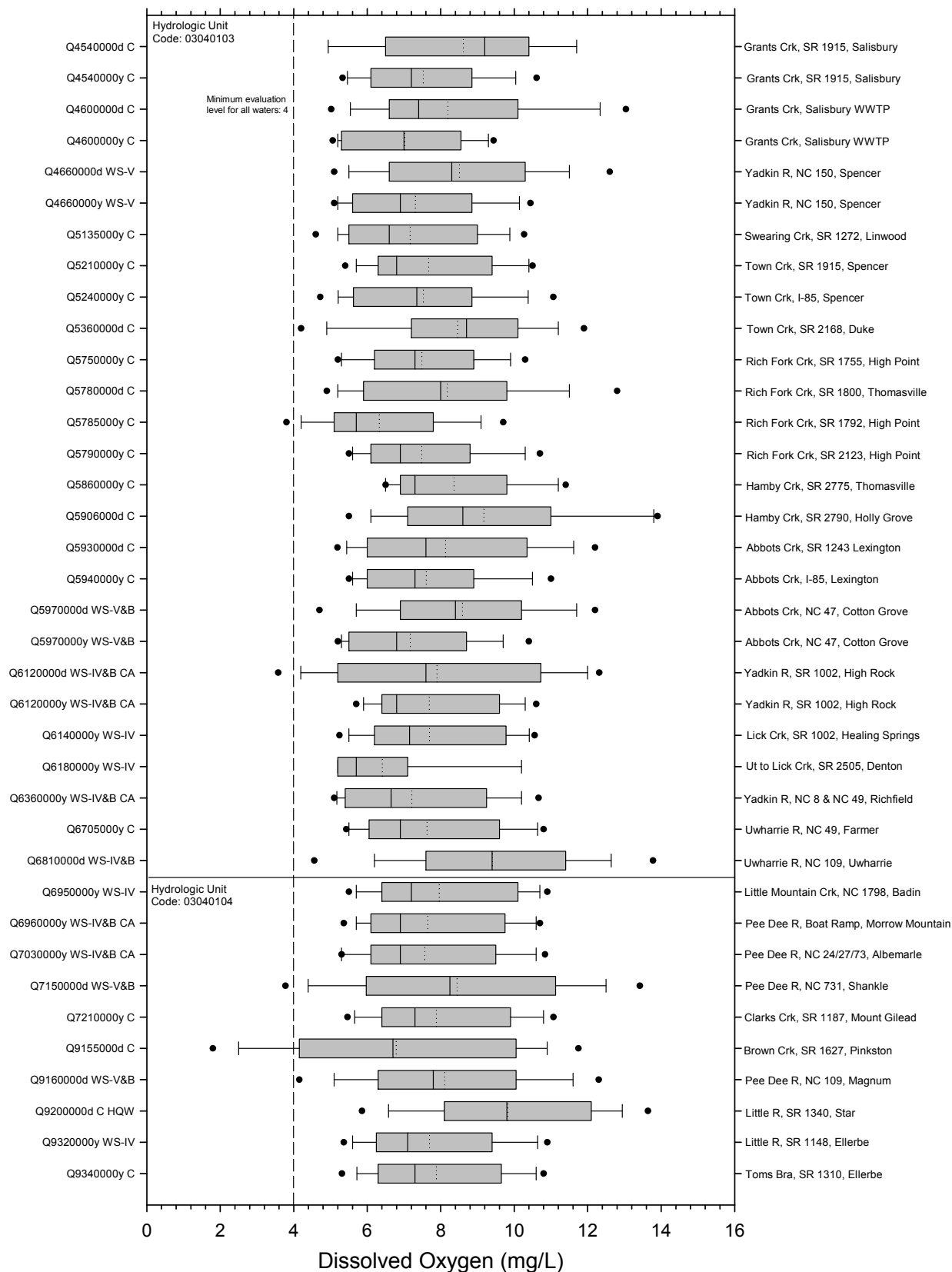
**Figure 20. Box Plots of Specific Conductance in the High Rock Lake and Lake Tillery HUs**



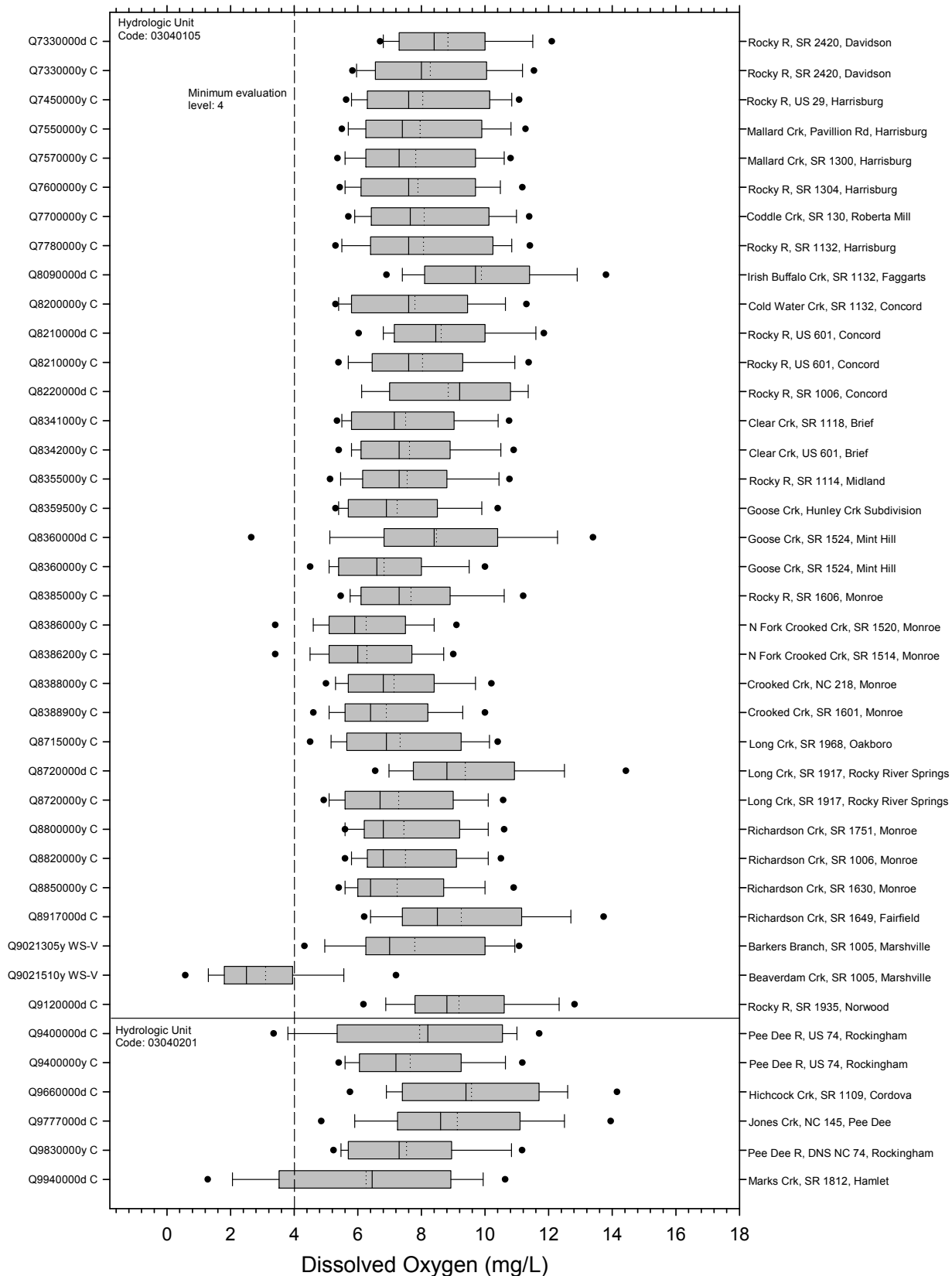
**Figure 21. Box Plots of Specific Conductance in the Rocky River and Pee Dee River HUs**



**Figure 22. Box Plots of Dissolved Oxygen in the Yadkin River Headwaters and South Yadkin River HUs**

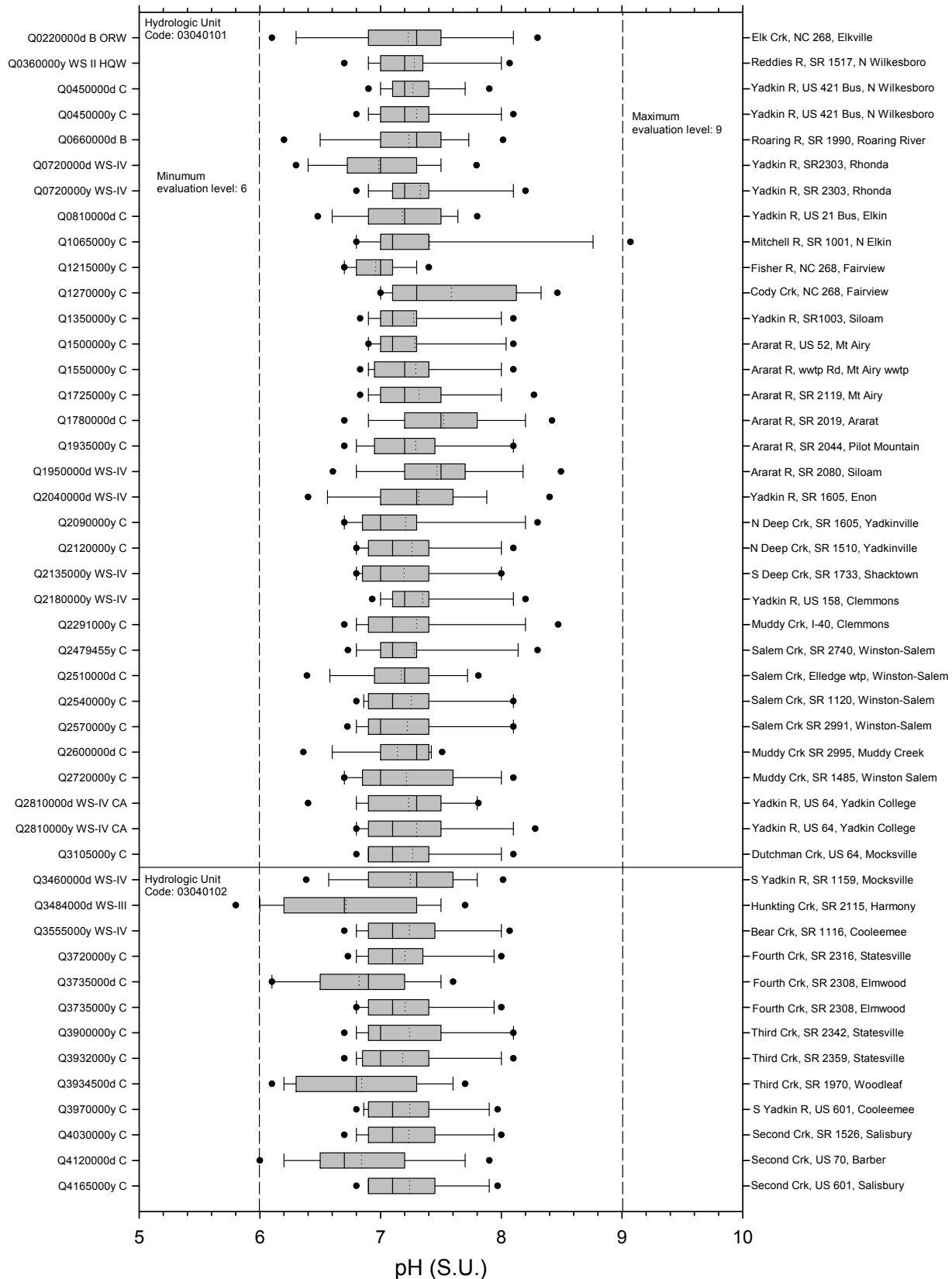


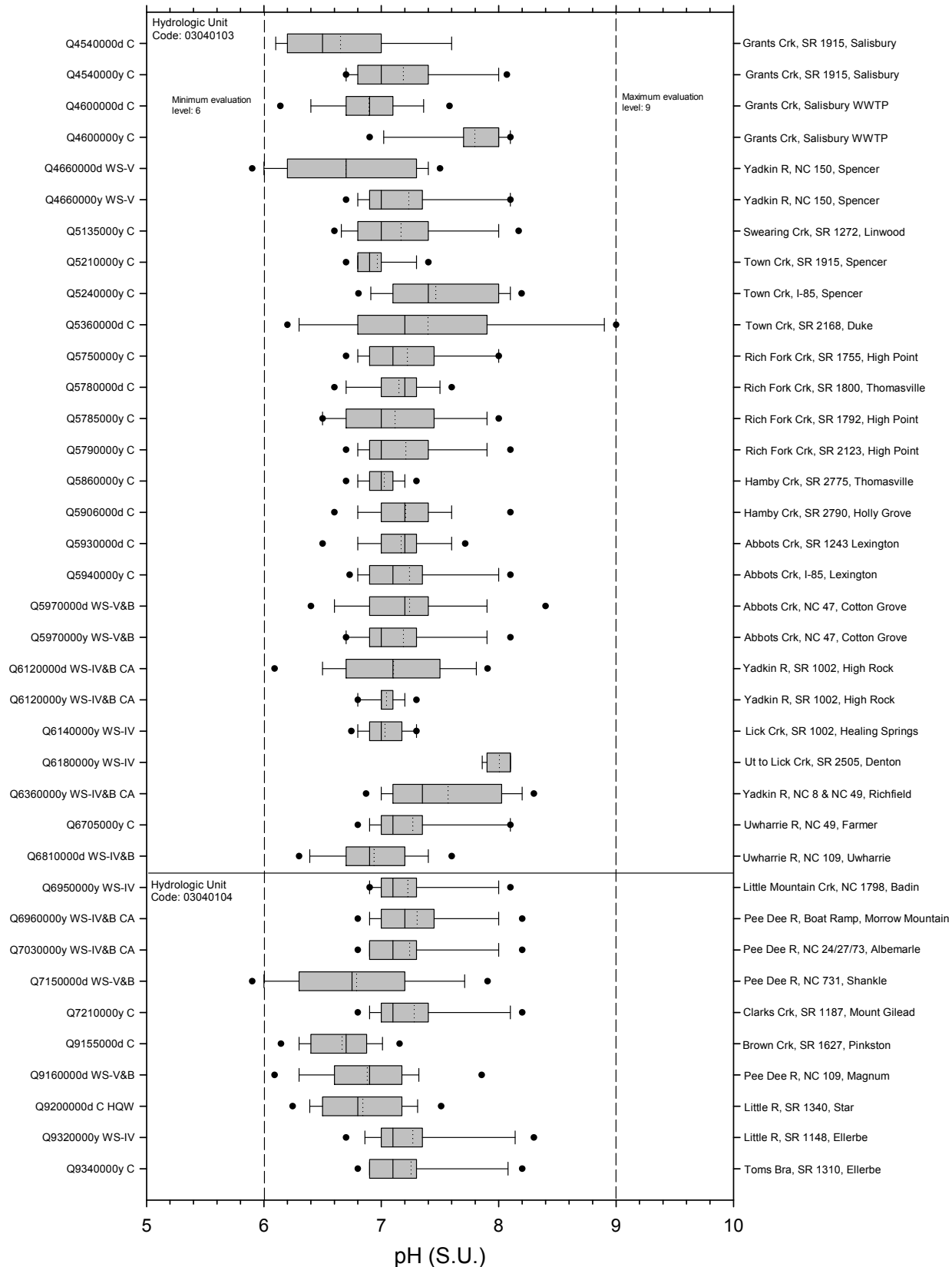
**Figure 23. Box Plots of Dissolved Oxygen in the High Rock Lake and Lake Tillery HUs**



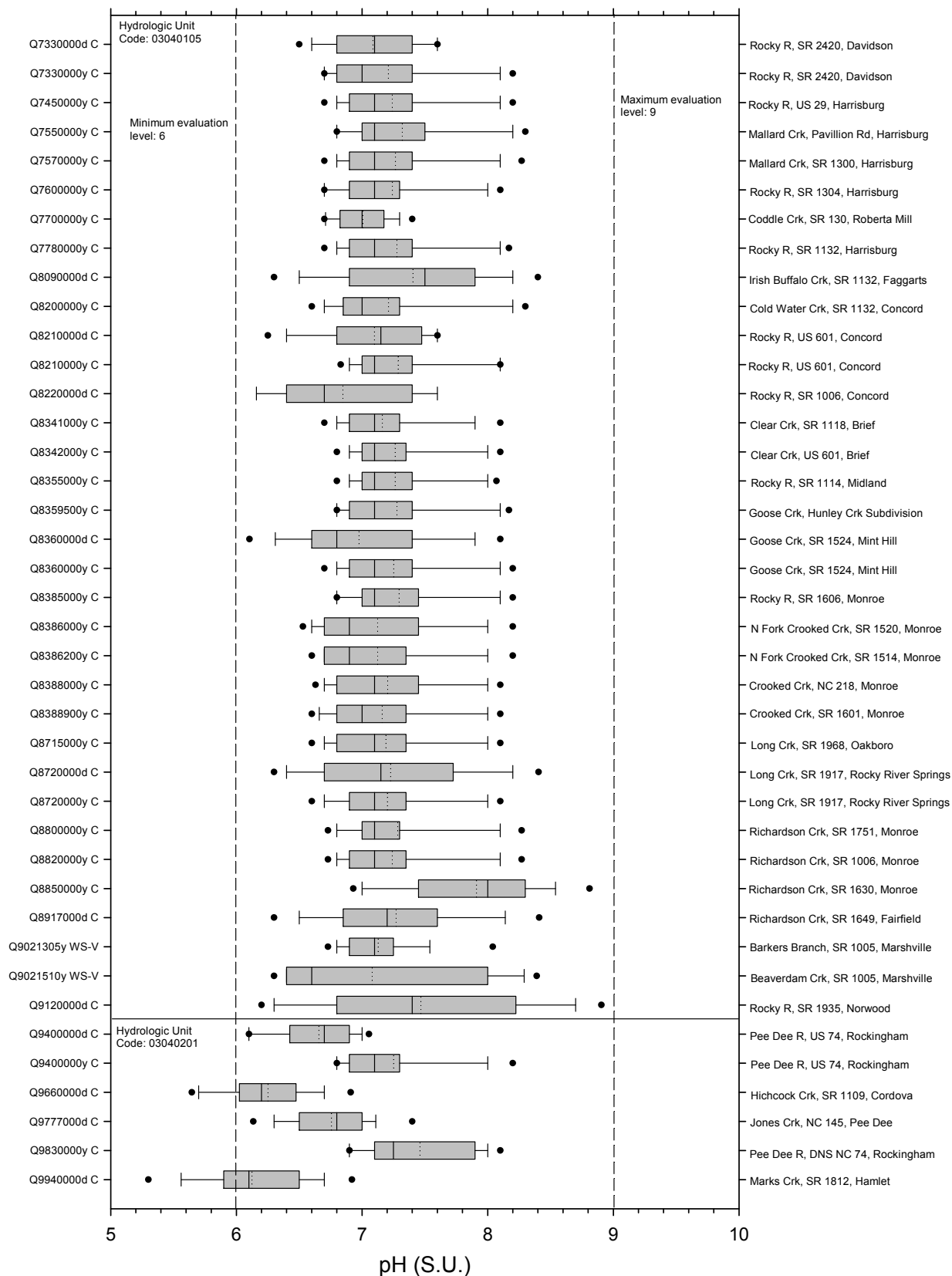
**Figure 24. Box Plots of Dissolved Oxygen in the Rocky River and Pee Dee River HUs**



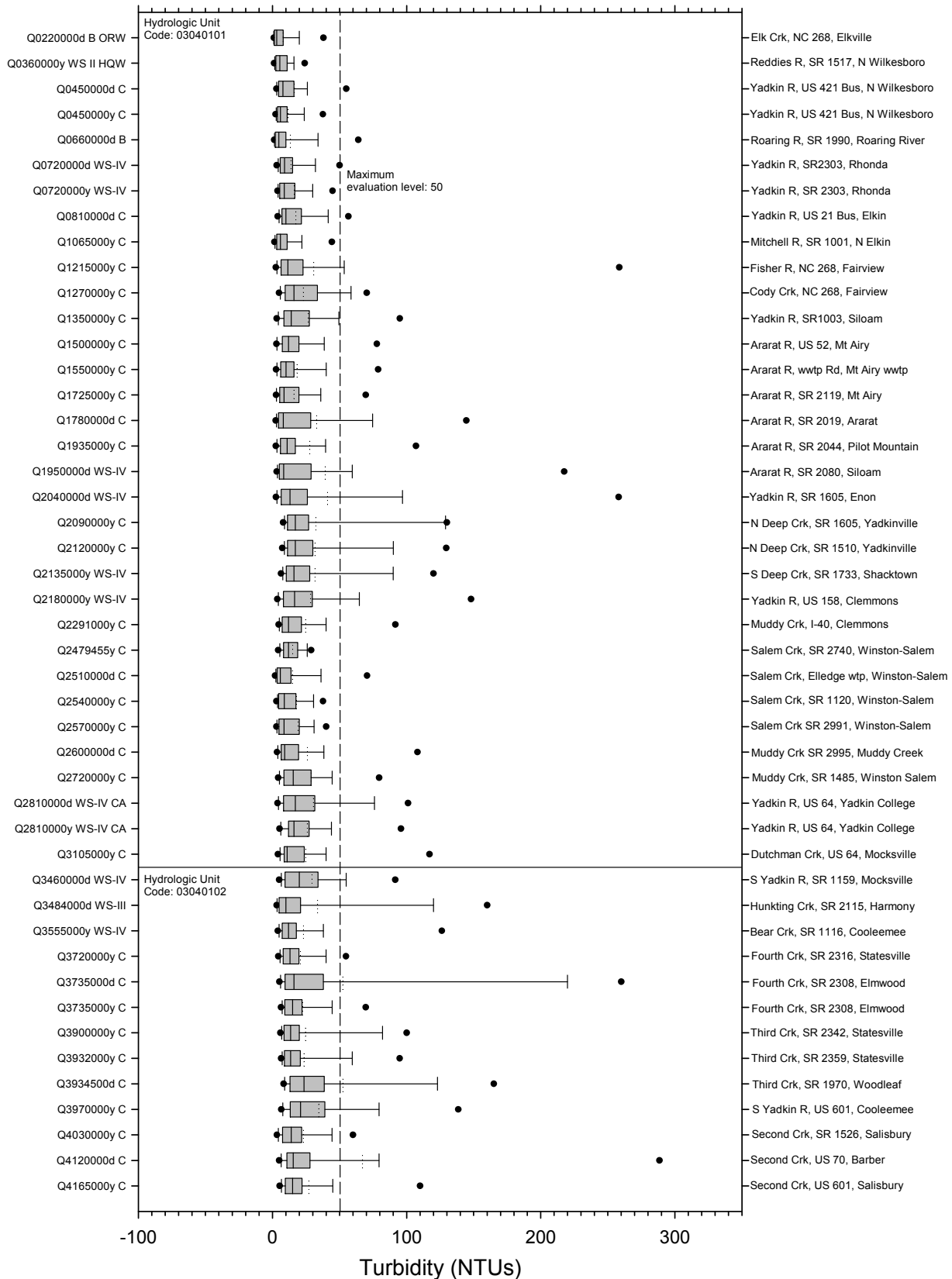


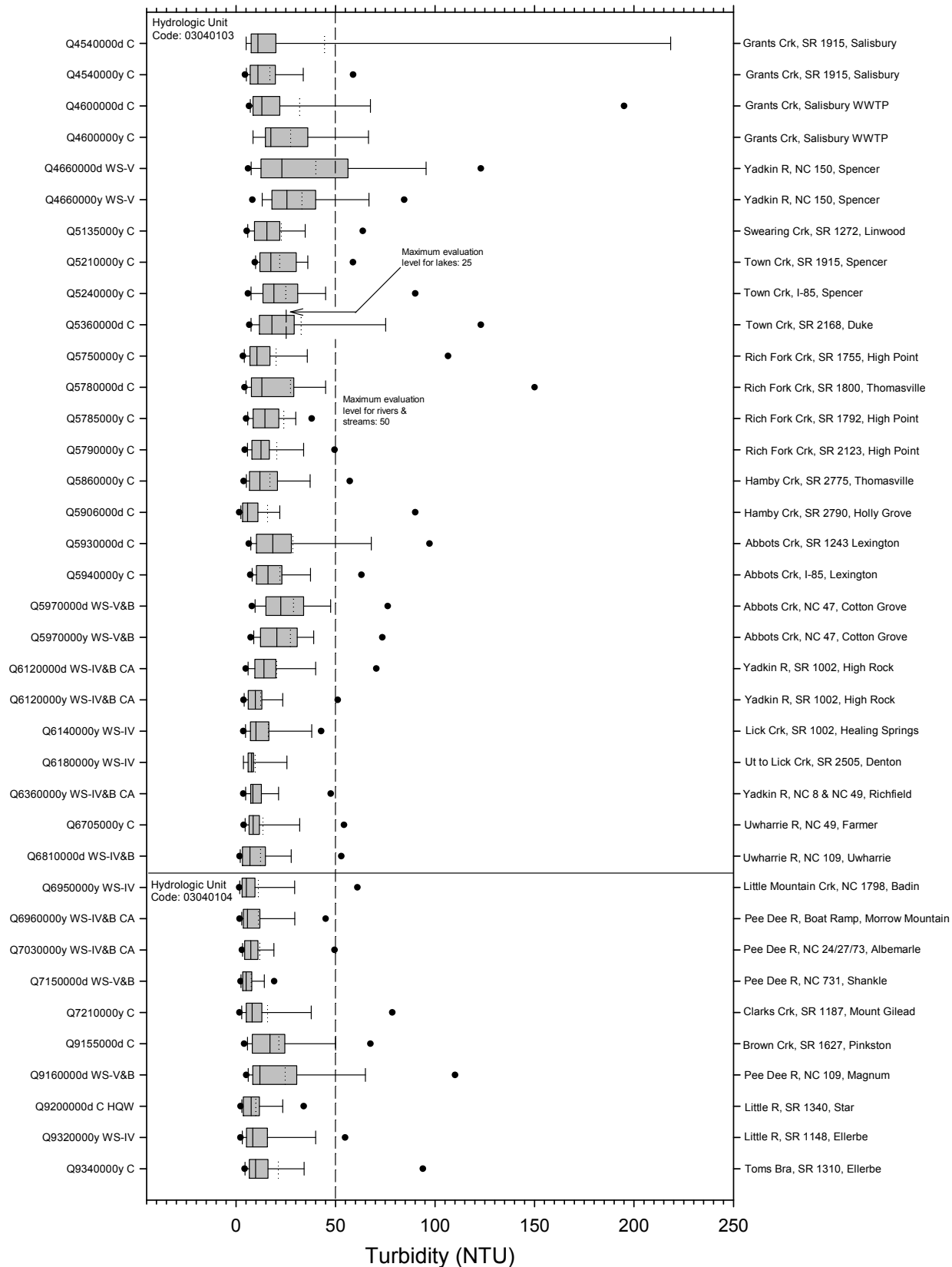


**Figure 26. Box Plots of pH in the High Rock Lake and Lake Tillery HUs**

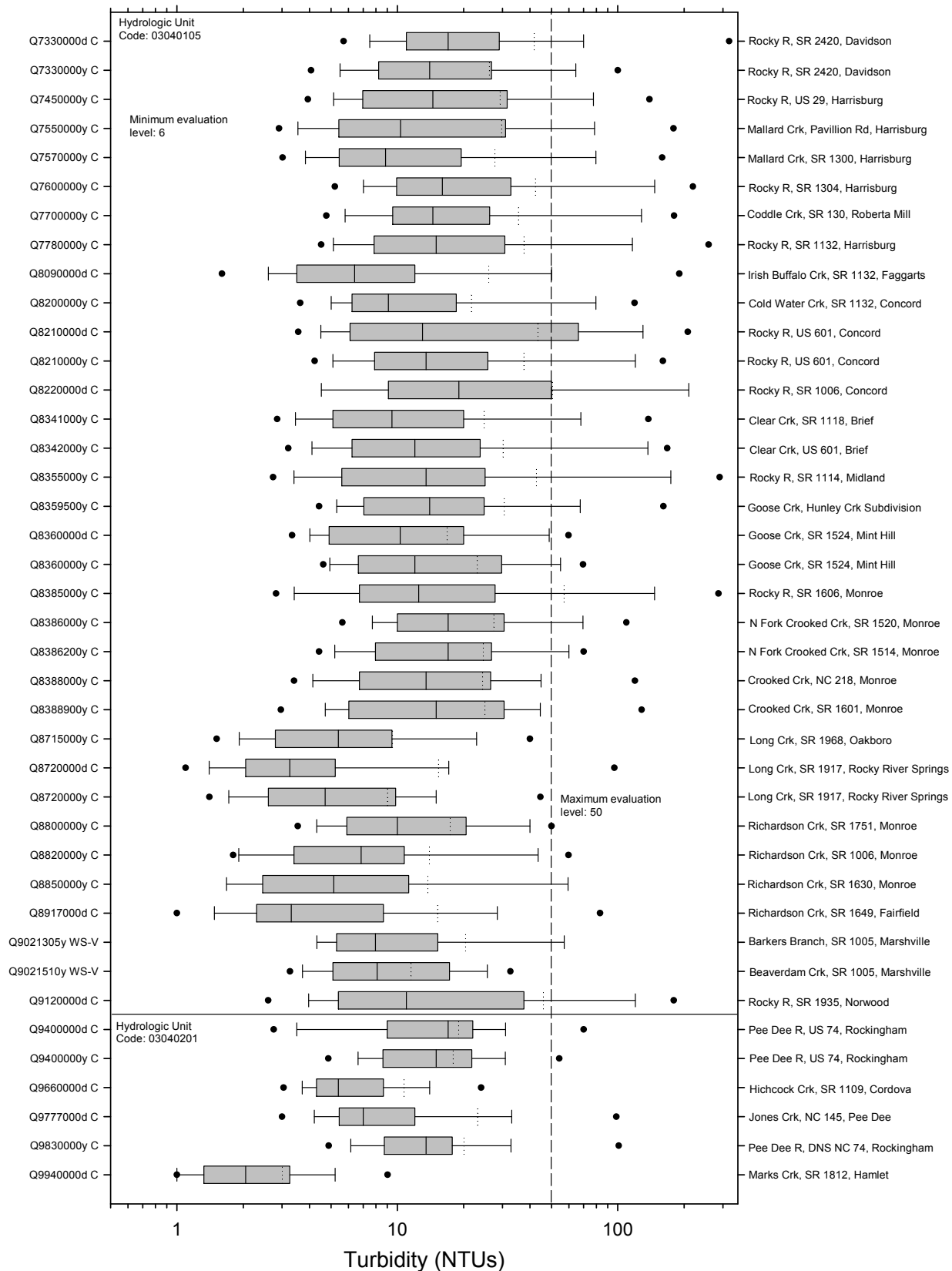


**Figure 27. Box Plots of pH in the Rocky River and Pee Dee River HUs**

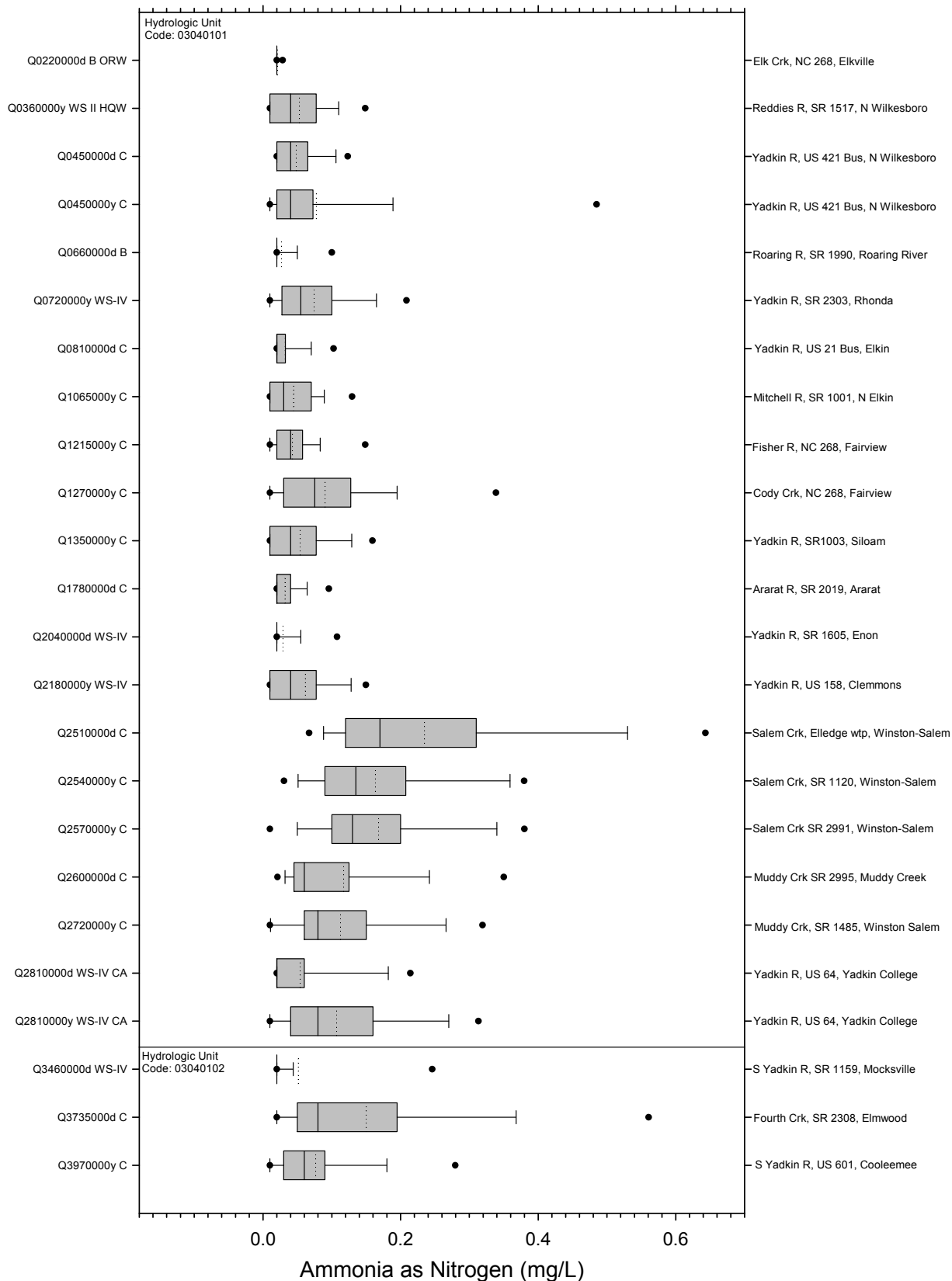




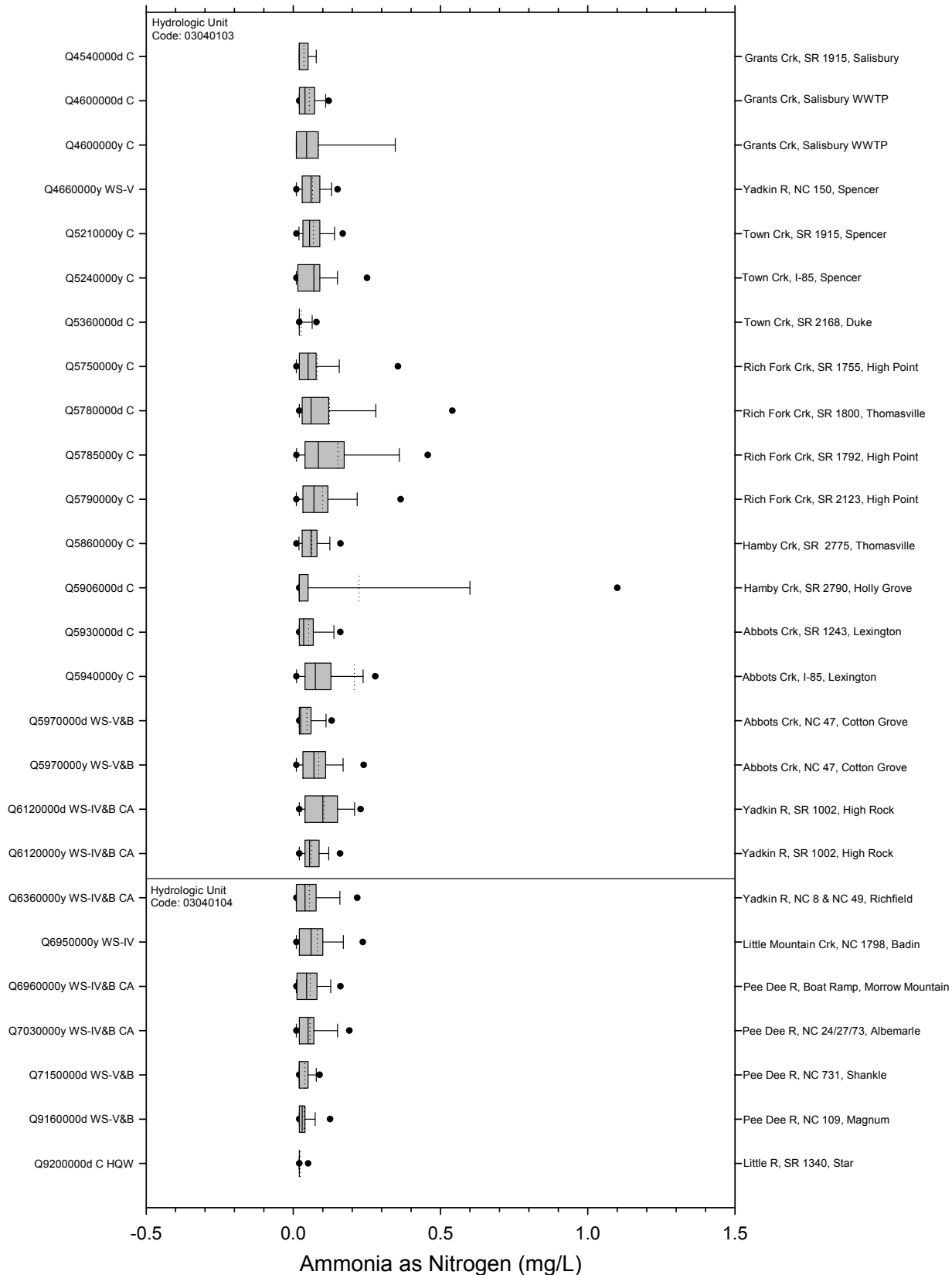
**Figure 29. Box Plots of Turbidity in the High Rock Lake and Lake Tillery HUs**



**Figure 30. Box Plots of Turbidity in the Rocky River and Pee Dee River HUs**

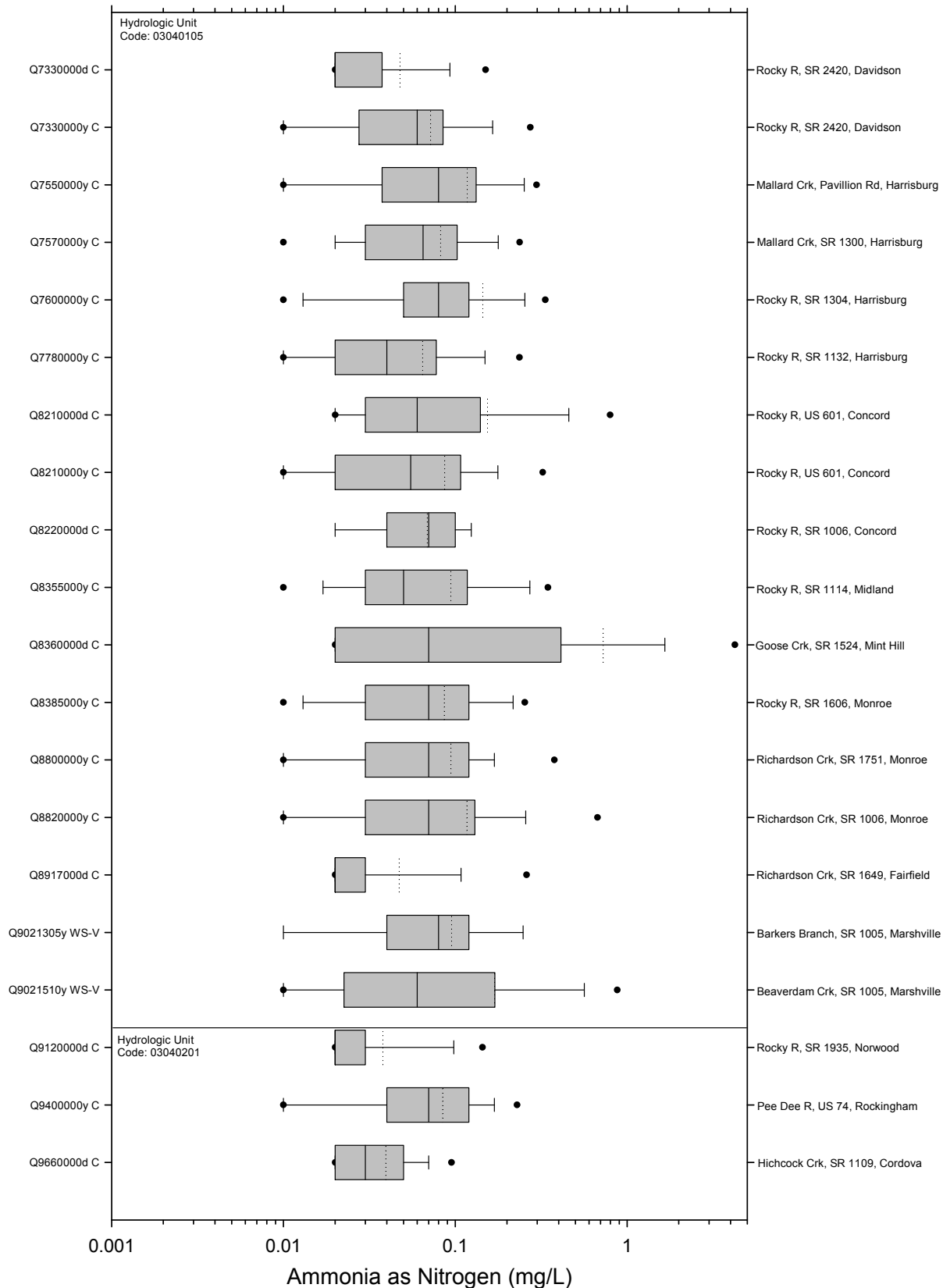


**Figure 31. Box Plots of Ammonia as Nitrogen in the Yadkin River Headwaters and South Yadkin River HUs**



**Figure 32. Box Plots of Ammonia as Nitrogen in the High Rock Lake and Lake Tillery HUs**





**Figure 33. Box Plots of Ammonia as Nitrogen in the Rocky River and Pee Dee River HUs**

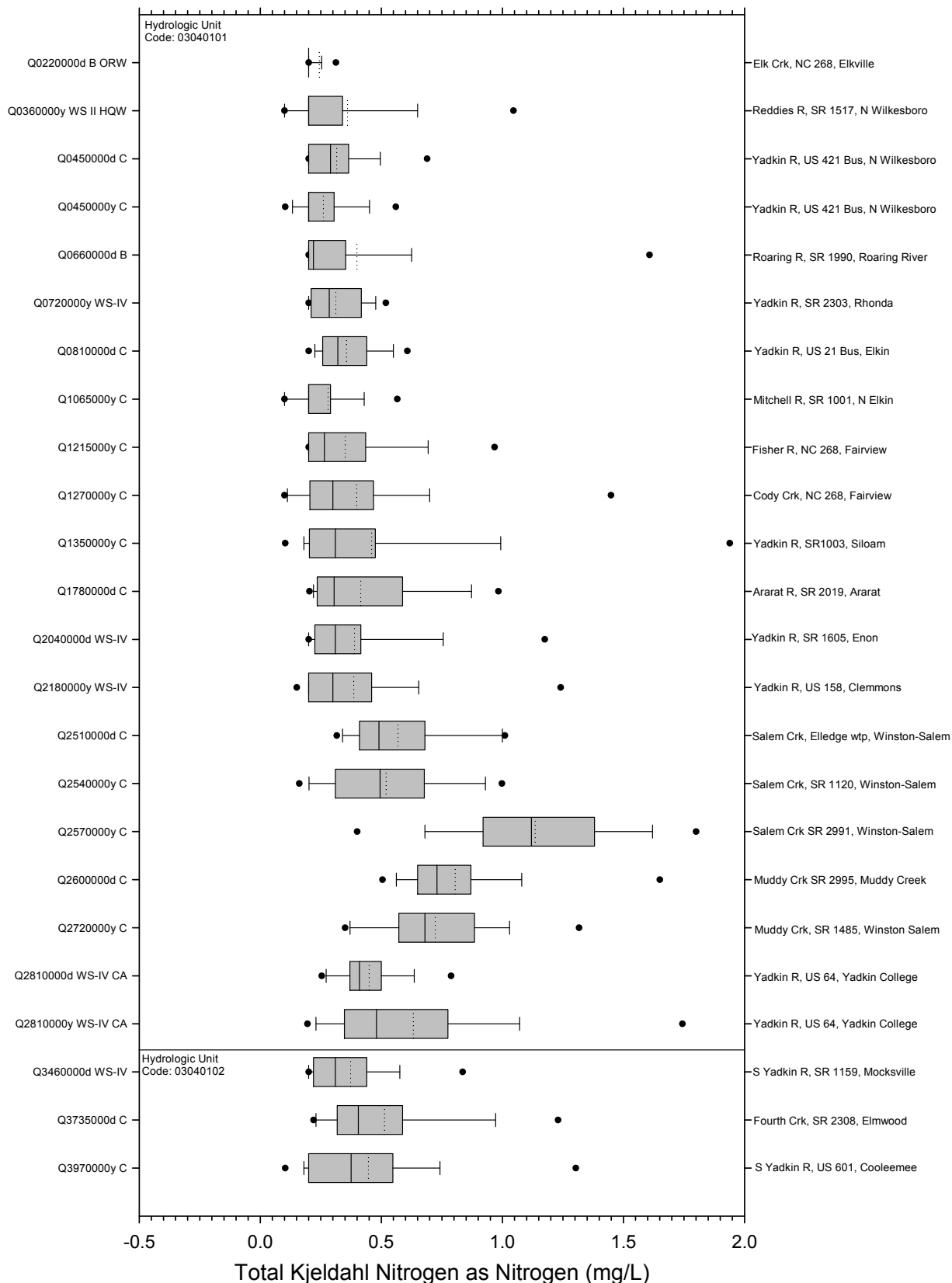
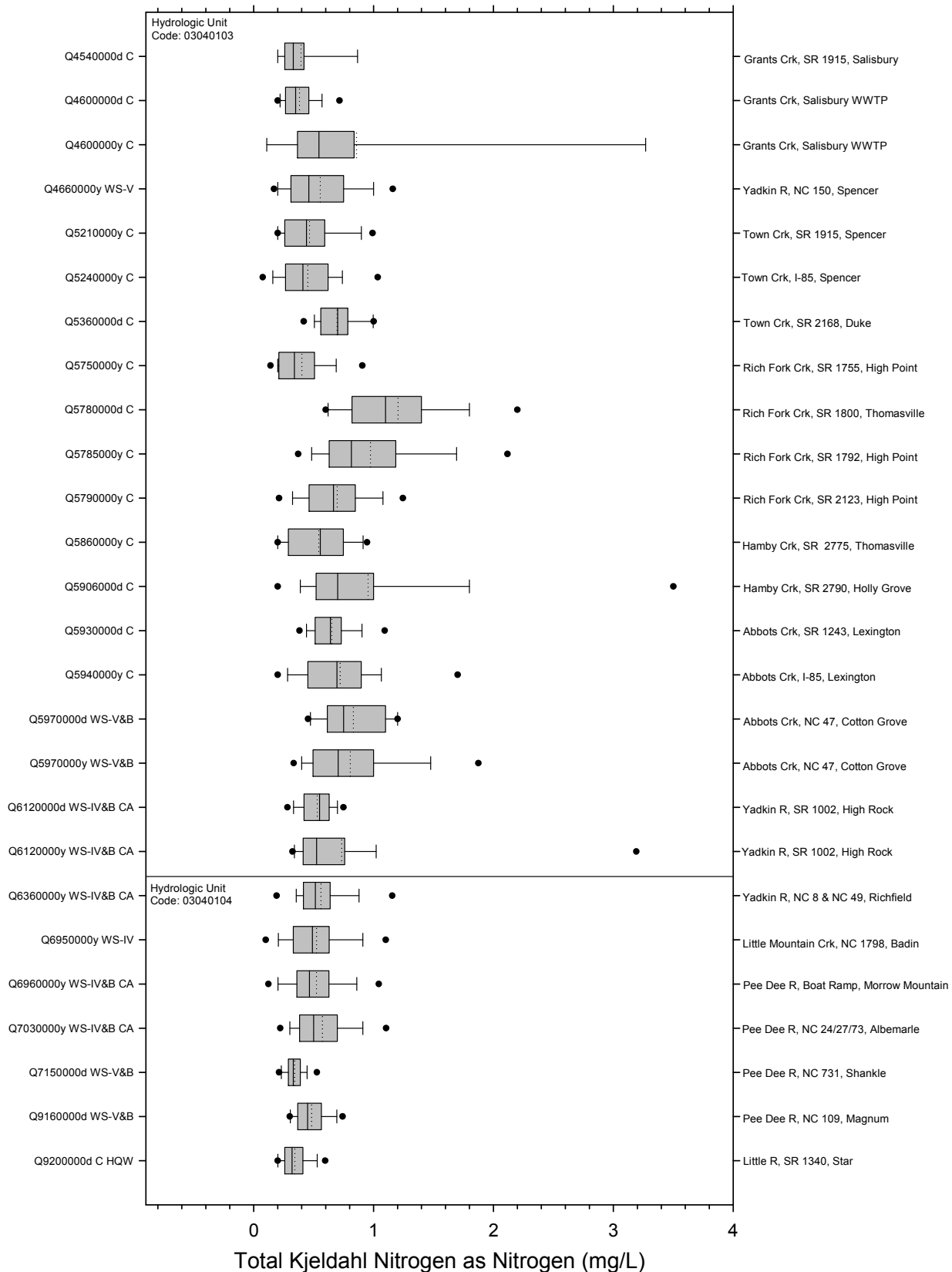
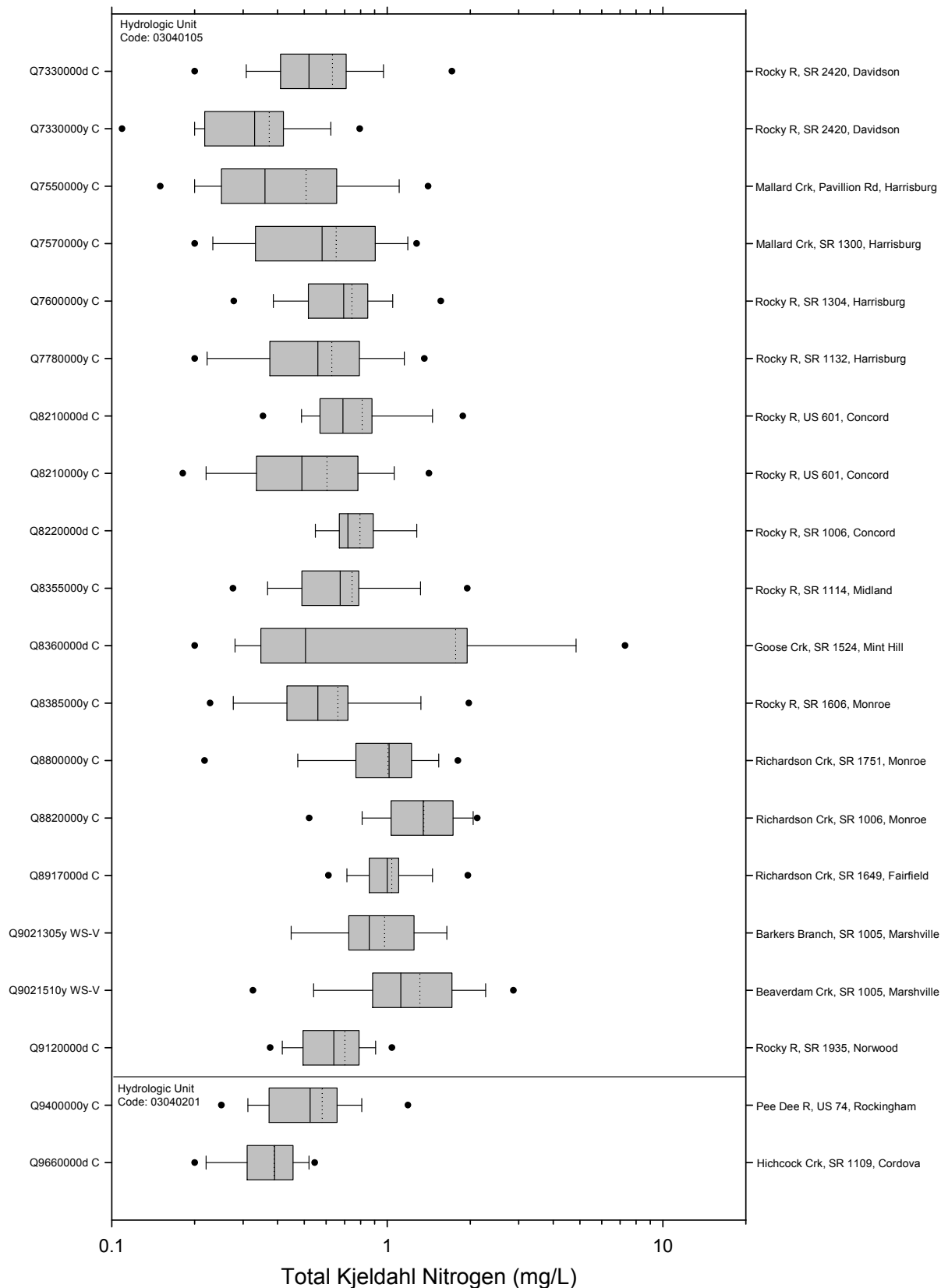


Figure 34. Box Plots of Total Kjeldahl Nitrogen as Nitrogen in the Yadkin River Headwaters and South Yadkin River HUs



**Figure 35. Box Plots of Total Kjeldahl Nitrogen as Nitrogen in the High Rock Lake and Lake Tillery HUs**



**Figure 36. Box Plots of Total Kjeldahl Nitrogen as Nitrogen in the Rocky River and Pee Dee River HUs**

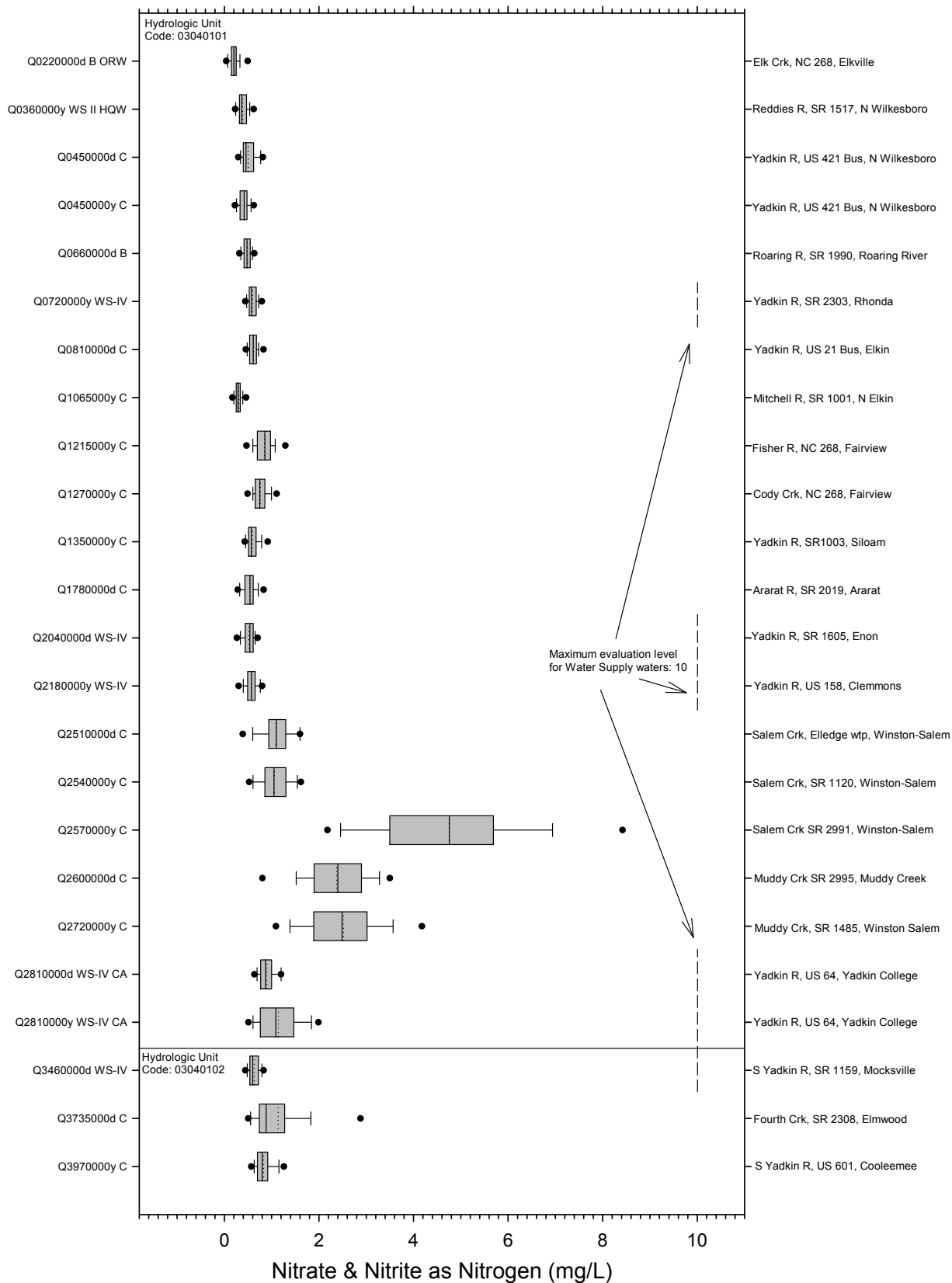
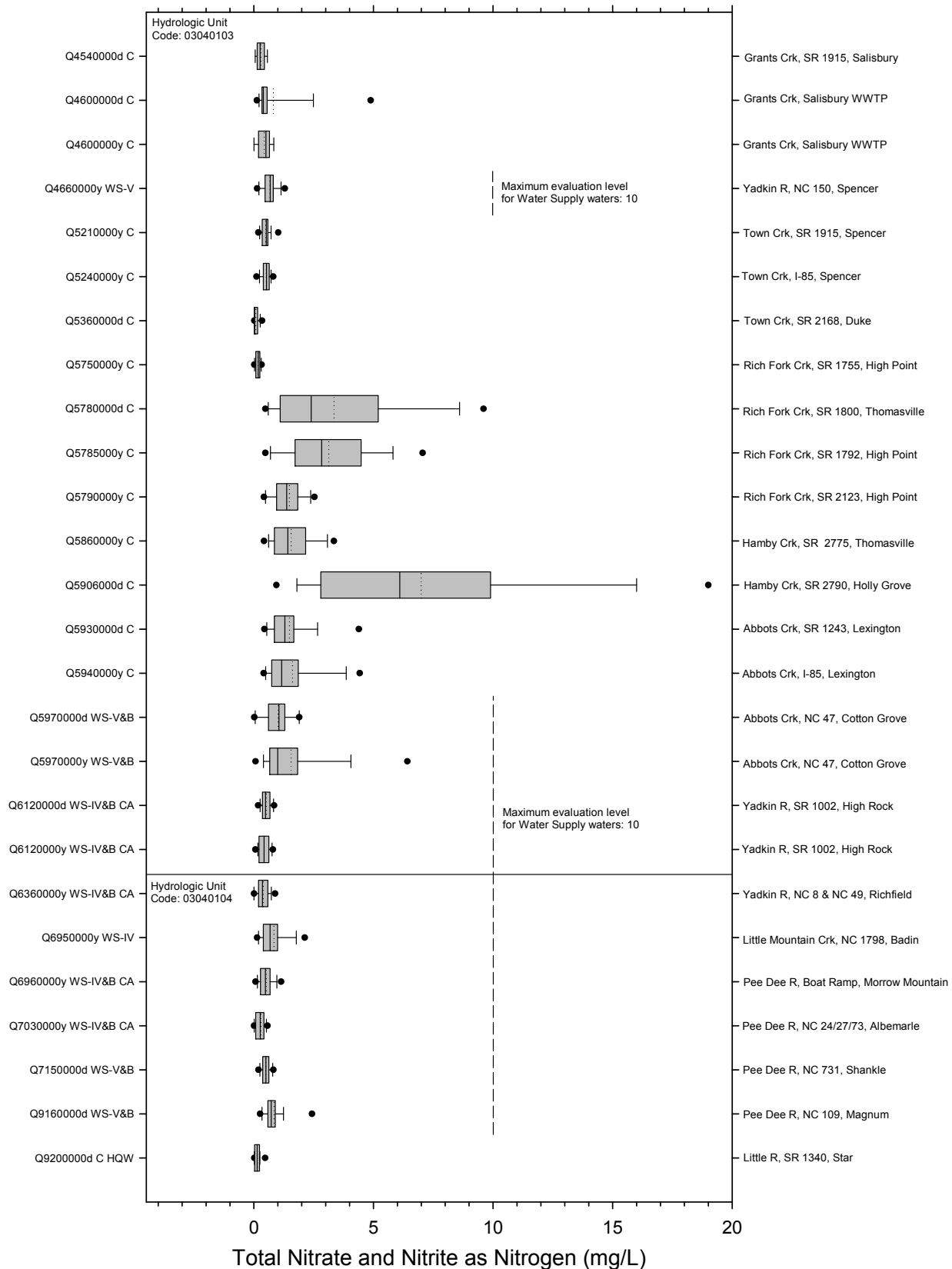
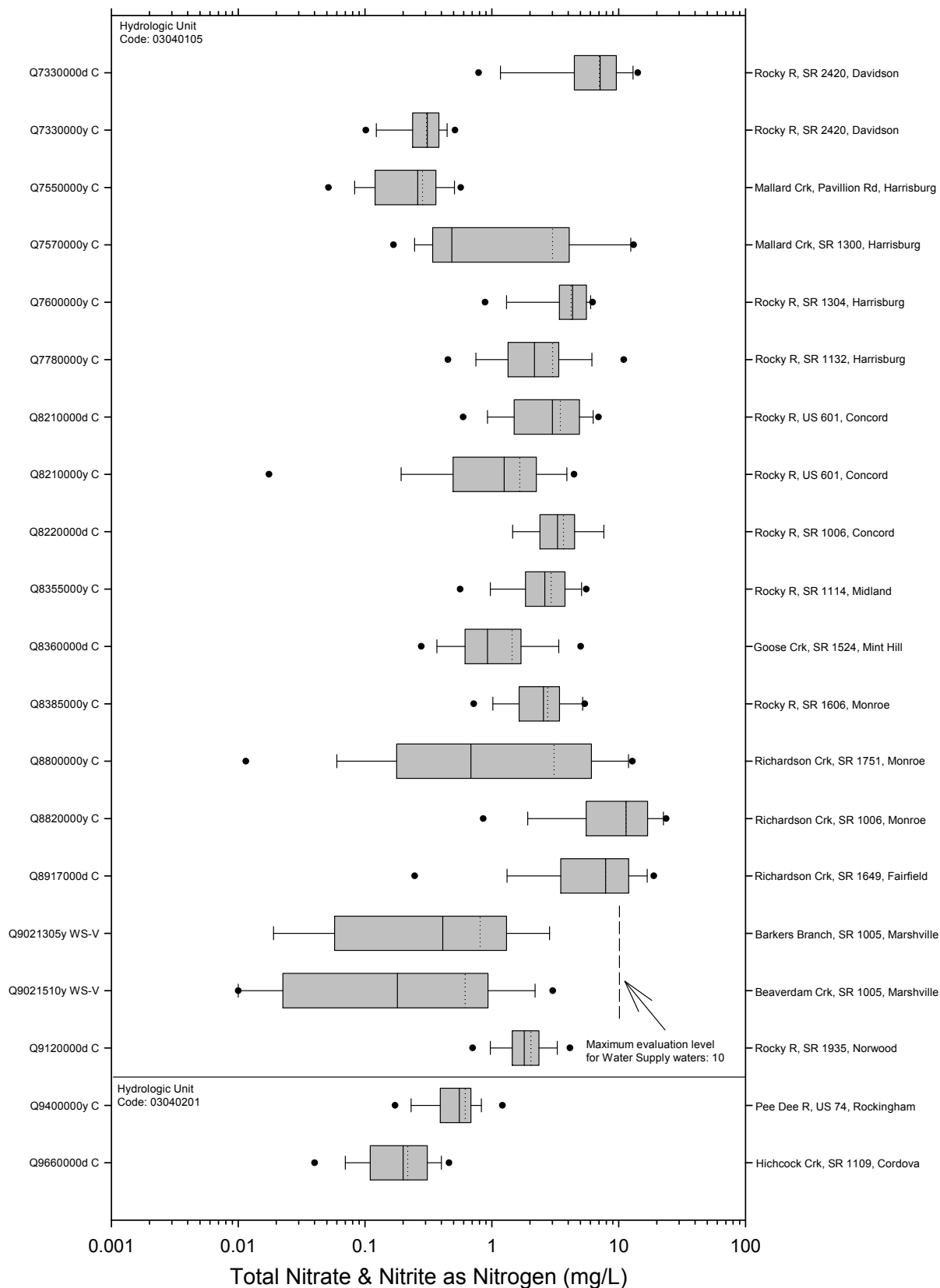


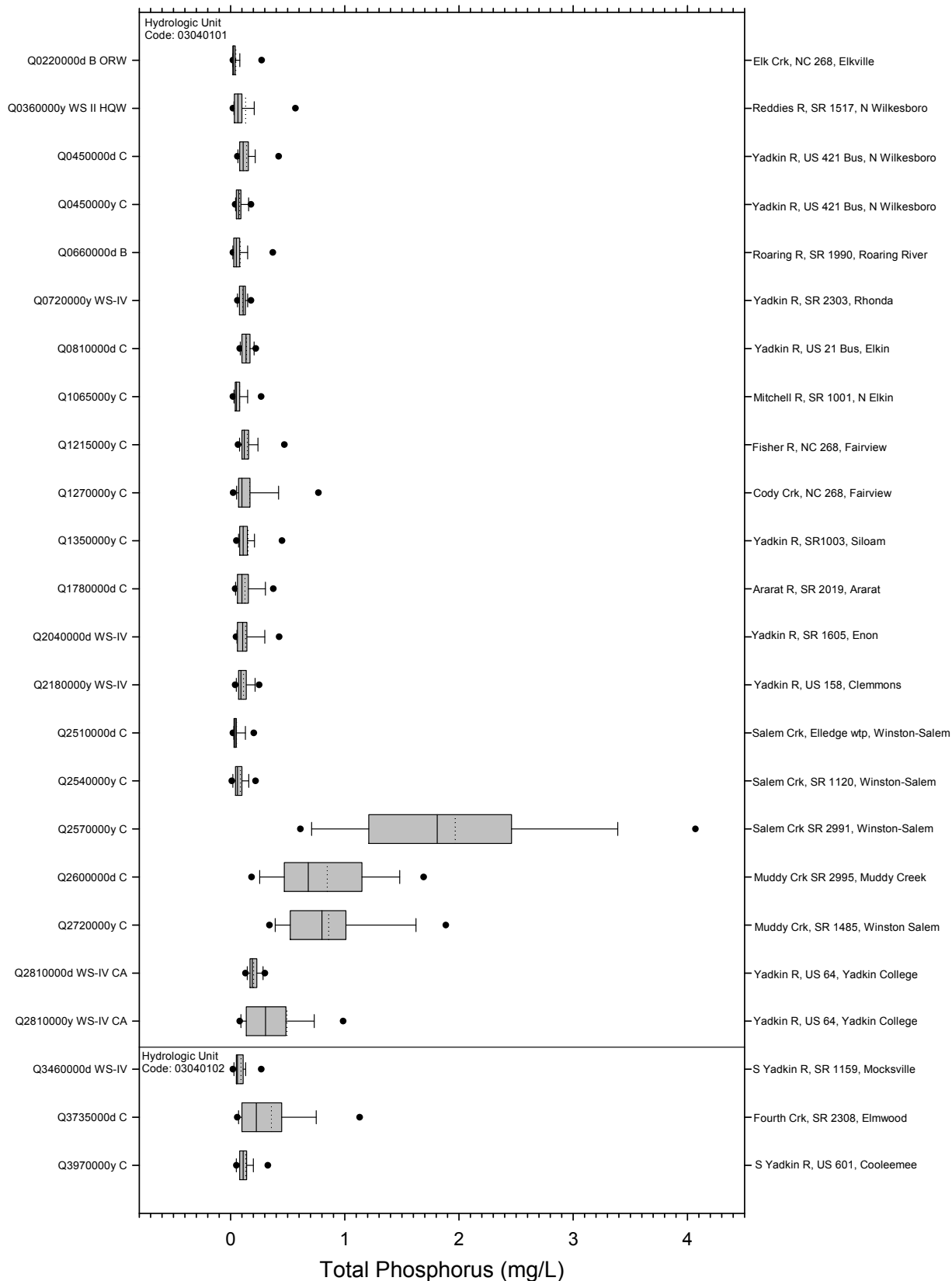
Figure 37. Box Plots of Total Nitrate and Nitrite as Nitrogen in the Yadkin River Headwaters and South Yadkin River HUs



**Figure 38. Box Plots of Total Nitrate and Nitrite as Nitrogen in the High Rock Lake and Lake Tillery HUs**

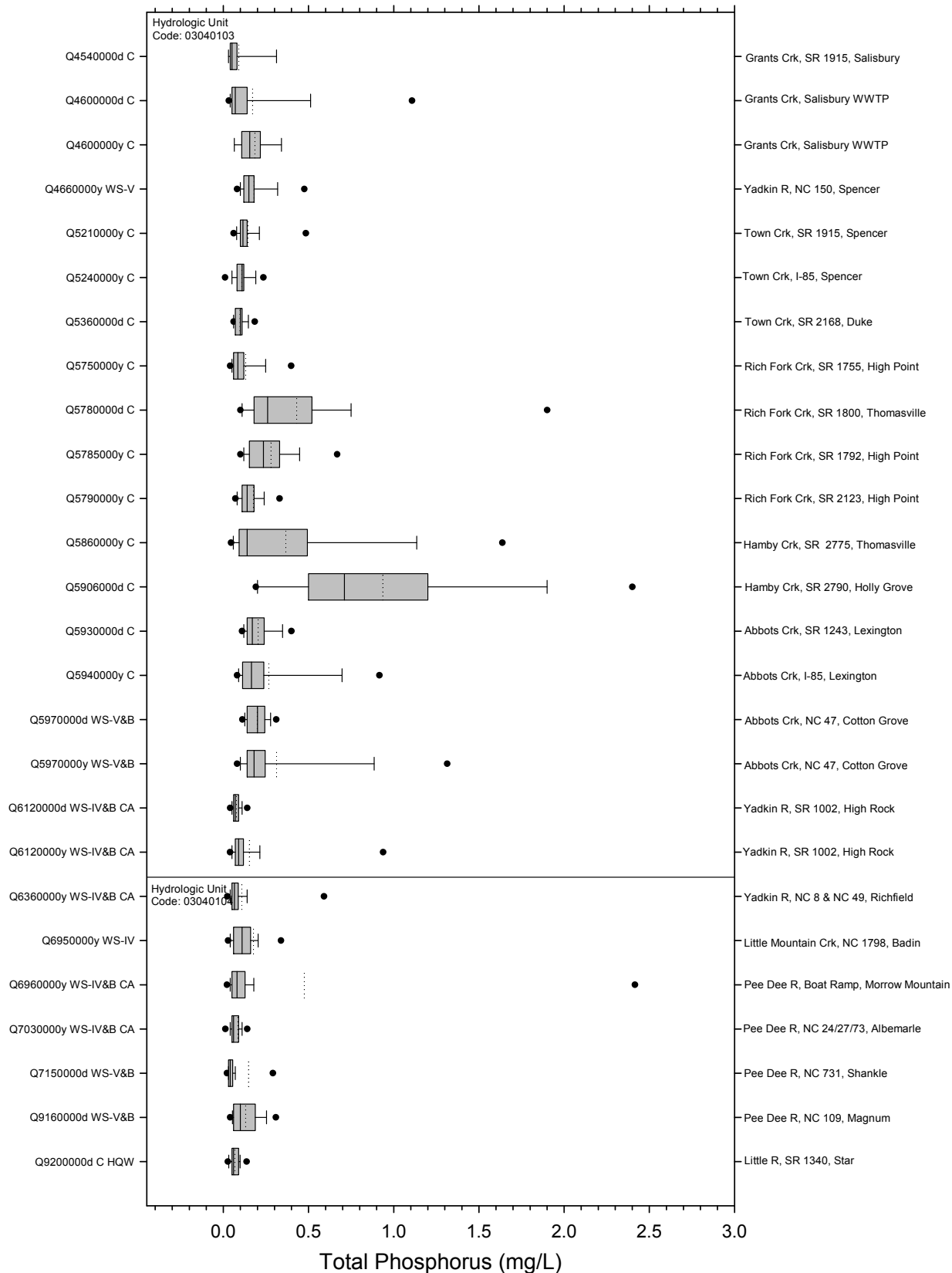


**Figure 39. Box Plots of Total Nitrate and Nitrite as Nitrogen in the Rocky River and Pee Dee River HUs**

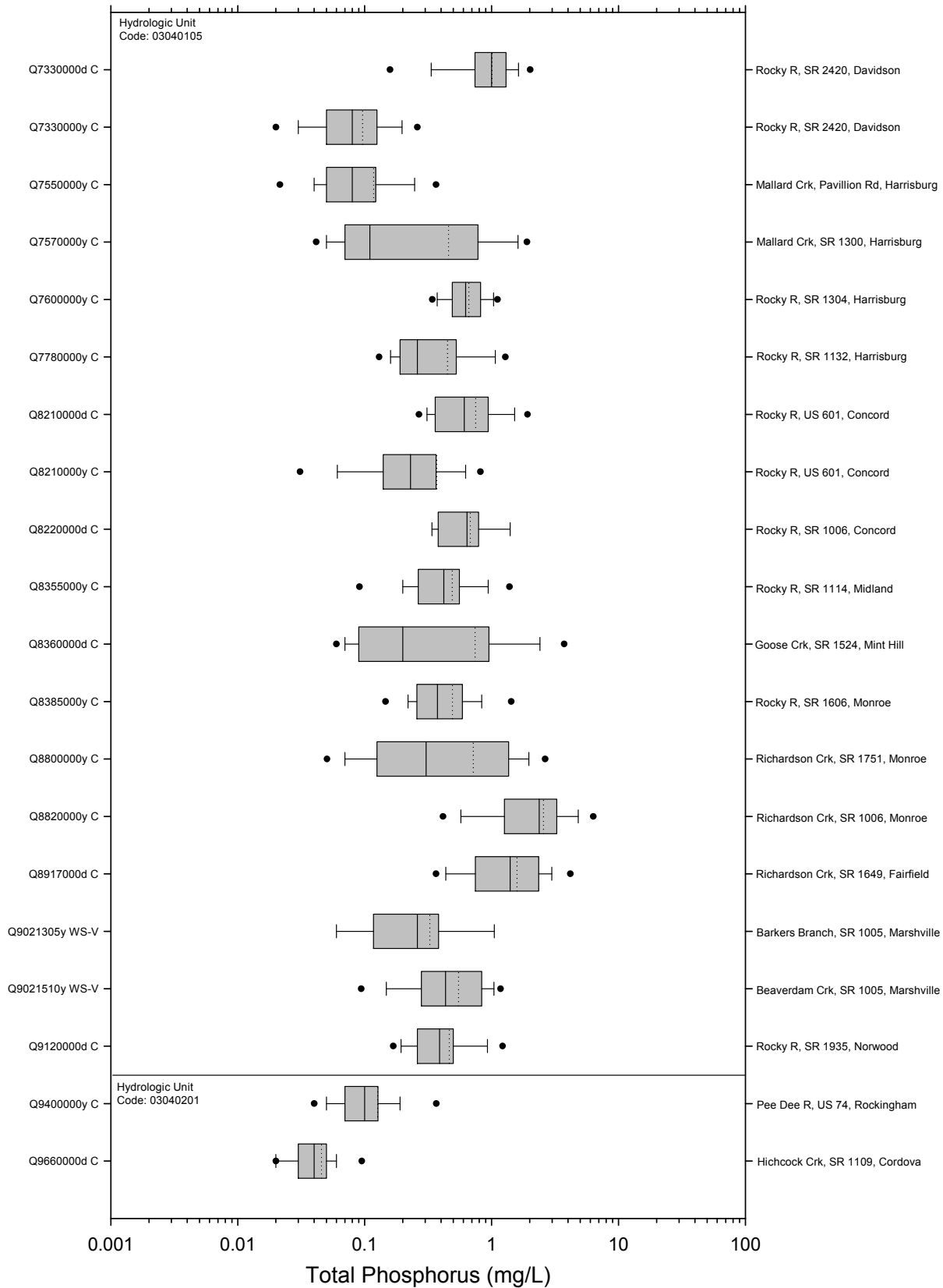


**Figure 40. Box Plots of Total Phosphorus in the Yadkin River Headwaters and South Yadkin River HUs**

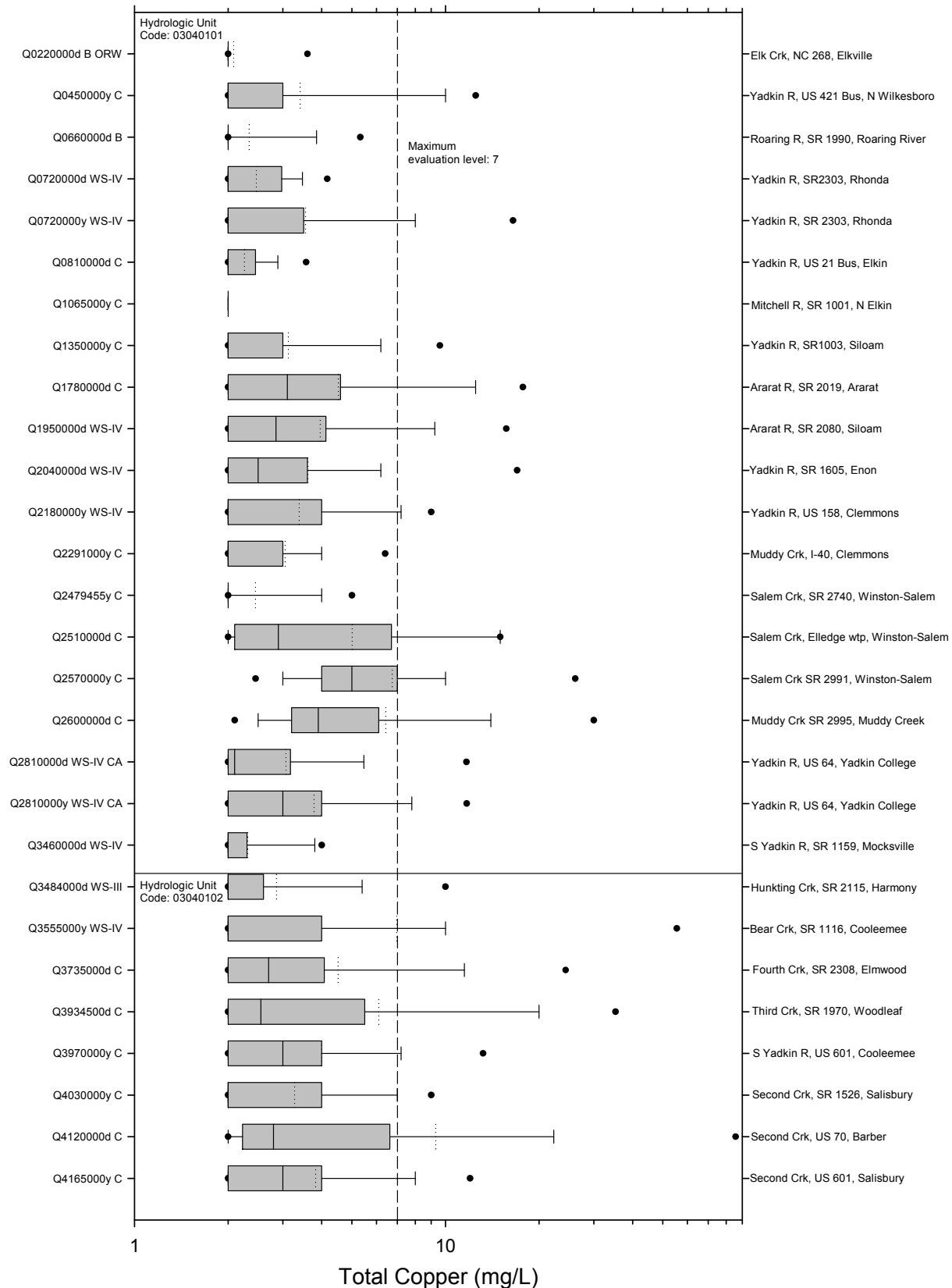




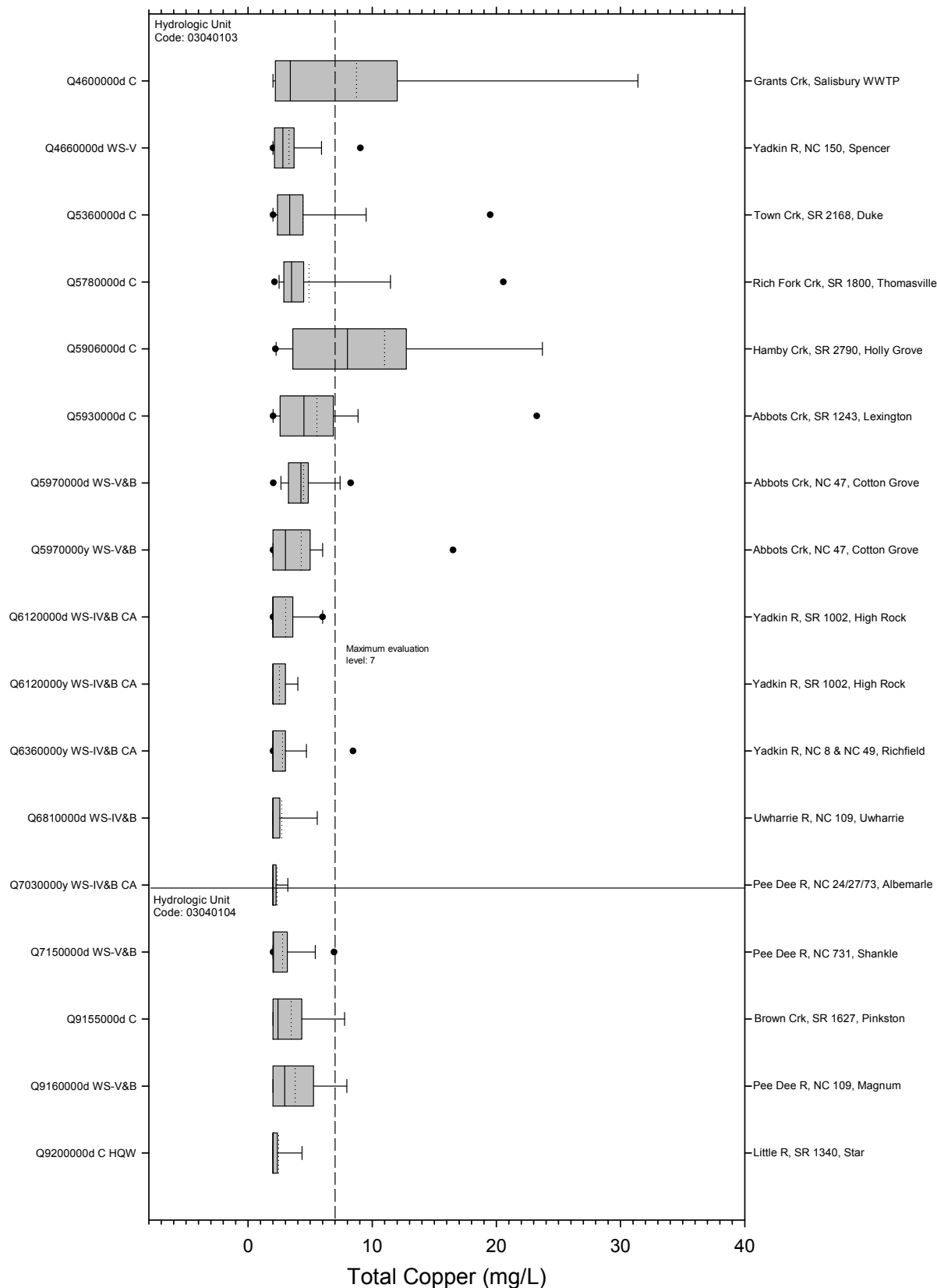
**Figure 41. Box Plots of Total Phosphorus in the High Rock Lake and Lake Tillery HUs**



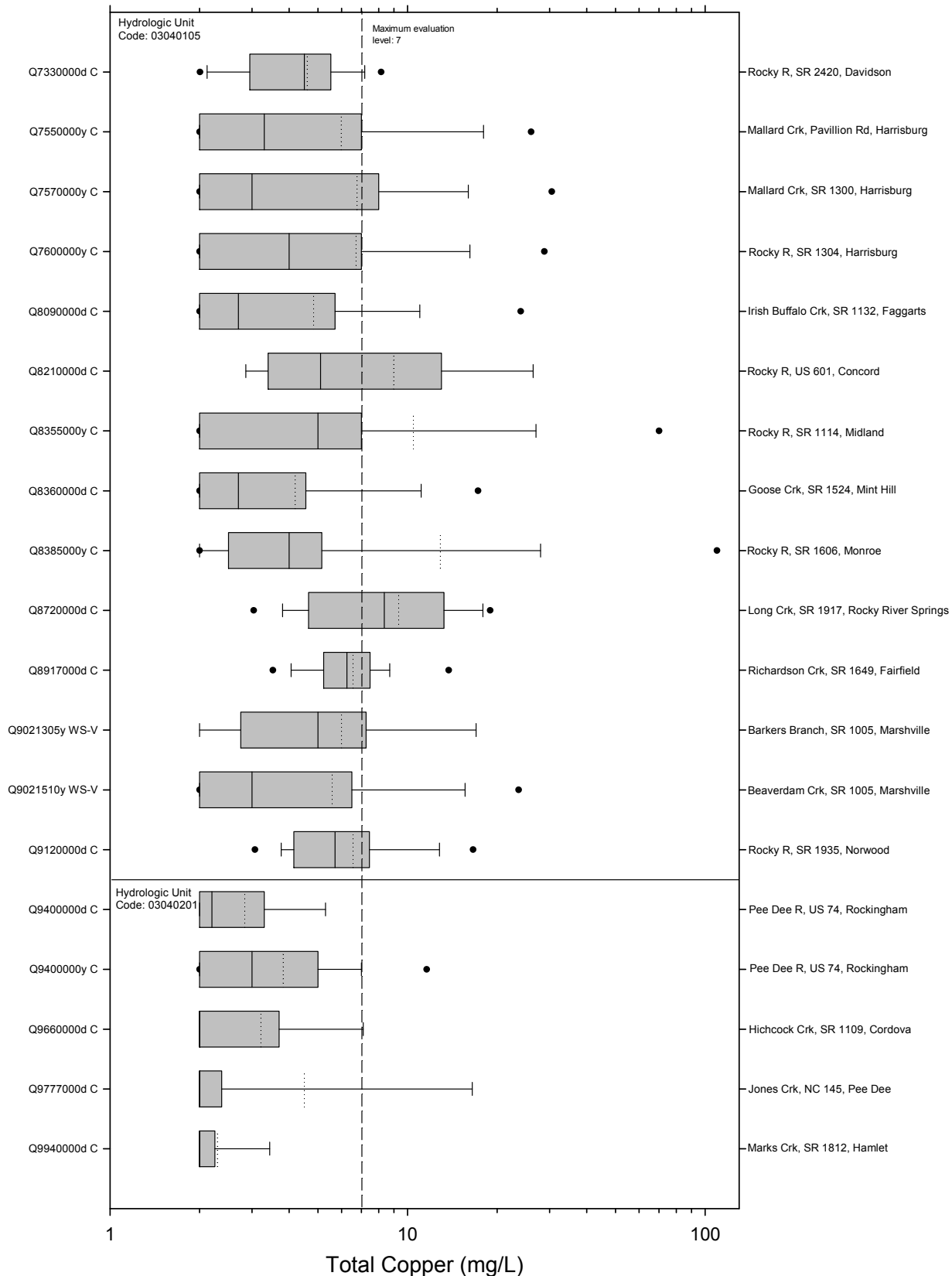
**Figure 42. Box Plots of Total Phosphorus in the Rocky River and Pee Dee River HUs**



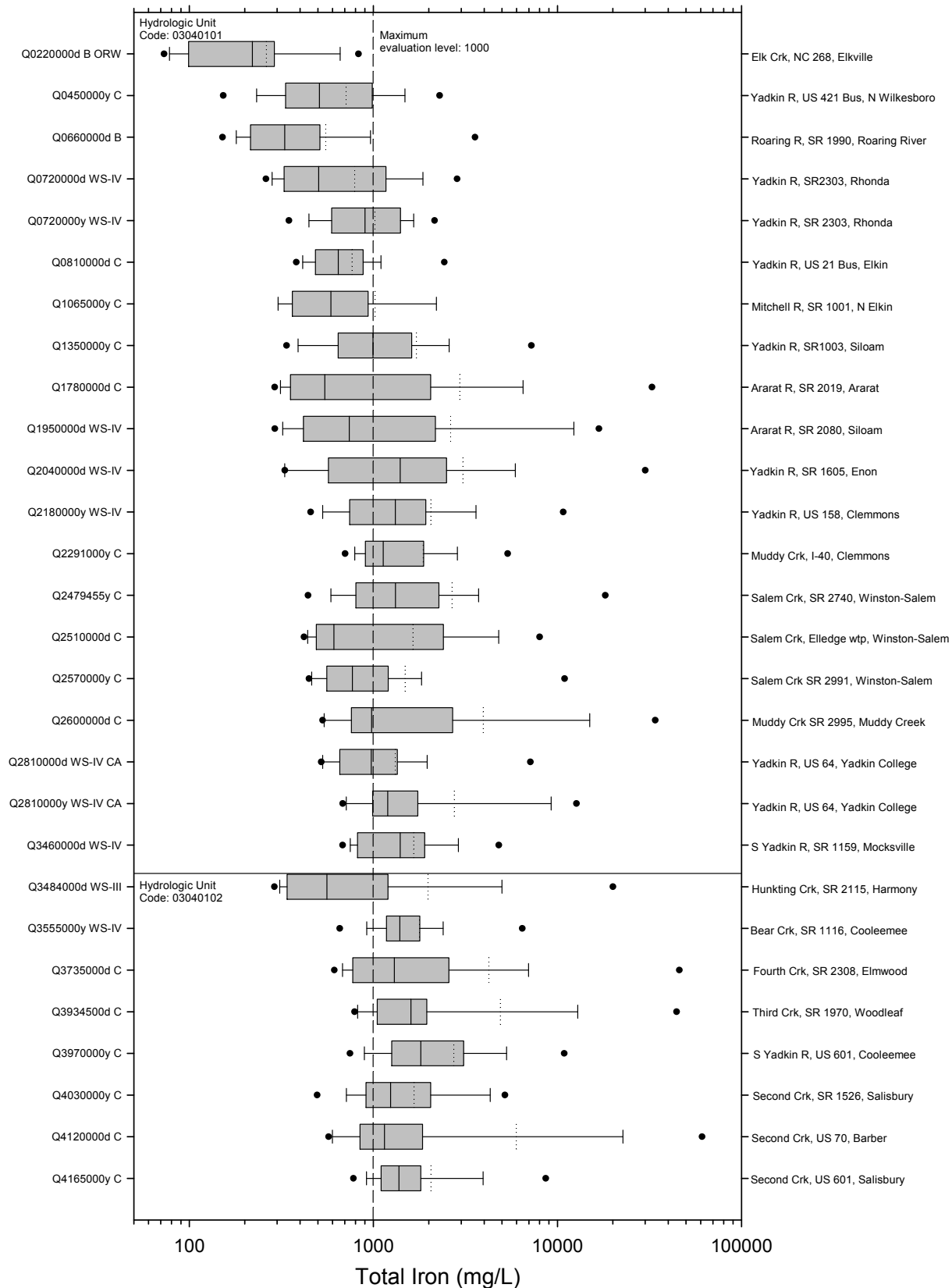
**Figure 43. Box Plots of Total Copper in the Yadkin River Headwaters and South Yadkin River HUs**



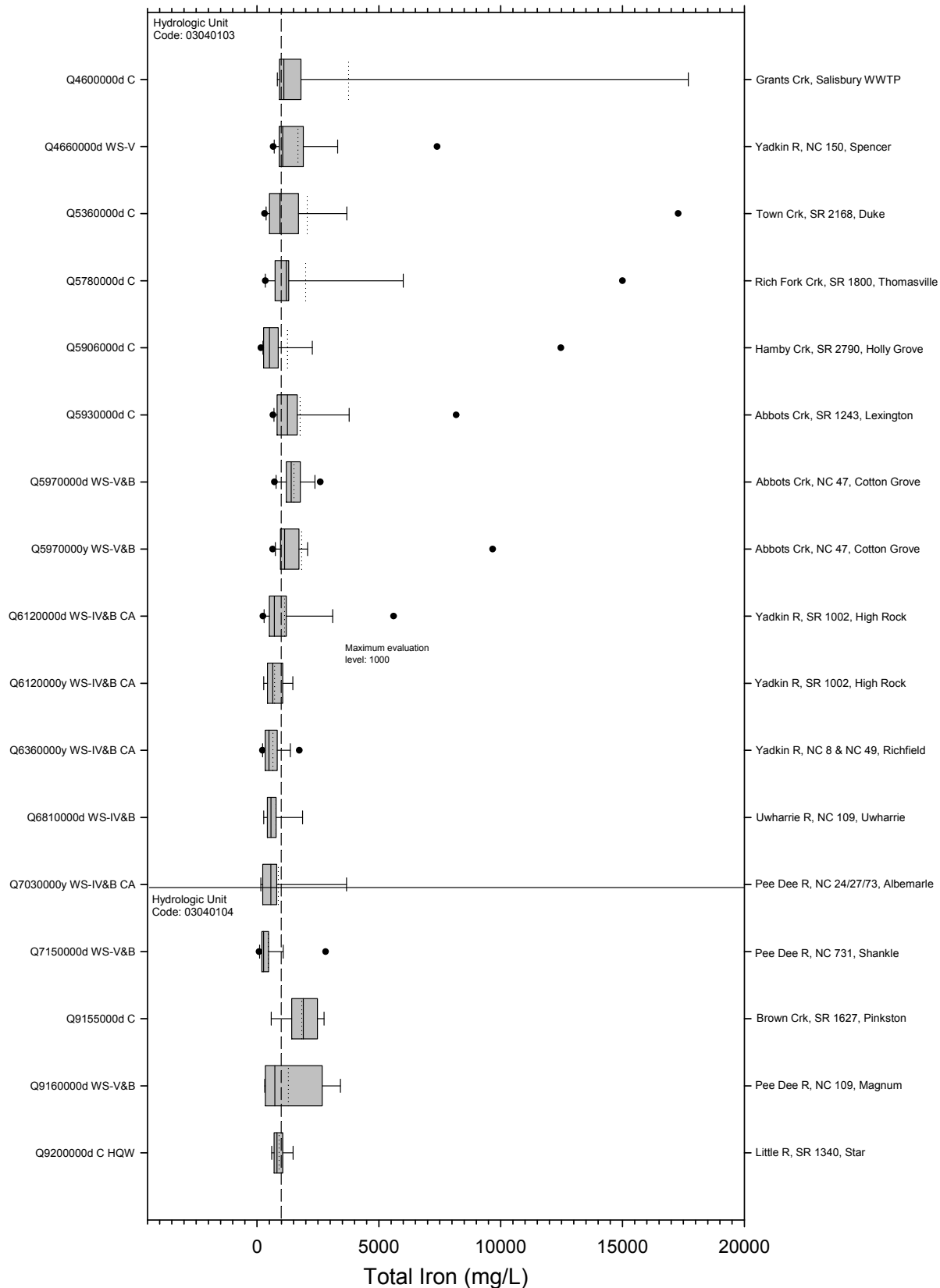
**Figure 44. Box Plots of Total Copper in the High Rock Lake and Lake Tillery HUs**



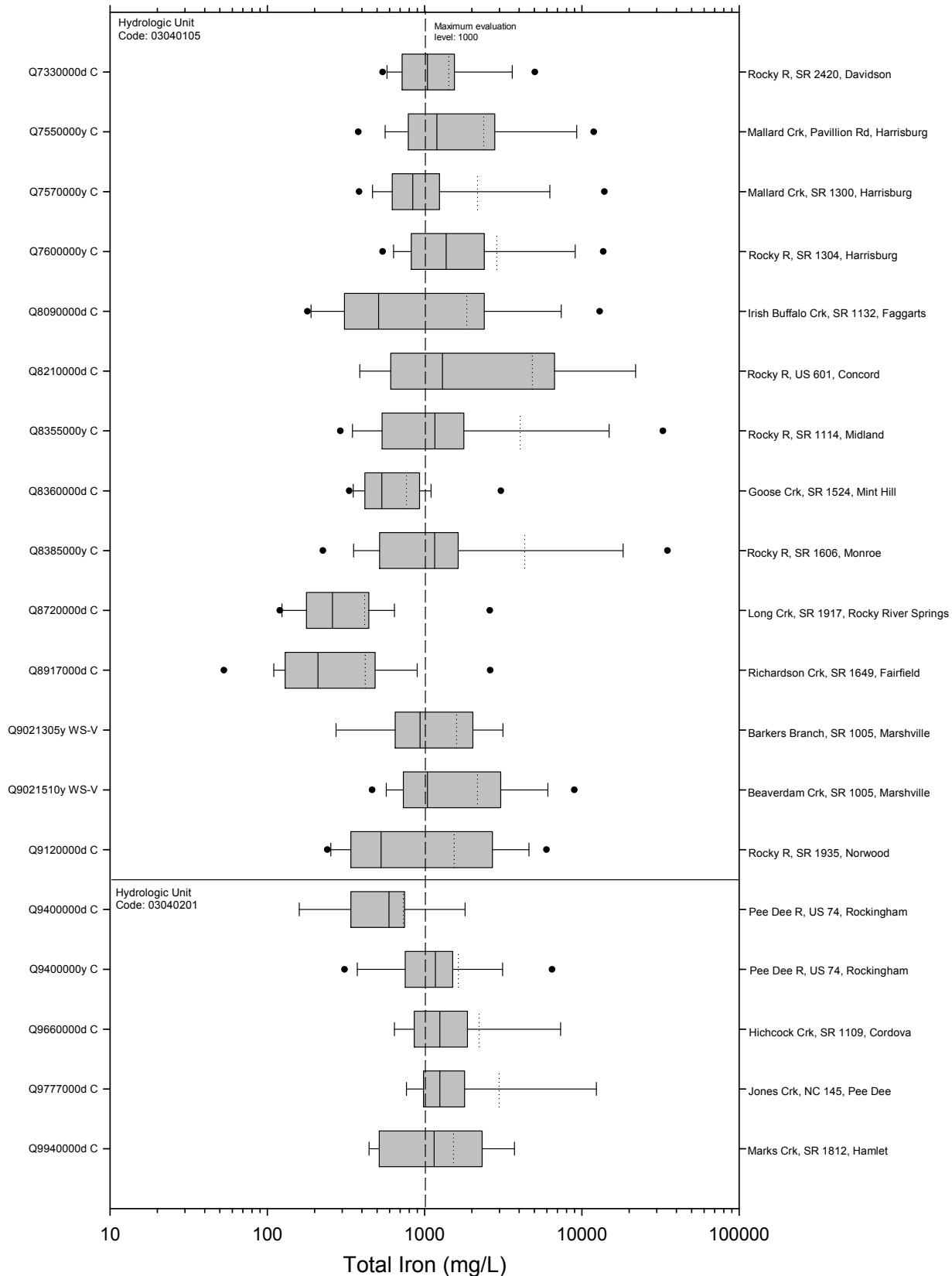
**Figure 45. Box Plots of Total Copper in the Rocky River and Pee Dee River HUs**



**Figure 46. Box Plots of Total Iron in the Yadkin River Headwaters and South Yadkin River HUs**

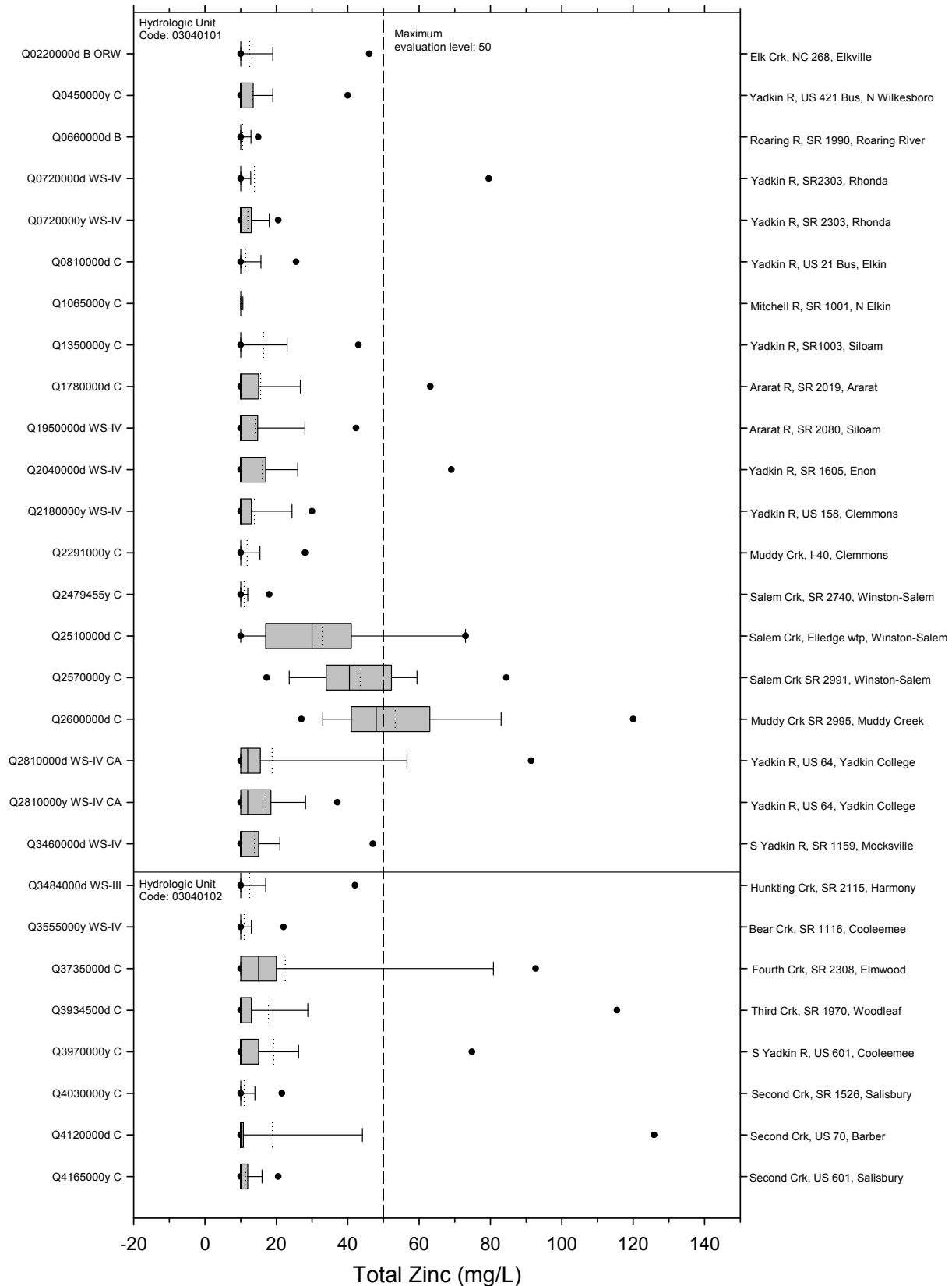


**Figure 47. Box Plots of Total Iron in the High Rock Lake and Lake Tillery HUs**

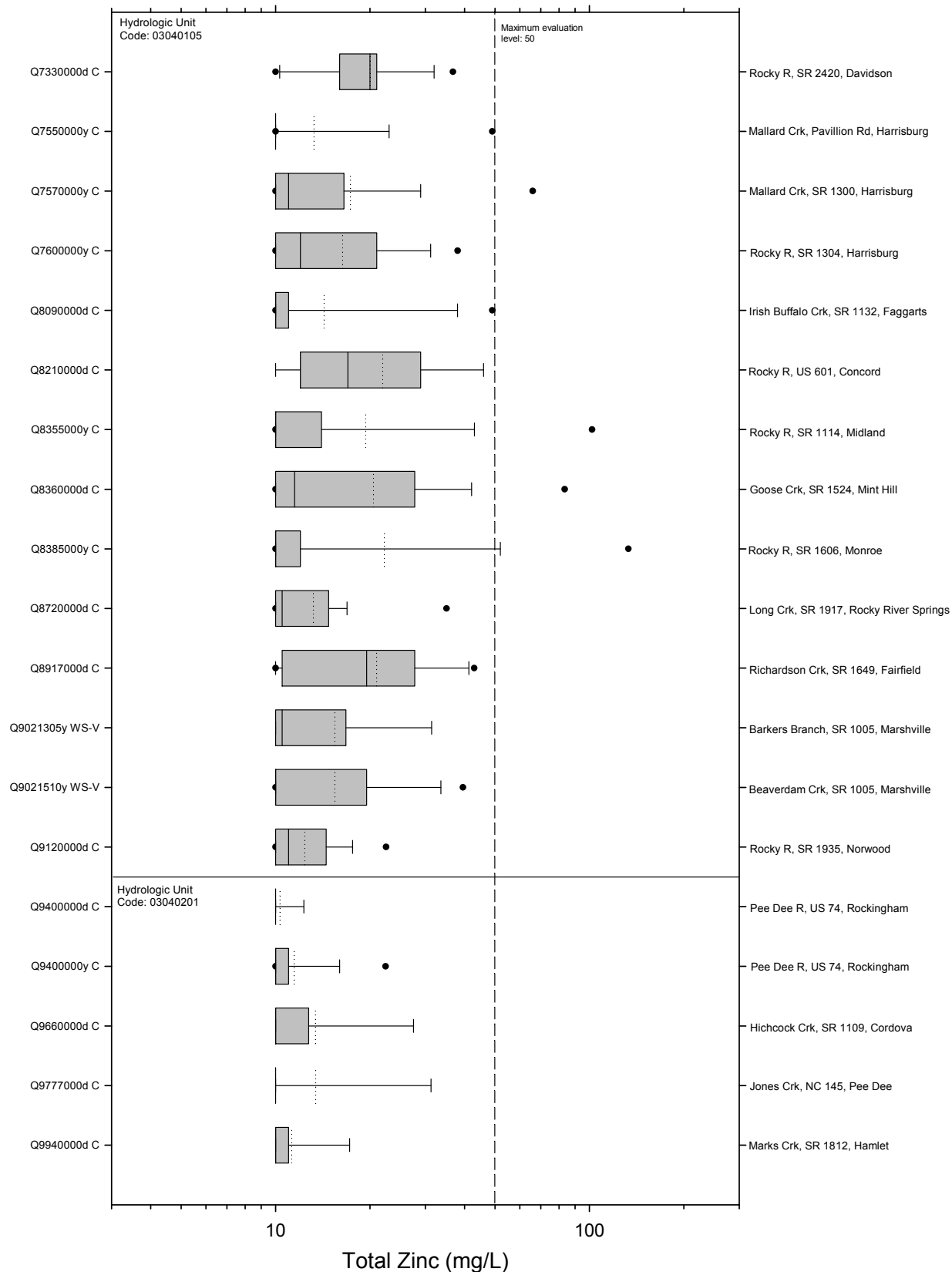


**Figure 48. Box Plots of Total Iron in the Rocky River and Pee Dee River HUs**

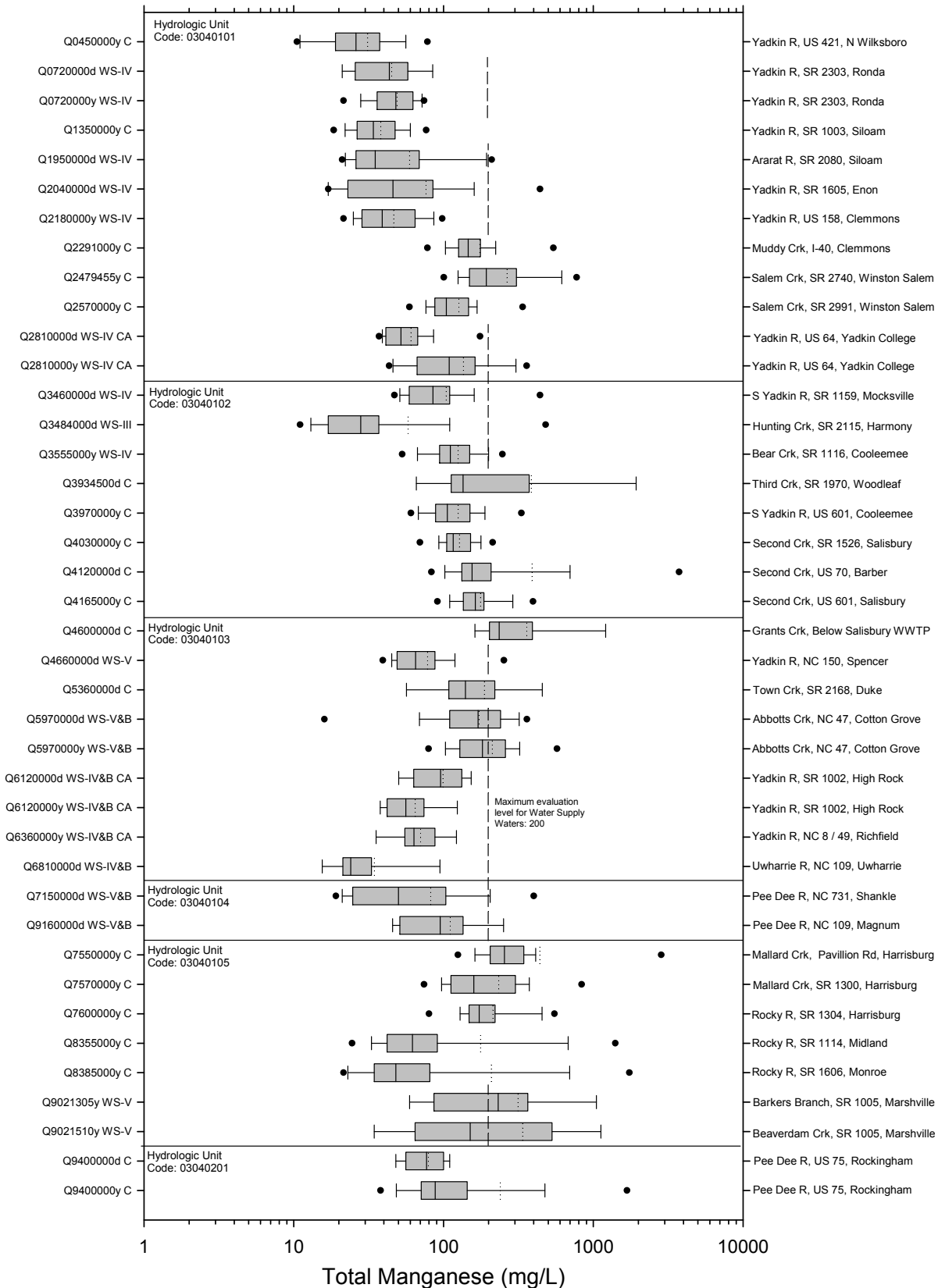




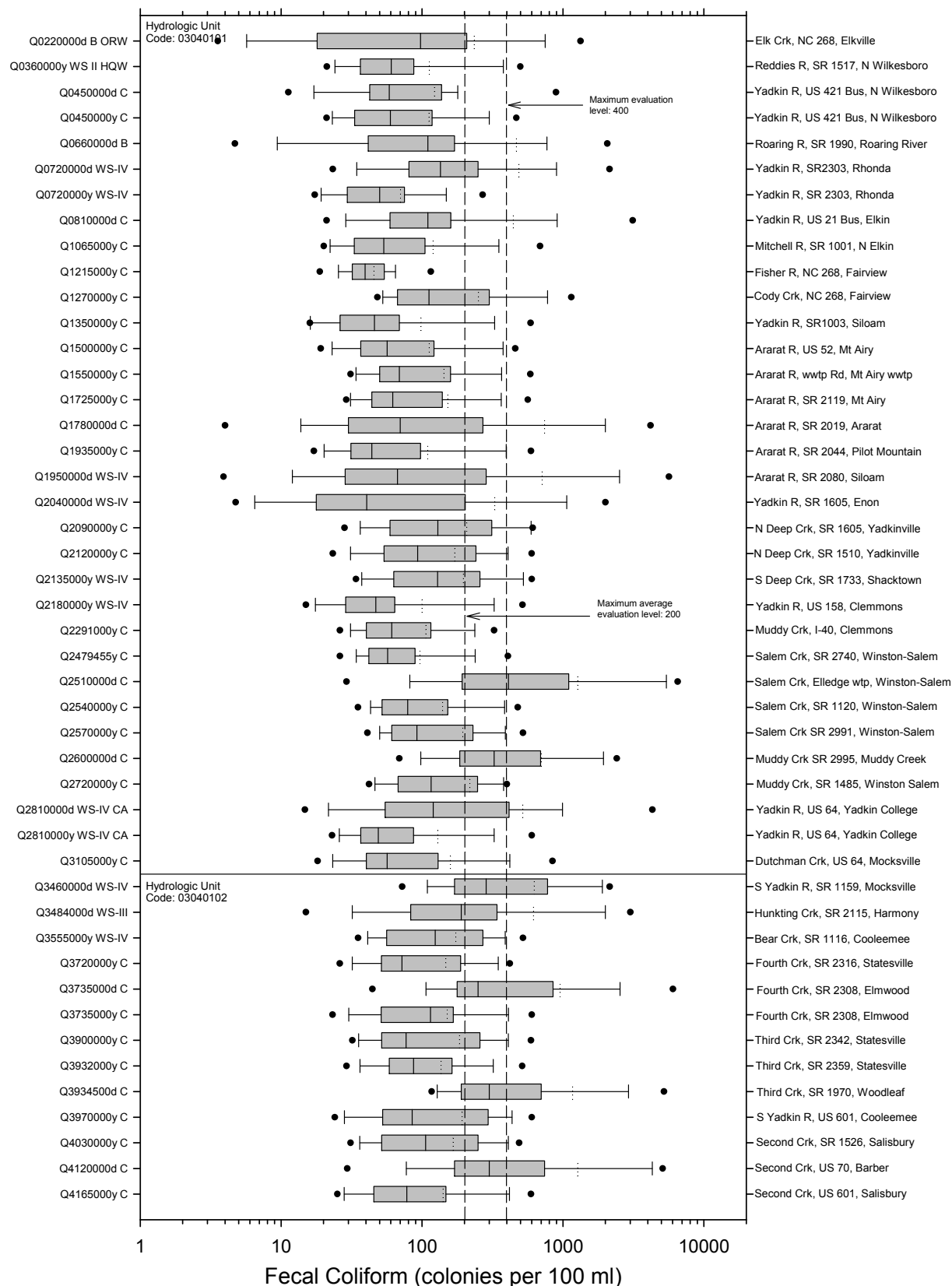
**Figure 49. Box Plots of Total Zinc in the Yadkin River Headwaters and South Yadkin River HUs**



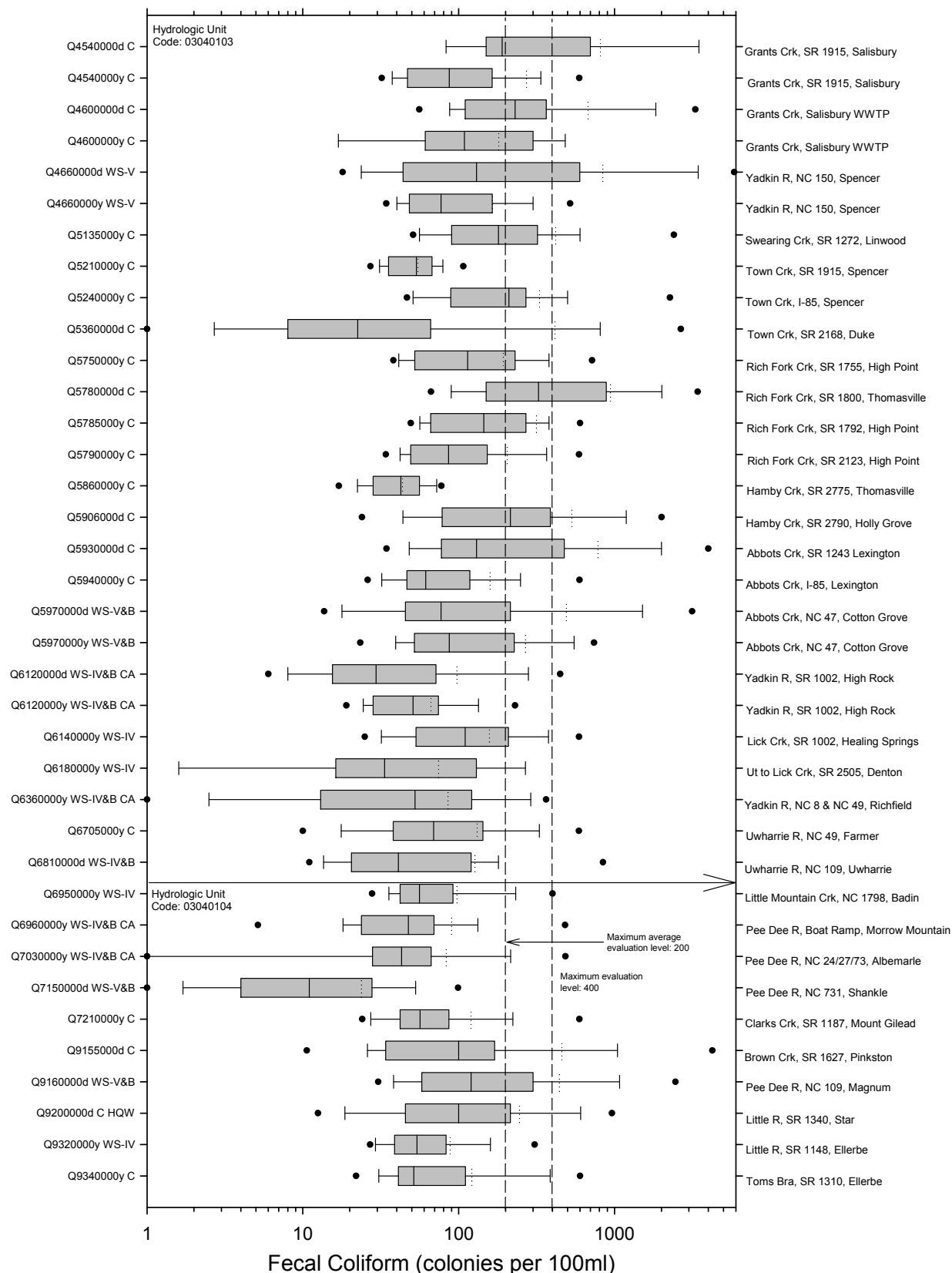
**Figure 50. Box Plots of Total Zinc in the Rocky River and Pee Dee River HUs**



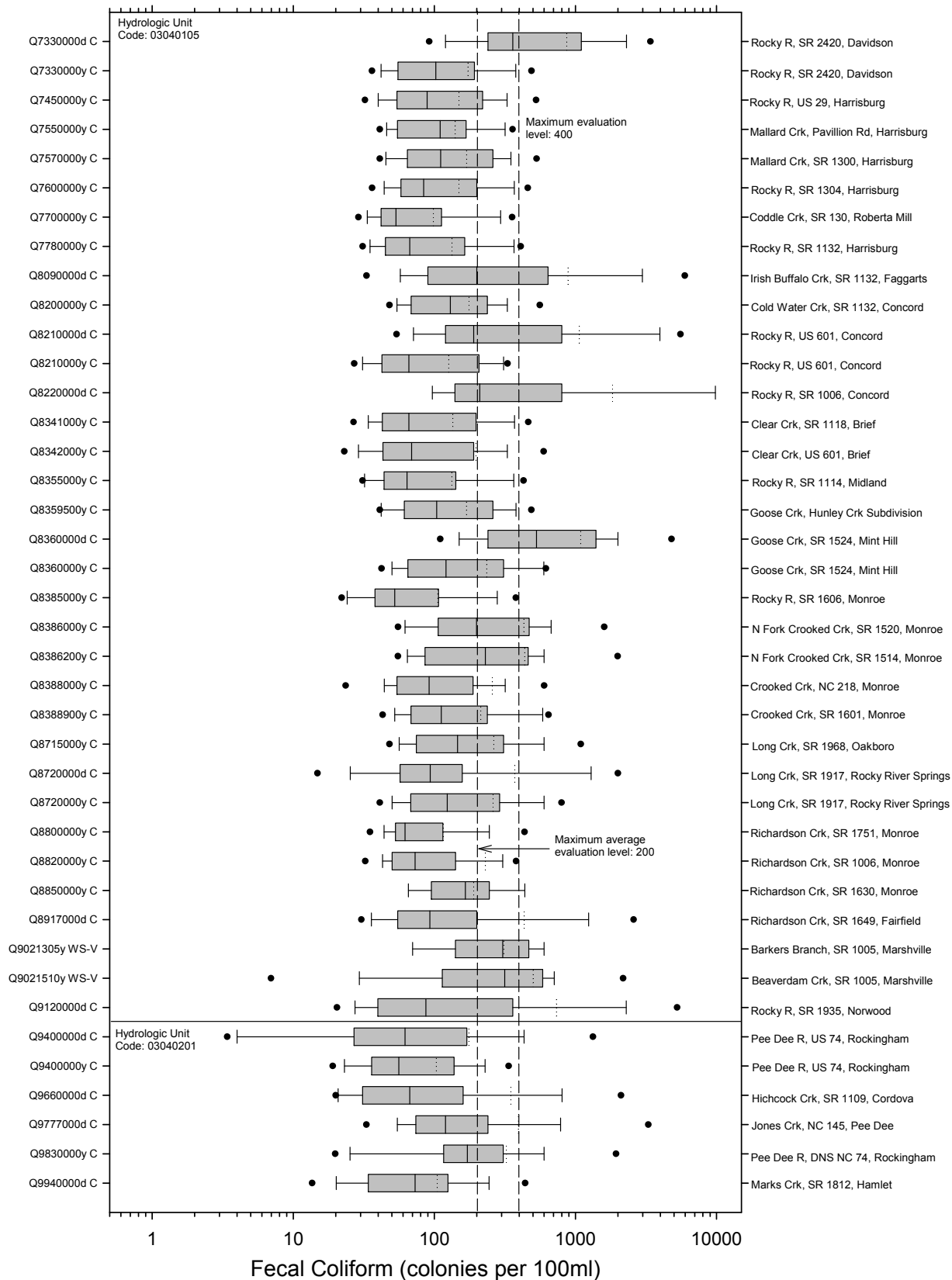
**Figure 51. Box Plots of Total Manganese in the Yadkin-Pee Dee River Basin**

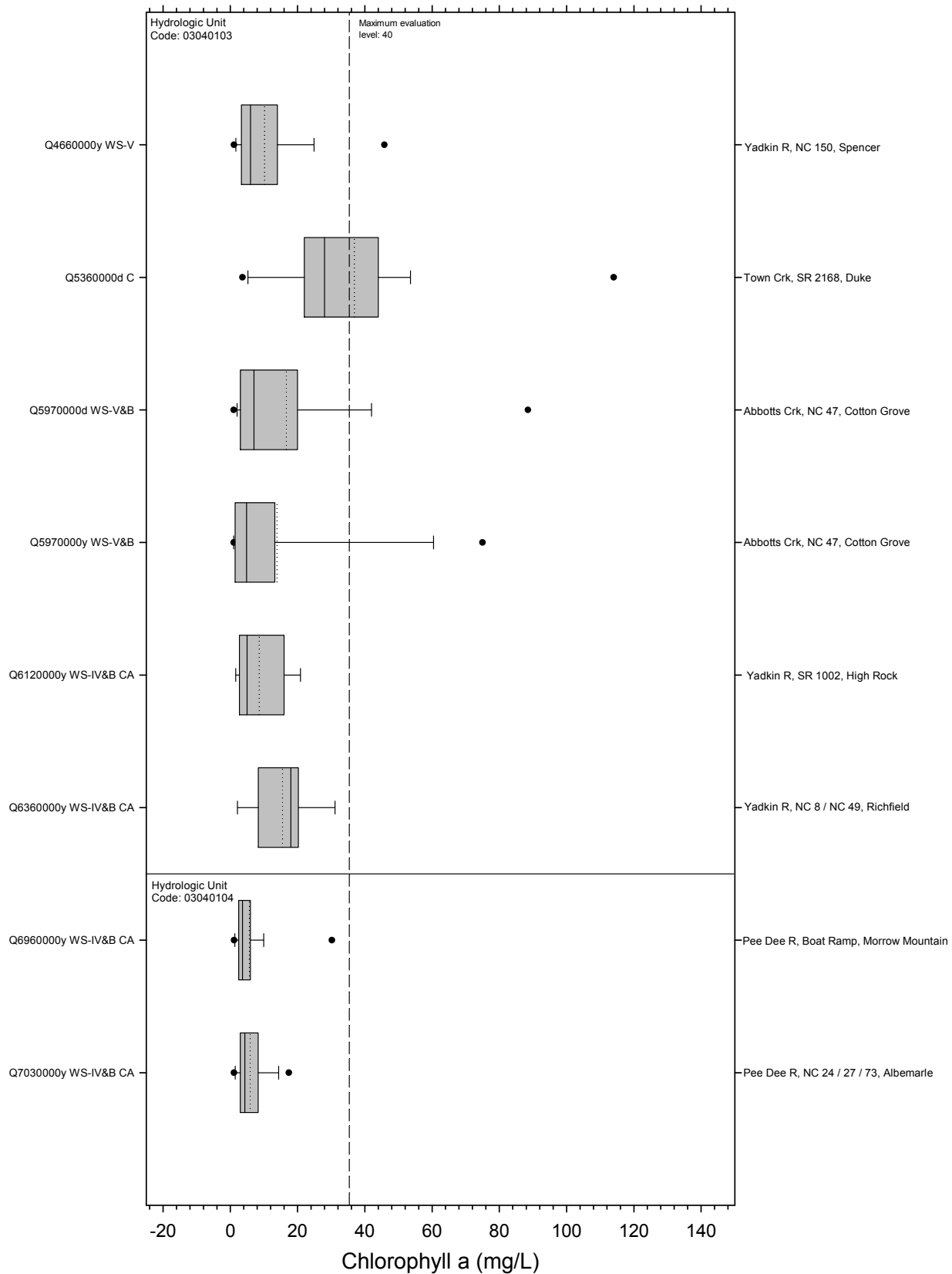


**Figure 52. Box Plots of Fecal Coliform in the Yadkin River Headwaters and South Yadkin River HUs**



**Figure 53. Box Plots of Fecal Coliform in the High Rock Lake and Lake Tillery HUs**





**Figure 55. Box Plots of Chlorophyll a in the Yadkin-Pee Dee River Basin**

## **Appendix A: Station Summary Sheets**



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ELK CRK AT NC 268 AT ELKVILLE

**Station #:** Q0220000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.06952 **Longitude:** -81.40237

**Stream class:** B ORW

**Agency:** NCAMBNT

**NC stream index:** 12-24-(10)

**Time period:** 01/10/2002 to 12/20/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		6	7.9	8.6	9.9	12	13	13.9
	59	0	<5	0	0		6	7.9	8.6	9.9	12	13	13.9
pH (SU)	59	0	<6	0	0		6	6.3	6.9	7.3	7.5	8.1	8.5
	59	0	>9	0	0		6	6.3	6.9	7.3	7.5	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				16	32	35	39	45	58	276
Water Temperature (°C)	59	0	>29	0	0		3.1	5.2	8.8	15.1	20.3	23.9	28.3
<b>Other</b>													
TSS (mg/L)	19	6	N/A				2.5	2.5	3	5	7	12	14
Turbidity (NTU)	59	11	>50	1	1.7		1	1	1.4	3.2	8	20	80
<b>Nutrients (mg/L)</b>													
NH3 as N	42	39	N/A				0.02	0.02	0.02	0.02	0.02	0.02	0.04
NO2 + NO3 as N	42	0	N/A				0.02	0.07	0.15	0.2	0.25	0.33	0.62
TKN as N	42	32	N/A				0.2	0.2	0.2	0.2	0.2	0.25	1.6
Total Phosphorus	42	8	N/A				0.02	0.02	0.02	0.02	0.04	0.08	0.4
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	19	5	N/A				50	50	50	150	230	630	780
Arsenic, total (As)	19	19	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	19	19	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	19	19	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	19	17	>7	0	0		2	2	2	2	2	2	4
Iron, total (Fe)	19	0	>1000	0	0		73	78	99	220	290	660	830
Lead, total (Pb)	19	19	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	19	19	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	19	19	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	19	15	>50	0	0		10	10	10	10	10	19	46

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
56	73	8	14	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** REDDIES RIV AT SR 1517 AT N WILKESBORO

**Station #:** Q0360000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.17430

**Longitude:** -81.16930

**Stream class:** WS II HQW

**Agency:** YPDRBA

**NC stream index:** 12-40-(1)

**Time period:** 01/13/2002 to 12/10/2006

	# result	# ND	Results not meeting EL EL	#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.7	6.5	7.7	8.9	10.4	12.3
	85	0	<5	0	0		5.2	5.7	6.5	7.7	8.9	10.4	12.3
pH (SU)	85	0	<6	0	0		6.6	6.9	7	7.2	7.4	8	8.1
	85	0	>9	0	0		6.6	6.9	7	7.2	7.4	8	8.1
Spec. conductance (umhos/cm at 25°C)	84	25	N/A				50	50	50	58	67	81	120
Water Temperature (°C)	85	0	>29	0	0		3.2	5.8	11	18.4	21.7	23.5	26.1
<b>Other</b>													
TSS (mg/L)	60	7	N/A				1	1	2	5.1	10.7	29.6	380
Turbidity (NTU)	59	0	>50	1	1.7		1.1	1.7	2.6	5.5	11	16	210
<b>Nutrients (mg/L)</b>													
NH3 as N	60	15	N/A				0.01	0.01	0.01	0.04	0.08	0.11	0.25
NO2 + NO3 as N	60	0	>10	0	0		0.05	0.24	0.32	0.37	0.47	0.54	0.66
TKN as N	60	24	N/A				0.1	0.1	0.2	0.2	0.34	0.65	3.26
Total Phosphorus	60	2	N/A				0.01	0.03	0.03	0.06	0.1	0.21	1.82

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	68	5	8	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** YADKIN RIV AT US 421 BUS AT N WILKESBORO

**Station #:** Q0450000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.16597 **Longitude:** -81.13447

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-(38)

**Time period:** 03/08/2005 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	39	0	<4	0	0		5.6	7.6	7.8	9.5	11.8	12.3	13.3
	39	0	<5	0	0		5.6	7.6	7.8	9.5	11.8	12.3	13.3
pH (SU)	39	0	<6	0	0		6.9	7	7.1	7.2	7.4	7.7	8.1
	39	0	>9	0	0		6.9	7	7.1	7.2	7.4	7.7	8.1
Spec. conductance (umhos/cm at 25°C)	39	0	N/A				36	42	47	52	59	62	68
Water Temperature (°C)	38	0	>29	0	0		5.6	8.2	11.7	16.2	22.5	25.2	27.1
<b>Other</b>													
TSS (mg/L)	36	1	N/A				3	4.5	5.8	11	16.2	48.7	326
Turbidity (NTU)	39	0	>50	2	5.1		2.9	3.2	4.5	7.8	16	26	220
<b>Nutrients (mg/L)</b>													
NH3 as N	33	9	N/A				0.02	0.02	0.02	0.04	0.06	0.11	0.13
NO2 + NO3 as N	33	0	N/A				0.23	0.34	0.4	0.46	0.62	0.77	0.85
TKN as N	33	9	N/A				0.2	0.2	0.2	0.29	0.36	0.5	0.99
Total Phosphorus	33	0	N/A				0.06	0.06	0.08	0.11	0.16	0.22	0.68

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>
20	71	1	5	

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** YADKIN RIV AT US 421 BUS AT N WILKESBORO

**Station #:** Q0450000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.16597

**Longitude:** -81.13447

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-(38)

**Time period:** 01/13/2002 to 12/10/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.4	6	6.4	7.6	9.1	10.4	12.4
	85	0	<5	0	0		5.4	6	6.4	7.6	9.1	10.4	12.4
pH (SU)	85	0	<6	0	0		6.3	6.9	7	7.2	7.4	8	8.1
	85	0	>9	0	0		6.3	6.9	7	7.2	7.4	8	8.1
Spec. conductance (umhos/cm at 25°C)	84	18	N/A				50	50	50	57	68	84	149
Water Temperature (°C)	85	0	>29	0	0		3.3	6	11.4	18.6	21.8	23.5	25.8
<b>Other</b>													
TSS (mg/L)	28	0	N/A				1.1	1.8	2.7	5	13.8	36.9	99
Turbidity (NTU)	60	0	>50	2	3.3		1.9	2.8	3.8	6	11	23.7	110
<b>Nutrients (mg/L)</b>													
NH3 as N	42	5	N/A				0.01	0.01	0.02	0.04	0.07	0.19	0.61
NO2 + NO3 as N	42	0	N/A				0.21	0.26	0.33	0.42	0.48	0.57	0.78
TKN as N	42	20	N/A				0.1	0.13	0.2	0.2	0.31	0.45	0.92
Total Phosphorus	42	0	N/A				0.03	0.04	0.05	0.07	0.09	0.16	0.18
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	1	N/A				50	111	173	280	687	972	8188
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	29	>50	0	0		5	5	5	5	5	5	5
Copper, total (Cu)	29	19	>7	4	13.8	84.2	2	2	2	2	3	10	13
Iron, total (Fe)	29	0	>1000	6	20.7	97.8	108	232	334	510	986	1485	2563
Lead, total (Pb)	29	28	>25	0	0		5	5	5	5	5	5	6
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	28	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	29	19	>50	0	0		10	10	10	10	14	19	48
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>		<b>% &gt; 400:</b>	<b>%Conf:</b>						
60	69			3		5							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** ROARING RIV AT SR 1990 NR ROARING RIVER

**Station #:** Q0660000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.24802

**Longitude:** -81.04303

**Stream class:** B

**Agency:** NCAMBNT

**NC stream index:** 12-46

**Time period:** 01/10/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	76	0	<4	0	0		6.8	7.9	8.8	10.3	11.9	13.3	13.8
	76	0	<5	0	0		6.8	7.9	8.8	10.3	11.9	13.3	13.8
pH (SU)	76	0	<6	0	0		6	6.5	7	7.3	7.5	7.7	8.3
	76	0	>9	0	0		6	6.5	7	7.3	7.5	7.7	8.3
Spec. conductance (umhos/cm at 25°C)	77	0	N/A				29	33	35	38	40	43	109
Water Temperature (°C)	77	0	>29	0	0		2.4	6	9.4	14.9	21.7	24.1	27
<b>Other</b>													
TSS (mg/L)	48	10	N/A				2.5	2.5	3	6	16.2	62.8	269
Turbidity (NTU)	77	2	>50	5	6.5		1	1.5	2	4.7	10	34	190
<b>Nutrients (mg/L)</b>													
NH3 as N	34	21	N/A				0.02	0.02	0.02	0.02	0.02	0.05	0.1
NO2 + NO3 as N	34	0	N/A				0.32	0.35	0.42	0.48	0.55	0.6	0.7
TKN as N	34	14	N/A				0.2	0.2	0.2	0.22	0.35	0.62	4
Total Phosphorus	34	0	N/A				0.02	0.02	0.03	0.05	0.08	0.15	1
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				70	77	102	235	335	959	4500
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	17	>7	0	0		2	2	2	2	2	4	5
Iron, total (Fe)	20	0	>1000	1	5		150	180	215	330	512	964	3700
Lead, total (Pb)	20	19	>25	0	0		10	10	10	10	10	10	16
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	16	>50	0	0		10	10	10	10	10	13	15
<b>Fecal coliform (#/100mL)</b>													
# results:		Geomean		# > 400:		% > 400:		%Conf:					
53		94		7		13							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** YADKIN RIV AT SR 2303 AT RONDA

**Station #:** Q0720000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.21548

**Longitude:** -80.93678

**Stream class:** WS-IV

**Agency:** NCAMBNT

**NC stream index:** 12-(47.5)

**Time period:** 01/10/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		5.1	6.9	7.8	9.5	11.3	12.2	13.2
	59	0	<5	0	0		5.1	6.9	7.8	9.5	11.3	12.2	13.2
pH (SU)	60	0	<6	0	0		6.1	6.4	6.7	7	7.3	7.5	7.9
	60	0	>9	0	0		6.1	6.4	6.7	7	7.3	7.5	7.9
Spec. conductance (umhos/cm at 25°C)	60	0	N/A				34	46	51	58	64	76	169
Water Temperature (°C)	60	0	>29	0	0		3.9	6.1	9.5	16	21.9	24	26.5
<b>Other</b>													
TSS (mg/L)	20	1	N/A				2.5	6	8	12	23.5	77.7	94
Turbidity (NTU)	59	0	>50	1	1.7		2.7	4.2	5.7	9	15	32	70
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				140	162	220	295	945	1860	2400
Arsenic, total (As)	20	20	>10	0	0		5	5	5	8	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	12	>7	0	0		2	2	2	2	3	3	4
Iron, total (Fe)	20	0	>1000	5	25	98.9	260	282	328	505	1170	1860	2900
Lead, total (Pb)	20	20	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	10	0	>200	0	0		21	21	26	44	58	85	87
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	16	>50	1	5		10	10	10	10	10	13	83

## Fecal coliform (#/100mL)

# results: 56      Geomean: 154      # > 400: 10      % > 400: 18      %Conf: 18

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** YADKIN RIV AT SR 2303 AT RONDA

**Station #:** Q0720000

**Latitude:** 36.21548

**Agency:** YPDRBA

**Longitude:** -80.93678

**Hydrologic Unit Code:** 3040101

**Stream class:** WS-IV

**NC stream index:** 12-(47.5)

**Time period:** 01/13/2002 to 12/10/2006

	# result	# ND	Results not meeting EL EL	#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.6	6.2	6.5	7.6	9.4	10.5	13.1
	85	0	<5	0	0		5.6	6.2	6.5	7.6	9.4	10.5	13.1
pH (SU)	85	0	<6	0	0		6.7	6.9	7.1	7.2	7.4	8.1	8.4
	85	0	>9	0	0		6.7	6.9	7.1	7.2	7.4	8.1	8.4
Spec. conductance (umhos/cm at 25°C)	84	23	N/A				50	50	50	58	69	89	165
Water Temperature (°C)	85	0	>29	0	0		3.6	6.5	11.6	19.2	22.1	23.9	26.4
<b>Other</b>													
TSS (mg/L)	7	0	N/A				2.7	2.7	5.3	7.4	19	44	44
Turbidity (NTU)	60	0	>50	2	3.3		3.2	4.1	5.5	8.8	16.8	29.9	200
<b>Nutrients (mg/L)</b>													
NH3 as N	42	7	N/A				0.01	0.01	0.03	0.06	0.1	0.17	0.44
NO2 + NO3 as N	42	0	>10	0	0		0.36	0.47	0.53	0.57	0.67	0.73	0.87
TKN as N	42	5	N/A				0.13	0.2	0.21	0.28	0.42	0.48	0.56
Total Phosphorus	42	0	N/A				0.05	0.06	0.08	0.11	0.13	0.15	0.18
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	0	N/A				133	170	320	640	986	1673	2737
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	29	>50	0	0		5	5	5	5	5	5	5
Copper, total (Cu)	29	16	>7	3	10.3	67.1	2	2	2	2	4	8	25
Iron, total (Fe)	29	0	>1000	13	44.8	100	317	447	593	901	1404	1658	2516
Lead, total (Pb)	29	28	>25	0	0		5	5	5	5	5	5	10
Manganese, total (Mn)	29	0	>200	0	0		17	28	36	48	62	72	75
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	27	>25	0	0		10	10	10	10	10	10	12
Zinc, total (Zn)	29	18	>50	0	0		10	10	10	10	13	18	22
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>												
45	52												
<b># &gt; 400:</b>	<b>% &gt; 400: %Conf:</b>												
0	0												

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** YADKIN RIV AT US 21 BUS AT ELKIN

**Station #:** Q0810000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.24176 **Longitude:** -80.84734

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-(53)

**Time period:** 01/14/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	76	0	<4	0	0		6.6	7.2	7.8	9.4	11.4	12.5	13
	76	0	<5	0	0		6.6	7.2	7.8	9.4	11.4	12.5	13
pH (SU)	75	0	<6	0	0		6.3	6.6	6.9	7.2	7.5	7.6	8.2
	75	0	>9	0	0		6.3	6.6	6.9	7.2	7.5	7.6	8.2
Spec. conductance (umhos/cm at 25°C)	77	0	N/A				32	46	52	57	62	70	94
Water Temperature (°C)	77	0	>29	0	0		4	7.1	10	15.9	22.6	25.2	27.8
<b>Other</b>													
TSS (mg/L)	48	0	N/A				4	6.3	8	12.5	27.5	43.1	530
Turbidity (NTU)	76	0	>50	4	5.3		2.4	4.9	7	10	21.5	41.5	110
<b>Nutrients (mg/L)</b>													
NH3 as N	34	18	N/A				0.02	0.02	0.02	0.02	0.03	0.07	0.14
NO2 + NO3 as N	34	0	N/A				0.37	0.48	0.54	0.61	0.68	0.72	0.88
TKN as N	34	1	N/A				0.2	0.22	0.26	0.32	0.44	0.55	0.63
Total Phosphorus	34	0	N/A				0.08	0.08	0.1	0.14	0.17	0.2	0.22
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				200	213	278	405	612	906	2400
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	12	>7	0	0		2	2	2	2	2	3	4
Iron, total (Fe)	20	0	>1000	3	15	86.7	380	413	485	645	880	1100	2500
Lead, total (Pb)	20	20	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	15	>50	0	0		10	10	10	10	10	16	26
<b>Fecal coliform (#/100mL)</b>													
# results:		Geomean		# > 400:		% > 400:		%Conf:					
56		123		7		12							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** MITCHELL RIV AT SR 1001 NR NORTH ELKIN

**Station #:** Q1065000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.31137

**Longitude:** -80.80656

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-62-(12.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.6	6.3	6.8	8.6	10.6	11.5	14.2
	85	0	<5	0	0		5.6	6.3	6.8	8.6	10.6	11.5	14.2
pH (SU)	85	0	<6	0	0		6.7	6.8	7	7.1	7.4	8.8	9.5
	85	0	>9	4	4.7		6.7	6.8	7	7.1	7.4	8.8	9.5
Spec. conductance (umhos/cm at 25°C)	84	32	N/A				50	50	50	52	72	93	109
Water Temperature (°C)	85	0	>29	0	0		1.5	3.8	9.3	17.2	20.2	22.7	24.3
<b>Other</b>													
TSS (mg/L)	60	5	N/A				1	1.1	1.8	4.5	9	22.4	161
Turbidity (NTU)	60	0	>50	2	3.3		1	1.9	3.1	5.9	11	21.9	110
<b>Nutrients (mg/L)</b>													
NH3 as N	60	17	N/A				0.01	0.01	0.01	0.03	0.07	0.09	0.27
NO2 + NO3 as N	60	0	N/A				0.13	0.2	0.25	0.29	0.34	0.39	0.48
TKN as N	60	24	N/A				0.1	0.1	0.2	0.2	0.29	0.43	2.23
Total Phosphorus	60	2	N/A				0.01	0.03	0.04	0.05	0.08	0.15	0.5
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	18	2	N/A				50	72	128	296	560	785	1676
Arsenic, total (As)	18	17	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	18	17	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	18	16	>50	0	0		5	5	5	5	5	5	7
Copper, total (Cu)	18	16	>7	0	0		2	2	2	2	2	2	2
Iron, total (Fe)	18	0	>1000	4	22.2	97.2	265	304	363	588	936	2201	7260
Lead, total (Pb)	18	16	>25	0	0		5	5	5	5	5	5	7
Mercury, total (Hg)	18	18	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	18	16	>88	0	0		5	10	10	10	10	10	13
Zinc, total (Zn)	18	16	>50	0	0		10	10	10	10	10	11	16
<b>Fecal coliform (#/100mL)</b>													
# results:		Geomean		# > 400:		% > 400:		%Conf:					
60		66		5		8							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** FISHER RIV AT NC 268 NR FAIRVIEW

**Station #:** Q1215000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.33953

**Longitude:** -80.68520

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-63-(9)

**Time period:** 09/20/2004 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	39	0	<4	0	0		6.4	6.5	7.1	8.6	10.6	11.6	12.1
	39	0	<5	0	0		6.4	6.5	7.1	8.6	10.6	11.6	12.1
pH (SU)	39	0	<6	0	0		6.6	6.7	6.8	7	7.1	7.3	7.4
	39	0	>9	0	0		6.6	6.7	6.8	7	7.1	7.3	7.4
Spec. conductance (umhos/cm at 25°C)	39	1	N/A				50	53	62	68	84	95	128
Water Temperature (°C)	39	0	>29	0	0		2.9	4.7	9.6	14.6	20	22.1	23.3
<b>Other</b>													
TSS (mg/L)	28	0	N/A				1.3	2.2	3.9	5.8	11	32.2	191
Turbidity (NTU)	28	0	>50	2	7.1		2.4	3.3	6.4	11.5	22.8	53.5	290
<b>Nutrients (mg/L)</b>													
NH3 as N	28	3	N/A				0.01	0.01	0.02	0.04	0.06	0.08	0.18
NO2 + NO3 as N	28	0	N/A				0.41	0.6	0.7	0.86	0.98	1.07	1.36
TKN as N	28	10	N/A				0.2	0.2	0.2	0.26	0.43	0.69	1.17
Total Phosphorus	28	0	N/A				0.06	0.08	0.1	0.12	0.16	0.24	0.52

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
28	41	0	0	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** CODY CRK AT NC 268 NR FAIRVIEW

**Station #:** Q1270000

**Latitude:** 36.33803

**Longitude:** -80.69287

**Agency:** YPDRBA

**Hydrologic Unit Code:** 3040101

**Stream class:** C

**NC stream index:** 12-63-14

**Time period:** 01/14/2002 to 08/26/2004

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	46	0	<4	0	0		5.2	5.9	6.9	8.9	10.5	11.8	14.6
	46	0	<5	0	0		5.2	5.9	6.9	8.9	10.5	11.8	14.6
pH (SU)	46	0	<6	0	0		6.9	7	7.1	7.3	8.1	8.3	8.5
	46	0	>9	0	0		6.9	7	7.1	7.3	8.1	8.3	8.5
Spec. conductance (umhos/cm at 25°C)	45	2	N/A				50	50	54	64	72	83	89
Water Temperature (°C)	46	0	>29	0	0		1.3	3.1	8.5	17.3	20.5	22.3	23.3
<b>Other</b>													
TSS (mg/L)	32	0	N/A				1.3	1.8	2.9	8.8	17.8	34	69
Turbidity (NTU)	32	0	>50	4	12.5	78.9	3.9	5.8	9.5	16	33.5	58.5	80
<b>Nutrients (mg/L)</b>													
NH3 as N	32	7	N/A				0.01	0.01	0.03	0.08	0.13	0.19	0.41
NO2 + NO3 as N	32	0	N/A				0.45	0.6	0.65	0.75	0.86	1	1.12
TKN as N	32	4	N/A				0.1	0.11	0.2	0.3	0.47	0.7	1.52
Total Phosphorus	32	1	N/A				0.01	0.05	0.07	0.1	0.17	0.42	0.97
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
32	148		5		16								

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** YADKIN RIV AT SR 1003 NR SILOAM

**Station #:** Q1350000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.28238

**Longitude:** -80.56223

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-(53)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.3	6.1	6.7	8.5	9.8	11.3	12.5
	85	0	<5	0	0		5.3	6.1	6.7	8.5	9.8	11.3	12.5
pH (SU)	85	0	<6	0	0		6.7	6.9	7	7.1	7.3	8	8.2
	85	0	>9	0	0		6.7	6.9	7	7.1	7.3	8	8.2
Spec. conductance (umhos/cm at 25°C)	84	3	N/A				50	60	73	90	105	121	151
Water Temperature (°C)	85	0	>29	0	0		2.5	4.6	10.3	17.9	21.8	23.4	26.8
<b>Other</b>													
TSS (mg/L)	60	1	N/A				1	2.9	8.9	14.5	29.8	61	680
Turbidity (NTU)	60	0	>50	4	6.7		2.2	4.3	8.5	14	27.5	49.5	360
<b>Nutrients (mg/L)</b>													
NH3 as N	60	15	N/A				0.01	0.01	0.01	0.04	0.08	0.13	0.23
NO2 + NO3 as N	60	0	N/A				0.34	0.45	0.51	0.57	0.67	0.79	0.98
TKN as N	60	10	N/A				0.1	0.18	0.2	0.31	0.47	0.99	2.52
Total Phosphorus	60	1	N/A				0.01	0.07	0.08	0.11	0.15	0.21	1.69
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	47	0	N/A				94	186	289	650	1221	1890	2610
Arsenic, total (As)	47	46	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	47	45	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	47	43	>50	0	0		5	5	5	5	5	5	20
Copper, total (Cu)	47	21	>7	3	6.4		2	2	2	2	3	6	13
Iron, total (Fe)	47	0	>1000	23	48.9	100	289	390	644	995	1617	2578	21490
Lead, total (Pb)	47	43	>25	0	0		5	5	5	5	5	5	15
Mercury, total (Hg)	47	47	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	47	45	>88	0	0		5	10	10	10	10	10	32
Zinc, total (Zn)	47	34	>50	1	2.1		10	10	10	10	10	23	206
<b>Fecal coliform (#/100mL)</b>													
# results:		Geomean		# > 400:		% > 400:		%Conf:					
60		52		3		5							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ARARAT RIV AT US 52 NR MT AIRY

**Station #:** Q1500000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.47995 **Longitude:** -80.60035

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-72-(4.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		5.4	6	6.8	8.4	9.7	10.9	13.5
	99	0	<5	0	0		5.4	6	6.8	8.4	9.7	10.9	13.5
pH (SU)	85	0	<6	0	0		6.8	6.9	7	7.1	7.3	8	8.3
	85	0	>9	0	0		6.8	6.9	7	7.1	7.3	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	3	N/A				50	64	82	96	108	128	319
Water Temperature (°C)	99	0	>29	0	0		1.5	4	10.7	17.9	21.4	23.5	25.6
<b>Other</b>													
Turbidity (NTU)	60	0	>50	4	6.7		2.2	3.4	7.3	12	19.8	38.5	170
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	67		4		7								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ARARAT RIV AT WWTP RD AT MT AIRY WWTP

**Station #:** Q1550000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.47703

**Longitude:** -80.60452

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-72-(4.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		5.2	5.8	6.6	8.2	9.4	10.2	13.1
	99	0	<5	0	0		5.2	5.8	6.6	8.2	9.4	10.2	13.1
pH (SU)	85	0	<6	0	0		6.8	6.9	7	7.2	7.4	8	8.3
	85	0	>9	0	0		6.8	6.9	7	7.2	7.4	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				94	120	130	170	197	251	377
Water Temperature (°C)	99	0	>29	0	0		1.9	4.6	10.8	17.9	21.4	23.8	26
<b>Other</b>													
Turbidity (NTU)	60	0	>50	5	8.3		1.8	3.3	6.1	10.1	16	40	190
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	89		5		8								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ARARAT RIV AT SR 2119 NR MT AIRY

**Station #:** Q1725000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.45172

**Longitude:** -80.60915

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-72-(4.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		5.5	6	6.7	8.2	9.7	10.7	13.2
	99	0	<5	0	0		5.5	6	6.7	8.2	9.7	10.7	13.2
pH (SU)	85	0	<6	0	0		6.8	6.9	7	7.2	7.5	8	9
	85	0	>9	0	0		6.8	6.9	7	7.2	7.5	8	9
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				54	74	98	121	154	186	378
Water Temperature (°C)	99	0	>29	0	0		1.8	4.4	10.5	17.7	21.8	23.8	26.2
<b>Other</b>													
Turbidity (NTU)	60	0	>50	4	6.7		1.8	2.9	5.5	8.6	19.8	36	92
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	82		5		8								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** ARARAT RIV AT SR 2019 AT ARARAT

**Station #:** Q1780000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.40361

**Longitude:** -80.56113

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-72-(4.5)

**Time period:** 01/14/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	70	0	<4	0	0		7.2	8	8.5	9.8	11.6	13	14.2
	70	0	<5	0	0		7.2	8	8.5	9.8	11.6	13	14.2
pH (SU)	71	0	<6	0	0		6.3	6.9	7.2	7.5	7.8	8.2	8.8
	71	0	>9	0	0		6.3	6.9	7.2	7.5	7.8	8.2	8.8
Spec. conductance (umhos/cm at 25°C)	71	0	N/A				11	69	92	113	142	187	595
Water Temperature (°C)	71	0	>29	0	0		3	4.7	10.2	16.1	22.6	25.4	28.7
<b>Other</b>													
TSS (mg/L)	39	6	N/A				2.5	2.5	3	7.2	41	106	810
Turbidity (NTU)	70	0	>50	11	15.7	95.6	1.5	3	4.4	8.1	28.5	74.6	550
<b>Nutrients (mg/L)</b>													
NH3 as N	22	11	N/A				0.02	0.02	0.02	0.02	0.04	0.06	0.1
NO2 + NO3 as N	22	0	N/A				0.28	0.32	0.44	0.55	0.61	0.72	0.85
TKN as N	22	1	N/A				0.2	0.22	0.24	0.3	0.59	0.87	1
Total Phosphorus	22	0	N/A				0.04	0.04	0.06	0.1	0.16	0.3	0.38
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				84	102	142	220	1650	6520	48000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	8	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	19	>50	0	0		25	25	25	25	25	25	29
Copper, total (Cu)	20	8	>7	4	20	95.7	2	2	2	3	5	13	18
Iron, total (Fe)	20	0	>1000	8	40	100	290	313	355	545	2050	6500	34000
Lead, total (Pb)	20	19	>25	0	0		10	10	10	10	10	10	20
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	19	>88	0	0		10	10	10	10	10	10	12
Zinc, total (Zn)	20	12	>50	1	5		10	10	10	10	15	27	65
<b>Fecal coliform (#/100mL)</b>													
# results:	Geomean		# > 400:		% > 400:		%Conf:						
55	99		12		22		70.2						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ARARAT RIV AT SR 2044 NR PILOT MOUNTAIN

**Station #:** Q1935000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.36262 **Longitude:** -80.53938

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-72-(4.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.7	6.1	7	8.7	10.2	11.2	13.3
	85	0	<5	0	0		5.7	6.1	7	8.7	10.2	11.2	13.3
pH (SU)	85	0	<6	0	0		6.7	6.8	7	7.2	7.5	8.1	8.4
	85	0	>9	0	0		6.7	6.8	7	7.2	7.5	8.1	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				64	83	95	112	133	150	174
Water Temperature (°C)	85	0	>29	0	0		2.1	4	9.8	17.6	21.6	23.4	26.3
<b>Other</b>													
Turbidity (NTU)	60	0	>50	3	5		2.2	3.3	5.9	11	17	39.6	550
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	61		6		10								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** ARARAT RIV AT SR 2080 NR SILOAM

**Station #:** Q1950000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.30235 **Longitude:** -80.53159

**Stream class:** WS-IV

**Agency:** NCAMBNT

**NC stream index:** 12-72-(18)

**Time period:** 01/14/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		6.9	7.8	8.4	9.6	11.6	13.1	14.2
	59	0	<5	0	0		6.9	7.8	8.4	9.6	11.6	13.1	14.2
pH (SU)	60	0	<6	0	0		6.5	6.8	7.2	7.5	7.7	8.2	8.8
	60	0	>9	0	0		6.5	6.8	7.2	7.5	7.7	8.2	8.8
Spec. conductance (umhos/cm at 25°C)	60	0	N/A				53	67	93	105	122	162	420
Water Temperature (°C)	60	0	>29	1	1.7		2	4.1	9.5	17.6	22.5	24.8	29.1
<b>Other</b>													
TSS (mg/L)	20	2	N/A				2.5	2.5	3	6.5	31.8	369.6	460
Turbidity (NTU)	60	0	>50	7	11.7	75.2	2.6	3.7	5.1	8.4	28.8	59.5	850
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				120	140	152	415	1800	16690	25000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	8	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	7	>7	2	10	67.7	2	2	2	3	4	9	16
Iron, total (Fe)	20	0	>1000	9	45	100	290	322	418	740	2175	12290	17000
Lead, total (Pb)	20	19	>25	0	0		10	10	10	10	10	10	12
Manganese, total (Mn)	20	0	>200	1	5		21	22	26	35	69	194	210
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	11	>50	0	0		10	10	10	10	15	28	43

## Fecal coliform (#/100mL)

# results: 57      Geomean: 99      # > 400: 11      % > 400: 19      %Conf: 19

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** YADKIN RIV AT SR 1605 AT ENON

**Station #:** Q2040000

**Latitude:** 36.13279

**Longitude:** -80.44539

**Agency:** NCAMBNT

**Hydrologic Unit Code:** 3040101

**Stream class:** WS-IV

**NC stream index:** 12-(80.7)

**Time period:** 01/28/2002 to 12/20/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	74	0	<4	0	0		5.7	7	7.8	9.6	11.9	13	15.5
	74	0	<5	0	0		5.7	7	7.8	9.6	11.9	13	15.5
pH (SU)	75	0	<6	0	0		6.2	6.6	7	7.3	7.6	7.9	9.2
	75	0	>9	1	1.3		6.2	6.6	7	7.3	7.6	7.9	9.2
Spec. conductance (umhos/cm at 25°C)	75	0	N/A				40	54	61	70	75	87	138
Water Temperature (°C)	75	0	>29	2	2.7		1.1	6.7	9.4	15.6	23.2	26.3	29.2
<b>Other</b>													
TSS (mg/L)	45	0	N/A				4	5.5	8.8	22	33.5	96.6	600
Turbidity (NTU)	75	0	>50	11	14.7	93.1	2.3	3.4	6.5	13	26	97	450
<b>Nutrients (mg/L)</b>													
NH3 as N	34	23	N/A				0.02	0.02	0.02	0.02	0.02	0.06	0.13
NO2 + NO3 as N	34	0	>10	0	0		0.25	0.34	0.44	0.54	0.61	0.65	0.72
TKN as N	34	5	N/A				0.2	0.2	0.22	0.31	0.42	0.76	1.4
Total Phosphorus	34	0	N/A				0.04	0.06	0.06	0.11	0.14	0.3	0.47
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	19	0	N/A				110	160	300	1100	2500	4800	39000
Arsenic, total (As)	19	19	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	19	19	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	19	18	>50	0	0		25	25	25	25	25	25	29
Copper, total (Cu)	19	9	>7	1	5.3		2	2	2	2	4	6	17
Iron, total (Fe)	19	0	>1000	11	57.9	100	330	330	570	1400	2500	5900	30000
Lead, total (Pb)	19	18	>25	0	0		10	10	10	10	10	10	20
Manganese, total (Mn)	19	0	>200	1	5.3		17	17	23	46	85	160	440
Mercury, total (Hg)	19	19	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	19	18	>25	0	0		10	10	10	10	10	10	13
Zinc, total (Zn)	19	10	>50	1	5.3		10	10	10	10	17	26	69
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
54	62			8 15									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** N DEEP CRK AT SR 1605 NR YADKINVILLE

**Station #:** Q2090000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.13618

**Longitude:** -80.63003

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-84-1-(0.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.1	5.8	6.6	8.2	9.8	10.9	13
	85	0	<5	0	0		5.1	5.8	6.6	8.2	9.8	10.9	13
pH (SU)	85	0	<6	0	0		6.7	6.7	6.9	7	7.3	8.2	8.5
	85	0	>9	0	0		6.7	6.7	6.9	7	7.3	8.2	8.5
Spec. conductance (umhos/cm at 25°C)	84	3	N/A				50	62	77	92	115	142	246
Water Temperature (°C)	85	0	>29	0	0		1.4	4.7	10.1	17.9	21.5	22.3	24.5
<b>Other</b>													
Turbidity (NTU)	60	0	>50	7	11.7	75.2	4.8	9	11.2	17	27	129	190
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	135		9		15								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** N DEEP CRK AT SR 1510 NR YADKINVILLE

**Station #:** Q2120000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.12590

**Longitude:** -80.59183

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-84-1-(0.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.4	6.2	6.7	8.2	9.8	10.9	12.8
	85	0	<5	0	0		5.4	6.2	6.7	8.2	9.8	10.9	12.8
pH (SU)	85	0	<6	0	0		6.6	6.8	6.9	7.1	7.4	8	8.2
	85	0	>9	0	0		6.6	6.8	6.9	7.1	7.4	8	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				68	86	96	111	124	150	210
Water Temperature (°C)	85	0	>29	0	0		1.3	4.9	10.4	18.2	21.4	22.6	24.8
<b>Other</b>													
Turbidity (NTU)	60	0	>50	7	11.7	75.2	4.2	8.9	11.2	17	30	90.1	290

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	111	6	10	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** S DEEP CRK AT SR 1733 NR SHACKTOWN

**Station #:** Q2135000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.10648

**Longitude:** -80.58765

**Stream class:** WS-IV

**Agency:** YPDRBA

**NC stream index:** 12-84-2-(5.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	6	6.6	7.9	9.4	10.4	12.5
	85	0	<5	0	0		5.2	6	6.6	7.9	9.4	10.4	12.5
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7	7.4	8	8.2
	85	0	>9	0	0		6.7	6.8	6.9	7	7.4	8	8.2
Spec. conductance (umhos/cm at 25°C)	84	3	N/A				50	60	72	96	129	168	212
Water Temperature (°C)	85	0	>29	0	0		1.3	5	10.6	18.1	21.7	22.9	25.1
<b>Other</b>													
Turbidity (NTU)	60	0	>50	8	13.3	85.8	4.3	7.7	10.2	16	27.8	90	302
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	134		6		10								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** YADKIN RIV AT US 158 AT CLEMMONS

**Station #:** Q2180000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.01437

**Longitude:** -80.41637

**Stream class:** WS-IV

**Agency:** YPDRBA

**NC stream index:** 12-(86.7)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.9	6.6	8.1	9.6	10.8	12.6
	85	0	<5	0	0		5.2	5.9	6.6	8.1	9.6	10.8	12.6
pH (SU)	85	0	<6	0	0		6.7	7	7.1	7.2	7.4	8.1	8.3
	85	0	>9	0	0		6.7	7	7.1	7.2	7.4	8.1	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				51	70	92	102	116	127	209
Water Temperature (°C)	85	0	>32	0	0		3.1	5.7	11.1	18.5	22.2	23.4	26.4
<b>Other</b>													
TSS (mg/L)	60	0	N/A				1.2	4	7	14	29.8	76.6	457
Turbidity (NTU)	60	0	>50	8	13.3	85.8	2.7	4.3	8.2	16.5	29.8	64.7	200
<b>Nutrients (mg/L)</b>													
NH3 as N	60	14	N/A				0.01	0.01	0.01	0.04	0.08	0.13	0.77
NO2 + NO3 as N	60	0	>10	0	0		0.25	0.4	0.49	0.57	0.65	0.76	1
TKN as N	60	9	N/A				0.1	0.2	0.2	0.3	0.46	0.65	1.78
Total Phosphorus	60	2	N/A				0.01	0.05	0.07	0.09	0.14	0.21	0.43
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	47	0	N/A				119	187	288	662	1619	2987	14796
Arsenic, total (As)	47	46	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	47	46	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	47	41	>50	0	0		5	5	5	5	5	5	19
Copper, total (Cu)	47	15	>7	4	8.5		2	2	2	2	4	7	15
Iron, total (Fe)	47	0	>1000	29	61.7	100	413	531	743	1317	1929	3616	14530
Lead, total (Pb)	47	44	>25	0	0		5	5	5	5	5	5	8
Manganese, total (Mn)	29	0	>200	0	0		20	25	28	39	64	86	106
Mercury, total (Hg)	47	47	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	47	46	>25	0	0		5	10	10	10	10	10	10
Zinc, total (Zn)	47	29	>50	1	2.1		10	10	10	10	13	24	68
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	60	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>					
	60	56		4		7							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** MUDDY CRK AT I 40 NR CLEMMONS

**Station #:** Q2291000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.04700

**Longitude:** -80.36623

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-94-(0.5)

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.5	6.4	7	7.8	10	10.9	13.8
	85	0	<5	0	0		5.5	6.4	7	7.8	10	10.9	13.8
pH (SU)	85	0	<6	0	0		6.6	6.8	6.9	7.1	7.4	8.2	8.9
	85	0	>9	0	0		6.6	6.8	6.9	7.1	7.4	8.2	8.9
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				51	82	103	120	138	169	221
Water Temperature (°C)	85	0	>32	0	0		2	3.9	10.7	18.1	21.2	23.4	26
<b>Other</b>													
Turbidity (NTU)	60	0	>50	4	6.7		3.6	5.1	7.2	12	21.5	39.9	260
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	47	0	N/A				92	120	192	371	817	1387	2416
Arsenic, total (As)	47	46	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	47	46	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	47	41	>50	0	0		5	5	5	5	5	5	44
Copper, total (Cu)	47	25	>7	2	4.3		2	2	2	2	3	4	27
Iron, total (Fe)	47	0	>1000	28	59.6	100	10	793	905	1132	1879	2859	18600
Lead, total (Pb)	47	45	>25	0	0		5	5	5	5	5	5	21
Mercury, total (Hg)	47	46	>0.012	1	2.1		0.2	0.2	0.2	0.2	0.2	0.2	0.3
Nickel, total (Ni)	47	43	>88	0	0		10	10	10	10	10	10	20
Zinc, total (Zn)	47	38	>50	0	0		10	10	10	10	10	15	43

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	70	2	3	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** SALEM CRK AT SR 2740 REYNOLDS PARK RD NR WINSTON SALEM

**Station #:** Q2479455

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.08843

**Longitude:** -80.21208

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-94-12-(4)

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	Results not meeting EL EL	#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.4	6.1	7	7.9	10.2	10.8	13.4
	85	0	<5	0	0		5.4	6.1	7	7.9	10.2	10.8	13.4
pH (SU)	85	0	<6	0	0		6.5	6.8	7	7.1	7.3	8.1	8.6
	85	0	>9	0	0		6.5	6.8	7	7.1	7.3	8.1	8.6
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				55	78	95	116	140	188	319
Water Temperature (°C)	85	0	>32	0	0		2.3	4.1	11	18.3	21.3	23.4	26.4
<b>Other</b>													
Turbidity (NTU)	60	0	>50	1	1.7		3.3	5.5	8.2	12	18.8	25.9	100
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	47	2	N/A				50	70	148	311	609	1149	6230
Arsenic, total (As)	47	46	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	47	46	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	47	44	>50	0	0		5	5	5	5	5	5	11
Copper, total (Cu)	47	26	>7	0	0		2	2	2	2	2	4	7
Iron, total (Fe)	47	0	>1000	29	61.7	100	350	589	804	1318	2273	3731	28130
Lead, total (Pb)	47	46	>25	0	0		5	5	5	5	5	5	5
Mercury, total (Hg)	47	47	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	47	45	>88	0	0		10	10	10	10	10	10	11
Zinc, total (Zn)	47	40	>50	0	0		10	10	10	10	10	12	34

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	69	3	5	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** SALEM CRK AT ELLEDGE WTP AT WINSTON SALEM

**Station #:** Q2510000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.03878

**Longitude:** -80.30416

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-94-12-(4)

**Time period:** 01/07/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	56	0	<4	0	0		6.1	7	8	9.2	11	12	14.2
	56	0	<5	0	0		6.1	7	8	9.2	11	12	14.2
pH (SU)	57	0	<6	0	0		6.2	6.6	7	7.2	7.4	7.7	8.3
	57	0	>9	0	0		6.2	6.6	7	7.2	7.4	7.7	8.3
Spec. conductance (umhos/cm at 25°C)	57	0	N/A				67	123	140	163	190	208	367
Water Temperature (°C)	57	0	>32	0	0		2	7.8	10.6	16	23.5	26.5	30.7
<b>Other</b>													
TSS (mg/L)	18	2	N/A				2.5	2.5	3	5.5	20	89.4	174
Turbidity (NTU)	57	0	>50	4	7		1.5	2.6	3.4	5.8	13.8	36.2	150
<b>Nutrients (mg/L)</b>													
NH3 as N	57	1	N/A				0.02	0.09	0.12	0.17	0.31	0.53	0.84
NO2 + NO3 as N	57	0	N/A				0.12	0.6	0.94	1.1	1.3	1.6	1.8
TKN as N	57	0	N/A				0.25	0.34	0.41	0.49	0.68	1	1.2
Total Phosphorus	57	2	N/A				0.02	0.03	0.03	0.04	0.05	0.13	0.28
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	19	0	N/A				66	80	130	180	1500	3000	7800
Arsenic, total (As)	18	18	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	19	19	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	19	19	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	19	3	>7	4	21.1	96.5	2	2	2	3	7	15	15
Iron, total (Fe)	19	0	>1000	5	26.3	99.1	420	440	490	610	2400	4800	8000
Lead, total (Pb)	19	16	>25	0	0		10	10	10	10	10	21	22
Mercury, total (Hg)	19	19	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	19	19	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	19	2	>50	3	15.8	88.5	10	10	17	30	41	73	73
<b>Fecal coliform (#/100mL)</b>													
# results:	Geomean		# > 400:		% > 400:		%Conf:						
52	475		26		50		100						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** SALEM CRK AT SR 1120 CLEMMONSVILLE RD AT WINSTON SALEM

**Station #:** Q2540000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.03115

**Longitude:** -80.31372

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-94-12-(4)

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		5.4	5.7	6.5	7.3	9.3	10.4	13.2
	99	0	<5	0	0		5.4	5.7	6.5	7.3	9.3	10.4	13.2
pH (SU)	85	0	<6	0	0		6.6	6.9	6.9	7.1	7.4	8.1	8.5
	85	0	>9	0	0		6.6	6.9	6.9	7.1	7.4	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				62	121	150	180	225	278	387
Water Temperature (°C)	99	0	>32	0	0		3	5.3	12.7	18.9	22.4	24.5	28.2
<b>Other</b>													
Turbidity (NTU)	60	0	>50	2	3.3		2	3.8	4.5	8.8	17.5	30.6	310
<b>Nutrients (mg/L)</b>													
NH3 as N	60	2	N/A				0.01	0.05	0.09	0.14	0.21	0.36	0.43
NO2 + NO3 as N	60	0	N/A				0.16	0.61	0.86	1.05	1.3	1.54	1.86
TKN as N	60	3	N/A				0.1	0.2	0.31	0.49	0.68	0.93	1.67
Total Phosphorus	60	5	N/A				0.01	0.02	0.04	0.06	0.1	0.16	0.62
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
60	99			5 8									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NC DENR, Division of Water Quality

Basinwide Assessment Report

**Location:** SALEM CRK AT SR 2991 FRATERNITY CHURCH RD NR WINSTON SALEM

**Station #:** Q2570000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.00855

**Longitude:** -80.33528

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-94-12-(4)

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	98	0	<4	0	0		5.1	5.4	6.1	7	9.1	10.1	12.7
	98	0	<5	0	0		5.1	5.4	6.1	7	9.1	10.1	12.7
pH (SU)	84	0	<6	0	0		6.7	6.8	6.9	7	7.4	8.1	8.4
	84	0	>9	0	0		6.7	6.8	6.9	7	7.4	8.1	8.4
Spec. conductance (umhos/cm at 25°C)	83	0	N/A				93	178	223	302	389	597	749
Water Temperature (°C)	98	0	>32	0	0		4	5.8	13.5	20.1	23.1	24.9	28.8
<b>Other</b>													
Turbidity (NTU)	59	0	>50	2	3.4		2.2	3.4	4.8	8.6	20	31	360
<b>Nutrients (mg/L)</b>													
NH3 as N	59	4	N/A				0.01	0.05	0.1	0.13	0.2	0.34	0.93
NO2 + NO3 as N	59	0	N/A				1	2.46	3.5	4.76	5.69	6.94	9.01
TKN as N	59	0	N/A				0.19	0.68	0.92	1.12	1.38	1.62	2.02
Total Phosphorus	59	0	N/A				0.53	0.71	1.21	1.81	2.46	3.39	4.45
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	28	0	N/A				92	121	162	281	522	1304	16156
Arsenic, total (As)	28	28	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	28	28	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	28	25	>50	0	0		5	5	5	5	5	6	31
Copper, total (Cu)	28	0	>7	6	21.4	98.2	2	3	4	5	7	10	32
Iron, total (Fe)	28	0	>1000	8	28.6	99.9	441	463	559	770	1204	1828	18300
Lead, total (Pb)	28	25	>25	1	3.6		5	5	5	5	5	5	56
Mercury, total (Hg)	28	28	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	28	23	>88	0	0		10	10	10	10	10	11	12
Zinc, total (Zn)	28	0	>50	7	25	99.5	15	24	34	40	52	59	102
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
59	117			5 8									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** MUDDY CRK AT SR 2995 NR MUDDY CREEK

**Station #:** Q2600000

**Hydrologic Unit Code:** 3040101

**Latitude:** 36.00001

**Longitude:** -80.34000

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-94-(0.5)

**Time period:** 01/07/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	55	0	<4	0	0		5.5	6.5	6.8	8.5	10.7	11.9	13.9
	55	0	<5	0	0		5.5	6.5	6.8	8.5	10.7	11.9	13.9
pH (SU)	57	0	<6	0	0		6	6.6	7	7.3	7.4	7.4	7.6
	57	0	>9	0	0		6	6.6	7	7.3	7.4	7.4	7.6
Spec. conductance (umhos/cm at 25°C)	57	0	N/A				51	190	250	321	432	488	728
Water Temperature (°C)	57	0	>32	0	0		2	8	11.1	16.8	23.8	26.9	29.7
<b>Other</b>													
TSS (mg/L)	18	1	N/A				5	5	6.8	11.5	40.5	279.8	728
Turbidity (NTU)	57	0	>50	3	5.3		2.8	4.1	6.5	9.1	19.5	38.4	500
<b>Nutrients (mg/L)</b>													
NH3 as N	41	1	N/A				0.02	0.03	0.04	0.06	0.12	0.24	1.1
NO2 + NO3 as N	41	0	N/A				0.38	1.52	1.9	2.4	2.9	3.28	3.9
TKN as N	41	0	N/A				0.49	0.56	0.65	0.73	0.87	1.08	1.8
Total Phosphorus	41	0	N/A				0.16	0.25	0.47	0.68	1.15	1.48	2.6
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	19	0	N/A				130	190	290	400	1800	20000	34000
Arsenic, total (As)	19	19	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	19	19	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	19	18	>50	0	0		25	25	25	25	25	25	42
Copper, total (Cu)	19	0	>7	4	21.1	96.5	2	2	3	4	6	14	30
Iron, total (Fe)	19	0	>1000	7	36.8	100	530	540	760	980	2700	15000	34000
Lead, total (Pb)	19	16	>25	1	5.3		10	10	10	10	10	14	28
Mercury, total (Hg)	19	19	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	19	18	>88	0	0		10	10	10	10	10	10	22
Zinc, total (Zn)	19	0	>50	9	47.4	100	27	33	41	48	63	83	120
<b>Fecal coliform (#/100mL)</b>													
# results:	Geomean			# > 400: % > 400: %Conf:									
52	376			22 42 100									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** MUDDY CRK AT SR 1485 NR WINSTON SALEM

**Station #:** Q2720000

**Hydrologic Unit Code:** 3040101

**Latitude:** 35.94020

**Longitude:** -80.35800

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-94-(0.5)

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		5.2	5.5	6.3	7.2	9.3	10.3	13
	99	0	<5	0	0		5.2	5.5	6.3	7.2	9.3	10.3	13
pH (SU)	85	0	<6	0	0		6.6	6.7	6.9	7	7.6	8	8.4
	85	0	>9	0	0		6.6	6.7	6.9	7	7.6	8	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				59	158	191	263	349	504	716
Water Temperature (°C)	99	0	>32	0	0		3.8	5.8	12.8	19.7	22.9	24.8	28.5
<b>Other</b>													
Turbidity (NTU)	60	0	>50	5	8.3		3.5	5.2	8.5	15.5	28.8	44.5	450
<b>Nutrients (mg/L)</b>													
NH3 as N	60	5	N/A				0.01	0.01	0.06	0.08	0.15	0.27	0.38
NO2 + NO3 as N	60	0	N/A				0.59	1.39	1.89	2.49	3.02	3.57	4.71
TKN as N	60	0	N/A				0.26	0.37	0.57	0.68	0.88	1.03	1.68
Total Phosphorus	60	0	N/A				0.17	0.39	0.52	0.8	1.01	1.62	2.22
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	127		2		3								

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** YADKIN RIV AT US 64 AT YADKIN COLLEGE

**Station #:** Q2810000

**Hydrologic Unit Code:** 3040101

**Latitude:** 35.85700

**Longitude:** -80.38628

**Stream class:** WS-IV CA

**Agency:** NCAMBNT

**NC stream index:** 12-(97.5)

**Time period:** 01/07/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	76	0	<4	0	0		5.2	6.8	7.2	8.9	11	12.3	15.6
	76	0	<5	0	0		5.2	6.8	7.2	8.9	11	12.3	15.6
pH (SU)	77	0	<6	0	0		6.4	6.8	6.9	7.3	7.5	7.8	8
	77	0	>9	0	0		6.4	6.8	6.9	7.3	7.5	7.8	8
Spec. conductance (umhos/cm at 25°C)	77	0	N/A				60	70	82	95	114	149	267
Water Temperature (°C)	77	0	>32	0	0		2	7.6	11	17.1	24.8	26.8	29.9
<b>Other</b>													
TSS (mg/L)	46	1	N/A				4.2	5	8	14	28.2	58.6	430
Turbidity (NTU)	77	0	>50	12	15.6	95.9	3.4	4.4	8.2	17	31.5	76	250
<b>Nutrients (mg/L)</b>													
NH3 as N	35	13	N/A				0.02	0.02	0.02	0.02	0.06	0.18	0.23
NO2 + NO3 as N	35	0	>10	0	0		0.5	0.69	0.77	0.87	1	1.2	1.2
TKN as N	35	0	N/A				0.23	0.27	0.37	0.41	0.5	0.64	0.9
Total Phosphorus	35	0	N/A				0.13	0.15	0.17	0.19	0.23	0.28	0.3
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				130	233	370	680	940	1550	6600
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	10	>7	1	5		2	2	2	2	3	5	12
Iron, total (Fe)	20	0	>1000	10	50	100	520	531	658	975	1350	1960	7400
Lead, total (Pb)	20	20	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	20	0	>200	0	0		37	39	41	52	67	86	180
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	6	>50	2	10	67.7	10	10	10	12	16	57	93
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
58	144		15		26		89.7						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** YADKIN RIV AT US 64 AT YADKIN COLLEGE

**Station #:** Q2810000

**Hydrologic Unit Code:** 3040101

**Latitude:** 35.85700

**Longitude:** -80.38628

**Stream class:** WS-IV CA

**Agency:** YPDRBA

**NC stream index:** 12-(97.5)

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	83	0	<4	0	0		5.1	5.7	6.8	7.8	10	11.2	13.2
	83	0	<5	0	0		5.1	5.7	6.8	7.8	10	11.2	13.2
pH (SU)	83	0	<6	0	0		6.7	6.8	6.9	7.1	7.5	8.1	8.5
	83	0	>9	0	0		6.7	6.8	6.9	7.1	7.5	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	82	0	N/A				61	81	96	110	133	159	231
Water Temperature (°C)	83	0	>32	0	0		3.5	5.4	11.6	18.8	22.6	24.5	28.8
<b>Other</b>													
TSS (mg/L)	58	0	N/A				2.1	5.1	9.4	15.5	40.2	111.2	757
Turbidity (NTU)	58	0	>50	5	8.6		4.2	6.3	12	16	27.2	44	160
<b>Nutrients (mg/L)</b>													
NH3 as N	58	6	N/A				0.01	0.01	0.04	0.08	0.16	0.27	0.44
NO2 + NO3 as N	58	0	>10	0	0		0.27	0.61	0.76	1.09	1.47	1.84	2.23
TKN as N	58	4	N/A				0.1	0.23	0.35	0.48	0.77	1.07	3.57
Total Phosphorus	58	0	N/A				0.06	0.09	0.14	0.31	0.48	0.73	8.28
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	45	0	N/A				92	197	322	672	1219	3770	9546
Arsenic, total (As)	45	44	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	45	44	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	45	33	>50	0	0		5	5	5	5	6	9	17
Copper, total (Cu)	45	13	>7	4	8.9		2	2	2	3	4	8	14
Iron, total (Fe)	45	0	>1000	34	75.6	100	654	713	992	1197	1746	9253	21480
Lead, total (Pb)	45	38	>25	0	0		5	5	5	5	5	7	12
Manganese, total (Mn)	45	1	>200	7	15.6	92.4	10	46	66	109	162	304	514
Mercury, total (Hg)	45	45	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	45	41	>25	0	0		10	10	10	10	10	10	16
Zinc, total (Zn)	45	18	>50	1	2.2		10	10	10	12	18	28	58

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
58	63	4	7	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** DUTCHMAN CRK AT US 64 NR MOCKSVILLE

**Station #:** Q3105000

**Hydrologic Unit Code:** 3040101

**Latitude:** 35.88107 **Longitude:** -80.50118

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-102-(2)

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.1	5.9	6.8	7.5	9.7	10.8	12.9
	85	0	<5	0	0		5.1	5.9	6.8	7.5	9.7	10.8	12.9
pH (SU)	85	0	<6	0	0		6.7	6.9	6.9	7.1	7.4	8	8.2
	85	0	>9	0	0		6.7	6.9	6.9	7.1	7.4	8	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				73	110	119	138	166	188	290
Water Temperature (°C)	85	0	>32	0	0		3.2	4.9	12	18.6	22.1	23.9	25.3
<b>Other</b>													
Turbidity (NTU)	60	0	>50	5	8.3		3	5.6	8.7	11	23.8	39.9	330
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	79		7		12								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** S YADKIN RIV AT SR 1159 NR MOCKSVILLE

**Station #:** Q3460000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.84478

**Longitude:** -80.65910

**Stream class:** WS-IV

**Agency:** NCAMBNT

**NC stream index:** 12-108-(14.5)

**Time period:** 01/07/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	76	0	<4	0	0		4.8	6.8	7.4	9.1	10.8	12.2	14
	76	0	<5	1	1.3		4.8	6.8	7.4	9.1	10.8	12.2	14
pH (SU)	76	0	<6	0	0		6.1	6.6	6.9	7.3	7.6	7.8	8.5
	76	0	>9	0	0		6.1	6.6	6.9	7.3	7.6	7.8	8.5
Spec. conductance (umhos/cm at 25°C)	76	0	N/A				43	61	67	72	78	84	105
Water Temperature (°C)	76	0	>32	0	0		1	6.8	9.6	16	23	24.7	27.3
<b>Other</b>													
Chlorophyll a (ug/L)	1	0	>40	0	0		16	16	16	16	16	16	16
TSS (mg/L)	46	0	N/A				3.2	6.1	11.8	22.5	38.5	59.2	318
Turbidity (NTU)	76	0	>50	8	10.5	65.1	3.6	6.6	9.4	20	34	55	310
<b>Nutrients (mg/L)</b>													
NH3 as N	35	24	N/A				0.02	0.02	0.02	0.02	0.02	0.04	0.99
NO2 + NO3 as N	35	0	>10	0	0		0.37	0.49	0.54	0.6	0.72	0.79	0.91
TKN as N	35	8	N/A				0.2	0.2	0.22	0.31	0.44	0.58	1.7
Total Phosphorus	35	0	N/A				0.02	0.03	0.05	0.06	0.11	0.13	0.62
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	19	0	N/A				190	210	280	730	1100	1700	3700
Arsenic, total (As)	19	19	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	19	19	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	19	19	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	19	12	>7	0	0		2	2	2	2	2	4	4
Iron, total (Fe)	19	0	>1000	14	73.7	100	680	750	820	1400	1900	2900	4800
Lead, total (Pb)	19	19	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	19	0	>200	1	5.3		47	51	59	85	110	160	440
Mercury, total (Hg)	19	19	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	19	19	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	19	11	>50	0	0		10	10	10	10	15	21	47
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
58	343			21 36 99.9									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** HUNTING CRK AT SR 2115 NR HARMONY

**Station #:** Q3484000

**Hydrologic Unit Code:** 3040102

**Latitude:** 36.00024

**Longitude:** -80.74562

**Stream class:** WS-III

**Agency:** NCAMBNT

**NC stream index:** 12-108-16-(0.5)

**Time period:** 01/10/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		6.6	7.5	8.6	9.8	12	12.9	14.9
	59	0	<5	0	0		6.6	7.5	8.6	9.8	12	12.9	14.9
pH (SU)	59	0	<6	5	8.5		5.6	6	6.2	6.7	7.3	7.5	7.9
	59	0	>9	0	0		5.6	6	6.2	6.7	7.3	7.5	7.9
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				40	49	51	54	58	62	70
Water Temperature (°C)	59	0	>32	0	0		0.9	5.3	7.2	15.3	20.8	23.7	28.1
<b>Other</b>													
TSS (mg/L)	20	3	N/A				2.5	2.6	4	6.8	14.8	92.4	310
Turbidity (NTU)	59	0	>50	10	16.9	96.9	1.6	3.5	4.9	10	21	120	400
<b>Nutrients (mg/L)</b>													
NH3 as N	1	1	N/A				0.02	0.02	0.02	0.02	0.02	0.02	0.02
NO2 + NO3 as N	1	0	>10	0	0		1.1	1.1	1.1	1.1	1.1	1.1	1.1
TKN as N	1	0	N/A				0.29	0.29	0.29	0.29	0.29	0.29	0.29
Total Phosphorus	1	0	N/A				0.03	0.03	0.03	0.03	0.03	0.03	0.03
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	19	0	N/A				120	160	190	390	1100	5500	27000
Arsenic, total (As)	19	19	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	19	19	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	19	19	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	19	11	>7	1	5.3		2	2	2	2	3	5	10
Iron, total (Fe)	19	0	>1000	6	31.6	99.8	290	310	340	560	1200	5000	20000
Lead, total (Pb)	19	18	>25	0	0		10	10	10	10	10	10	18
Manganese, total (Mn)	19	0	>200	1	5.3		11	13	17	28	37	110	480
Mercury, total (Hg)	19	19	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	19	18	>25	0	0		10	10	10	10	10	10	13
Zinc, total (Zn)	19	13	>50	0	0		10	10	10	10	10	17	42
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
59	204			12 20 60.2									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** BEAR CRK AT SR 1116 JUNCTION RD NR COOLEEMEE

**Station #:** Q3555000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.82560

**Longitude:** -80.58500

**Stream class:** WS-IV

**Agency:** YPDRBA

**NC stream index:** 12-108-18-(3)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.5	6.5	7.7	9.2	10.5	12.4
	85	0	<5	0	0		5.2	5.5	6.5	7.7	9.2	10.5	12.4
pH (SU)	85	0	<6	0	0		6.6	6.8	6.9	7.1	7.5	8	8.2
	85	0	>9	0	0		6.6	6.8	6.9	7.1	7.5	8	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				81	100	119	136	161	190	239
Water Temperature (°C)	85	0	>32	0	0		2.8	6.2	11.9	19.8	22.3	23.7	27.2
<b>Other</b>													
Turbidity (NTU)	60	0	>50	4	6.7		2.1	5	7.2	12	17.8	38	320
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	0	N/A				81	138	240	429	818	1337	6984
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	27	>50	0	0		5	5	5	5	5	5	9
Copper, total (Cu)	29	13	>7	5	17.2	93.6	2	2	2	2	4	10	96
Iron, total (Fe)	29	0	>1000	26	89.7	100	495	921	1178	1392	1789	2396	10168
Lead, total (Pb)	29	28	>25	0	0		5	5	5	5	5	5	7
Manganese, total (Mn)	29	0	>200	2	6.9		43	67	94	111	150	200	288
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	27	>25	0	0		10	10	10	10	10	10	18
Zinc, total (Zn)	29	25	>50	0	0		10	10	10	10	10	13	25
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>		<b>% &gt; 400:</b>	<b>%Conf:</b>						
60	120			4		7							

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** FOURTH CRK AT SR 2316 BELL FARM RD NR STATESVILLE

**Station #:** Q3720000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.77607 **Longitude:** -80.79582

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-108-20

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.7	6.8	7.8	9.6	10.8	13.4
	85	0	<5	0	0		5.2	5.7	6.8	7.8	9.6	10.8	13.4
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7.1	7.4	7.9	8.3
	85	0	>9	0	0		6.7	6.8	6.9	7.1	7.4	7.9	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				63	84	102	118	144	187	219
Water Temperature (°C)	85	0	>32	0	0		3.2	6.1	12.1	19.3	21.8	24	27.2
<b>Other</b>													
Turbidity (NTU)	60	0	>50	3	5		3.6	5.6	8	13	19.8	39.9	240
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	97		3		5								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** FOURTH CRK AT SR 2308 NR ELMWOOD

**Station #:** Q3735000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.76841

**Longitude:** -80.74978

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-108-20

**Time period:** 01/10/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		5.5	6.8	7.6	8.7	10.7	11.4	12.8
	59	0	<5	0	0		5.5	6.8	7.6	8.7	10.7	11.4	12.8
pH (SU)	59	0	<6	1	1.7		5.7	6.1	6.5	6.9	7.2	7.5	7.7
	59	0	>9	0	0		5.7	6.1	6.5	6.9	7.2	7.5	7.7
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				39	97	112	131	146	163	219
Water Temperature (°C)	59	0	>32	0	0		4	7	9	16	21.4	23.9	26.9
<b>Other</b>													
TSS (mg/L)	20	0	N/A				4.2	5.3	6	12.5	32	144.4	410
Turbidity (NTU)	59	0	>50	11	18.6	98.7	3.1	6	9.4	16	38	220	500
<b>Nutrients (mg/L)</b>													
NH3 as N	56	3	N/A				0.02	0.02	0.05	0.08	0.2	0.37	0.91
NO2 + NO3 as N	56	0	N/A				0.32	0.55	0.74	0.88	1.28	1.83	4.4
TKN as N	56	0	N/A				0.2	0.23	0.32	0.4	0.59	0.97	1.6
Total Phosphorus	56	0	N/A				0.05	0.07	0.1	0.22	0.45	0.75	2.5
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				170	191	260	615	2175	5660	50000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	19	>2	1	5		2	2	2	2	2	2	7
Chromium, total (Cr)	20	19	>50	1	5		25	25	25	25	25	25	53
Copper, total (Cu)	20	9	>7	3	15	86.7	2	2	2	3	4	12	25
Iron, total (Fe)	20	0	>1000	11	55	100	610	680	772	1300	2575	6970	48000
Lead, total (Pb)	20	18	>25	0	0		10	10	10	10	10	12	25
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	18	>88	0	0		10	10	10	10	10	15	24
Zinc, total (Zn)	20	6	>50	2	10	67.7	10	10	10	15	20	81	93
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>							
58	363			18	31	98.5							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** FOURTH CRK AT SR 2308 NR ELMWOOD

**Station #:** Q3735000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.76841

**Longitude:** -80.74978

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-108-20

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.9	6.6	7.8	9.8	10.9	13
	85	0	<5	0	0		5.2	5.9	6.6	7.8	9.8	10.9	13
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7.1	7.4	7.9	8.3
	85	0	>9	0	0		6.7	6.8	6.9	7.1	7.4	7.9	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				84	106	122	142	184	216	280
Water Temperature (°C)	85	0	>32	0	0		3.6	6.4	12.1	19.6	22.1	23.7	27.5
<b>Other</b>													
Turbidity (NTU)	60	0	>50	4	6.7		3.5	7.2	9.2	15	22	44.5	210
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	97		6		10								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** THIRD CRK AT SR 2342 AMITY HILL RD NR STATESVILLE

**Station #:** Q3900000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.74920

**Longitude:** -80.87748

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-108-20-4

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.5	5.9	6.8	8	9.9	10.9	13.2
	85	0	<5	0	0		5.5	5.9	6.8	8	9.9	10.9	13.2
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7	7.5	8.1	8.5
	85	0	>9	0	0		6.7	6.8	6.9	7	7.5	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	84	3	N/A				50	70	84	112	139	176	326
Water Temperature (°C)	85	0	>32	0	0		3	5.7	12.3	19.3	22.4	23.8	26.4
<b>Other</b>													
Turbidity (NTU)	60	0	>50	7	11.7	75.2	4.2	6.9	8.5	13.5	20	82	160
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	108		6		10								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** THIRD CRK AT SR 2359 BETHESDA RD NR STATESVILLE

**Station #:** Q3932000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.73302

**Longitude:** -80.80395

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-108-20-4

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.3	6	6.9	8	9.9	10.9	12.6
	85	0	<5	0	0		5.3	6	6.9	8	9.9	10.9	12.6
pH (SU)	85	0	<6	0	0		6.6	6.8	6.9	7	7.4	8	8.3
	85	0	>9	0	0		6.6	6.8	6.9	7	7.4	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				69	97	104	116	159	220	577
Water Temperature (°C)	85	0	>32	0	0		3.4	6	12.1	19.5	22.2	23.6	26.8
<b>Other</b>													
Turbidity (NTU)	60	0	>50	7	11.7	75.2	4.2	7.2	8.9	13.5	20.8	59.5	160

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	97	3	5	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** THIRD CRK AT SR 1970 NR WOODLEAF

**Station #:** Q3934500

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.76742 **Longitude:** -80.62609

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-108-20-4

**Time period:** 01/23/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		4.9	6.4	7.7	8.9	10.3	11.4	13.4
	59	0	<5	1	1.7		4.9	6.4	7.7	8.9	10.3	11.4	13.4
pH (SU)	59	0	<6	0	0		6	6.2	6.3	6.8	7.3	7.6	8.6
	59	0	>9	0	0		6	6.2	6.3	6.8	7.3	7.6	8.6
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				68	92	107	133	158	300	394
Water Temperature (°C)	59	0	>32	0	0		2.4	6.4	8.5	14.1	21.4	23.5	27.7
<b>Other</b>													
TSS (mg/L)	19	0	N/A				7	7	9	17	36	350	1100
Turbidity (NTU)	58	0	>50	11	19	98.9	5.2	9.1	13	23.5	38.5	123	850
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				260	297	408	615	1250	15130	57000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	19	>50	0	0		25	25	25	25	25	25	35
Copper, total (Cu)	20	6	>7	4	20	95.7	2	2	2	3	6	20	36
Iron, total (Fe)	20	0	>1000	15	75	100	790	822	1050	1600	1950	12900	46000
Lead, total (Pb)	20	19	>25	1	5		10	10	10	10	10	10	31
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	13	>50	1	5		10	10	10	10	13	29	120
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
57	425		21		37		99.9						

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** S YADKIN RIV AT US 601 NR COOLEEMEE

**Station #:** Q3970000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.77838

**Longitude:** -80.50673

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-108-(19.5)

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	Results not meeting EL EL	#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5	5.6	6.3	7.3	9.1	10.2	12.1
	85	0	<5	0	0		5	5.6	6.3	7.3	9.1	10.2	12.1
pH (SU)	85	0	<6	0	0		6.7	6.9	6.9	7.1	7.4	7.9	8.3
	85	0	>9	0	0		6.7	6.9	6.9	7.1	7.4	7.9	8.3
Spec. conductance (umhos/cm at 25°C)	84	2	N/A				50	89	102	116	140	186	240
Water Temperature (°C)	85	0	>32	0	0		3.4	6.5	12.6	20.4	22.9	24.1	28.5
<b>Other</b>													
TSS (mg/L)	60	0	N/A				3.1	5.7	11	20	32.8	57.6	262
Turbidity (NTU)	60	0	>50	10	16.7	96.6	4.8	7.7	13.2	21	39	79.5	200
<b>Nutrients (mg/L)</b>													
NH3 as N	60	8	N/A				0.01	0.01	0.03	0.06	0.09	0.18	0.3
NO2 + NO3 as N	60	0	N/A				0.02	0.63	0.7	0.8	0.92	1.15	1.51
TKN as N	60	12	N/A				0.1	0.18	0.2	0.38	0.55	0.74	2.51
Total Phosphorus	60	0	N/A				0.05	0.05	0.08	0.11	0.14	0.2	0.57
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	47	1	N/A				100	268	506	1117	2070	4009	16740
Arsenic, total (As)	47	46	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	47	46	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	47	36	>50	0	0		5	5	5	5	5	8	22
Copper, total (Cu)	47	11	>7	4	8.5		2	2	2	3	4	7	15
Iron, total (Fe)	47	0	>1000	40	85.1	100	571	893	1257	1809	3092	5298	12015
Lead, total (Pb)	47	43	>25	0	0		5	5	5	5	5	5	15
Mercury, total (Hg)	47	47	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	47	43	>88	0	0		10	10	10	10	10	10	20
Zinc, total (Zn)	47	25	>50	2	4.3		10	10	10	10	15	26	231
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	60	<b>Geomean</b>	112	<b># &gt; 400:</b>	6	<b>% &gt; 400:</b>	10	<b>%Conf:</b>					

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** SECOND CRK AT SR 1526 NR SALISBURY

**Station #:** Q4030000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.69702

**Longitude:** -80.61172

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-108-21

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.7	6.5	7.5	9.5	10.8	12.2
	85	0	<5	0	0		5.2	5.7	6.5	7.5	9.5	10.8	12.2
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7.1	7.5	7.9	8.2
	85	0	>9	0	0		6.7	6.8	6.9	7.1	7.5	7.9	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				76	100	116	139	156	180	255
Water Temperature (°C)	85	0	>32	0	0		3.3	6.3	12.6	20.2	22.2	23.4	27.7
<b>Other</b>													
Turbidity (NTU)	60	0	>50	4	6.7		1.9	4.4	7.5	14	21.8	44.4	320
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	0	N/A				133	148	250	576	868	1571	2746
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	27	>50	0	0		5	5	5	5	5	5	10
Copper, total (Cu)	29	11	>7	2	6.9		2	2	2	2	4	7	9
Iron, total (Fe)	29	0	>1000	19	65.5	100	483	714	912	1242	2049	4316	5210
Lead, total (Pb)	29	29	>25	0	0		5	5	5	5	5	5	5
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	27	>88	0	0		10	10	10	10	10	10	14
Zinc, total (Zn)	29	26	>50	0	0		10	10	10	10	10	14	24

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	112	6	10	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** SECOND CRK AT US 70 NR BARBER

**Station #:** Q4120000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.71840      **Longitude:** -80.59538

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-108-21

**Time period:** 01/23/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	1	1.7		2.5	6.7	8	9.1	10.7	11.7	14.3
	59	0	<5	2	3.4		2.5	6.7	8	9.1	10.7	11.7	14.3
pH (SU)	59	0	<6	0	0		6	6.2	6.5	6.7	7.2	7.7	8.1
	59	0	>9	0	0		6	6.2	6.5	6.7	7.2	7.7	8.1
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				72	102	118	126	145	173	342
Water Temperature (°C)	59	0	>32	0	0		1.9	6.3	8.8	14.3	21.5	23.7	29.5
<b>Other</b>													
TSS (mg/L)	19	0	N/A				4	4.2	8	14	32	160	1500
Turbidity (NTU)	58	0	>50	10	17.2	97.3	4.3	6.5	10.8	15.5	28	79.5	1800
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				190	203	402	545	1745	32350	81000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	19	>50	0	0		25	25	25	25	25	25	36
Copper, total (Cu)	20	3	>7	3	15	86.7	2	2	2	3	7	22	89
Iron, total (Fe)	20	0	>1000	11	55	100	570	599	848	1150	1850	22700	63000
Lead, total (Pb)	20	18	>25	1	5		10	10	10	10	10	14	36
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	19	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	15	>50	1	5		10	10	10	10	11	44	130
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>	<b># &gt; 400: % &gt; 400: %Conf:</b>											
57	360	20 35 99.8											

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** SECOND CRK AT US 601 NR SALISBURY

**Station #:** Q4165000

**Hydrologic Unit Code:** 3040102

**Latitude:** 35.76247

**Longitude:** -80.51075

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-108-21

**Time period:** 01/14/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	6	6.6	7.5	9.6	10.7	12.5
	85	0	<5	0	0		5.2	6	6.6	7.5	9.6	10.7	12.5
pH (SU)	85	0	<6	0	0		6.8	6.9	6.9	7.1	7.5	7.9	8.2
	85	0	>9	0	0		6.8	6.9	6.9	7.1	7.5	7.9	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				79	102	116	134	159	190	270
Water Temperature (°C)	85	0	>32	0	0		2.8	6.4	12.2	20	22.5	24.1	28.2
<b>Other</b>													
Turbidity (NTU)	59	0	>50	4	6.8		3.5	6.7	9.6	15	22	45	400
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	0	N/A				101	121	330	482	890	1385	4921
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	25	>50	0	0		5	5	5	5	5	6	9
Copper, total (Cu)	29	8	>7	3	10.3	67.1	2	2	2	3	4	8	14
Iron, total (Fe)	29	0	>1000	25	86.2	100	678	917	1102	1376	1812	3948	9405
Lead, total (Pb)	29	29	>25	0	0		5	5	5	5	5	5	5
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	27	>88	0	0		10	10	10	10	10	10	26
Zinc, total (Zn)	29	20	>50	0	0		10	10	10	10	12	16	21

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	92	6	10	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** GRANTS CRK AT SR 1915 NR SALISBURY

**Station #:** Q4540000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.70718

**Longitude:** -80.43608

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-110

**Time period:** 10/05/2005 to 12/06/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	15	0	<4	1	6.7		3.8	4.9	6.5	9.2	10.4	11.7	11.7
	15	0	<5	1	6.7		3.8	4.9	6.5	9.2	10.4	11.7	11.7
pH (SU)	15	0	<6	0	0		6.1	6.1	6.2	6.5	7	7.6	7.6
	15	0	>9	0	0		6.1	6.1	6.2	6.5	7	7.6	7.6
Spec. conductance (umhos/cm at 25°C)	15	0	N/A				49	77	129	137	166	183	187
Water Temperature (°C)	15	0	>32	0	0		6.7	6.9	8.2	12.2	21.9	23.8	24.7
<b>Other</b>													
TSS (mg/L)	5	0	N/A				2.8	2.8	2.9	6	41.5	68	68
Turbidity (NTU)	15	0	>50	3	20	94.4	4.9	5.1	7.6	11	20	218.4	306
<b>Nutrients (mg/L)</b>													
NH3 as N	15	7	N/A				0.02	0.02	0.02	0.02	0.05	0.08	0.12
NO2 + NO3 as N	15	0	N/A				0.06	0.06	0.14	0.26	0.44	0.57	0.72
TKN as N	15	1	N/A				0.2	0.2	0.26	0.33	0.42	0.87	1.4
Total Phosphorus	15	0	N/A				0.03	0.03	0.04	0.05	0.08	0.31	0.51
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	5	0	N/A				210	210	225	440	6745	13000	13000
Arsenic, total (As)	5	5	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	5	5	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	5	5	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	5	2	>7	2	40		2	2	2	2	23	24	24
Iron, total (Fe)	5	0	>1000	3	60		150	150	395	1100	9150	17000	17000
Lead, total (Pb)	5	4	>25	0	0		10	10	10	10	14	19	19
Mercury, total (Hg)	5	5	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	5	4	>88	0	0		10	10	10	10	12	14	14
Zinc, total (Zn)	5	3	>50	2	40		10	10	10	10	786	1500	1500
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
15	331			6 40 98.2									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** GRANTS CRK AT SR 1915 NR SALISBURY

**Station #:** Q4540000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.70718

**Longitude:** -80.43608

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-110

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.5	6.1	7.2	8.8	10	11.6
	85	0	<5	0	0		5.2	5.5	6.1	7.2	8.8	10	11.6
pH (SU)	85	0	<6	0	0		6.7	6.7	6.8	7	7.4	8	8.2
	85	0	>9	0	0		6.7	6.7	6.8	7	7.4	8	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				88	107	116	140	168	222	271
Water Temperature (°C)	85	0	>32	0	0		5.6	7.1	12.1	20.2	23.4	26.7	29.1
<b>Other</b>													
Turbidity (NTU)	60	0	>50	3	5		2.2	5.2	7.1	11	19.8	33.8	120
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	106		5		8								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** GRANTS CRK BELOW SALISBURY AND SPENCER WWTP

**Station #:** Q4600000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.71085

**Longitude:** -80.42597

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-110

**Time period:** 01/23/2002 to 08/04/2005

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	43	0	<4	0	0		4.5	5.5	6.6	7.4	10.1	12.3	13.6
	43	0	<5	1	2.3		4.5	5.5	6.6	7.4	10.1	12.3	13.6
pH (SU)	43	0	<6	0	0		6.1	6.4	6.7	6.9	7.1	7.4	7.7
	43	0	>9	0	0		6.1	6.4	6.7	6.9	7.1	7.4	7.7
Spec. conductance (umhos/cm at 25°C)	43	0	N/A				71	95	128	142	157	203	289
Water Temperature (°C)	43	0	>32	0	0		1.2	6.5	8.9	13.9	21.7	23.7	26.7
<b>Other</b>													
TSS (mg/L)	14	0	N/A				3	3.5	4	9.5	44.2	535	820
Turbidity (NTU)	42	0	>50	4	9.5		6.2	7.2	8.5	13	22	67.5	380
<b>Nutrients (mg/L)</b>													
NH3 as N	42	4	N/A				0.02	0.02	0.02	0.04	0.07	0.11	0.19
NO2 + NO3 as N	42	0	N/A				0.05	0.22	0.34	0.4	0.56	2.49	6.1
TKN as N	42	2	N/A				0.2	0.22	0.26	0.35	0.46	0.57	0.84
Total Phosphorus	42	0	N/A				0.03	0.04	0.05	0.07	0.14	0.51	1.2
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	15	0	N/A				140	158	240	320	880	20180	38000
Arsenic, total (As)	15	15	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	15	15	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	15	15	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	15	3	>7	5	33.3	99.8	2	2	2	3	12	31	32
Iron, total (Fe)	15	0	>1000	9	60	100	820	832	920	1100	1800	17700	30000
Lead, total (Pb)	15	14	>25	1	6.7		10	10	10	10	10	21	38
Mercury, total (Hg)	15	15	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	15	15	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	15	10	>50	1	6.7		10	10	10	10	22	59	110
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
41	266			9 22 70.4									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** GRANTS CRK BELOW SALISBURY AND SPENCER WWTP

**Station #:** Q4600000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.71085

**Longitude:** -80.42597

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-110

**Time period:** 01/15/2002 to 06/24/2003

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	25	0	<4	0	0		5	5.2	5.3	7	8.6	9.3	9.5
	25	0	<5	0	0		5	5.2	5.3	7	8.6	9.3	9.5
pH (SU)	25	0	<6	0	0		6.9	7	7.7	8	8	8.1	8.1
	25	0	>9	0	0		6.9	7	7.7	8	8	8.1	8.1
Spec. conductance (umhos/cm at 25°C)	24	0	N/A				85	89	94	130	205	236	245
Water Temperature (°C)	25	0	>32	0	0		5.7	6.1	9.8	19.6	25.8	27.5	29.4
<b>Other</b>													
Chlorophyll a (ug/L)	7	3	>40	0	0		1	1	1	5	8	15	15
Turbidity (NTU)	18	0	>50	3	16.7	90.2	5.9	8.5	14.8	17.5	36	66.5	80
<b>Nutrients (mg/L)</b>													
NH3 as N	18	5	N/A				0.01	0.01	0.01	0.04	0.08	0.35	0.49
NO2 + NO3 as N	18	1	N/A				0.01	0.01	0.19	0.51	0.65	0.83	0.87
TKN as N	18	1	N/A				0.1	0.11	0.36	0.54	0.84	3.27	3.36
Total Phosphorus	18	1	N/A				0.01	0.06	0.11	0.16	0.22	0.34	0.71

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400: %Conf:</b>
18	113	2	11

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** YADKIN RIV AT NC 150 NR SPENCER

**Station #:** Q4660000

**Latitude:** 35.72303

**Longitude:** -80.39050

**Agency:** NCAMBNT

**Hydrologic Unit Code:** 3040103

**Stream class:** WS-V

**NC stream index:** 12-(108.5)

**Time period:** 01/23/2002 to 12/06/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		4.3	5.5	6.6	8.3	10.3	11.5	13.8
	59	0	<5	2	3.4		4.3	5.5	6.6	8.3	10.3	11.5	13.8
pH (SU)	59	0	<6	4	6.8		5.3	6	6.2	6.7	7.3	7.4	7.7
	59	0	>9	0	0		5.3	6	6.2	6.7	7.3	7.4	7.7
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				54	70	82	89	117	131	267
Water Temperature (°C)	59	0	>32	0	0		1.2	6.6	8.9	16.3	24.1	26.5	29.8
<b>Other</b>													
TSS (mg/L)	19	0	N/A				5	5.2	15	24	30	41	60
Turbidity (NTU)	58	0	>50	15	25.9	100	5.2	7.6	12.5	23	56.2	95.5	240
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				260	355	462	675	1725	3890	6200
Arsenic, total (As)	20	19	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	4	>7	1	5		2	2	2	3	4	6	9
Iron, total (Fe)	20	0	>1000	10	50	100	660	703	908	1050	1900	3310	7600
Lead, total (Pb)	20	19	>25	0	0		10	10	10	10	10	10	12
Manganese, total (Mn)	20	0	>200	1	5		39	45	49	65	88	119	260
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	12	>50	1	5		10	10	10	10	15	27	53

**Fecal coliform (#/100mL)**

# results:	Geomean	# > 400:	% > 400:	%Conf:
56	171	15	27	92.1

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** YADKIN RIV AT NC 150 NR SPENCER

**Station #:** Q4660000

**Latitude:** 35.72303

**Longitude:** -80.39050

**Agency:** YPDRBA

**Hydrologic Unit Code:** 3040103

**Stream class:** WS-V

**NC stream index:** 12-(108.5)

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	Results not meeting EL EL	#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		4.6	5.2	5.6	6.9	8.8	10.1	11.4
	85	0	<5	3	3.5		4.6	5.2	5.6	6.9	8.8	10.1	11.4
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7	7.4	8.1	8.4
	85	0	>9	0	0		6.7	6.8	6.9	7	7.4	8.1	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				71	83	96	120	150	189	295
Water Temperature (°C)	85	0	>32	0	0		5.5	7.1	13	20.6	23.9	26.3	29.2
<b>Other</b>													
Chlorophyll a (ug/L)	25	1	>40	1	4		1	2	3	6	14	25	51
Turbidity (NTU)	60	0	>50	8	13.3	85.8	6.2	13.1	18	25.5	40	66.8	110
<b>Nutrients (mg/L)</b>													
NH3 as N	59	7	N/A				0.01	0.01	0.03	0.06	0.09	0.13	0.17
NO2 + NO3 as N	60	0	>10	0	0		0.01	0.21	0.47	0.69	0.82	1.14	1.68
TKN as N	59	3	N/A				0.1	0.2	0.31	0.46	0.75	1	1.27
Total Phosphorus	60	1	N/A				0.01	0.1	0.12	0.15	0.18	0.32	0.66

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>
60	89	3	5	

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** SWEARING CRK AT SR 1272 JERSEY CHURCH RD NR LINWOOD

**Station #:** Q5135000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.72911

**Longitude:** -80.30566

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-113

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		4.4	5.2	5.5	6.6	9	9.9	11.8
	85	0	<5	6	7.1		4.4	5.2	5.5	6.6	9	9.9	11.8
pH (SU)	85	0	<6	0	0		6.5	6.7	6.8	7	7.4	8	8.3
	85	0	>9	0	0		6.5	6.7	6.8	7	7.4	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				58	90	102	124	172	234	318
Water Temperature (°C)	85	0	>32	0	0		5.1	6.5	12.2	20.1	23.2	25.2	27.7
<b>Other</b>													
Turbidity (NTU)	60	0	>50	3	5		4.4	5.8	9.2	15.5	22	34.8	300
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
59	198		10		17								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** TOWN CRK AT SR 1915 ANDREWS ST AT SPENCER

**Station #:** Q5210000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.67981

**Longitude:** -80.41552

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-115-3

**Time period:** 09/21/2004 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	39	0	<4	0	0		5.4	5.7	6.3	6.8	9.4	10.4	11.2
	39	0	<5	0	0		5.4	5.7	6.3	6.8	9.4	10.4	11.2
pH (SU)	39	0	<6	0	0		6.6	6.8	6.8	6.9	7	7.3	7.6
	39	0	>9	0	0		6.6	6.8	6.8	6.9	7	7.3	7.6
Spec. conductance (umhos/cm at 25°C)	39	0	N/A				97	126	150	185	217	256	306
Water Temperature (°C)	39	0	>32	0	0		7.2	8.3	13.7	19.2	23.6	25.4	28.2
<b>Other</b>													
Turbidity (NTU)	28	0	>50	1	3.6		9.2	9.8	12	17.5	30.2	36	70
<b>Nutrients (mg/L)</b>													
NH3 as N	28	1	N/A				0.01	0.02	0.03	0.06	0.09	0.14	0.19
NO2 + NO3 as N	28	0	N/A				0.17	0.25	0.35	0.52	0.59	0.72	1.19
TKN as N	28	2	N/A				0.2	0.2	0.26	0.44	0.59	0.9	1.01
Total Phosphorus	28	0	N/A				0.06	0.08	0.1	0.12	0.14	0.21	0.7
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
28	51		0		0								

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** TOWN CRK AT I 85 NR SPENCER

**Station #:** Q5240000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.68635      **Longitude:** -80.40520

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-115-3

**Time period:** 01/15/2002 to 08/25/2004

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	40	0	<4	0	0		4.6	5.2	5.6	7.4	8.8	10.4	11.3
	40	0	<5	2	5		4.6	5.2	5.6	7.4	8.8	10.4	11.3
pH (SU)	40	0	<6	0	0		6.8	6.9	7.1	7.4	8	8.1	8.2
	40	0	>9	0	0		6.8	6.9	7.1	7.4	8	8.1	8.2
Spec. conductance (umhos/cm at 25°C)	39	0	N/A				73	90	104	113	135	189	277
Water Temperature (°C)	40	0	>32	0	0		5.8	6.3	9.4	20.1	22.8	26.1	27
<b>Other</b>													
Turbidity (NTU)	29	0	>50	2	6.9		5.4	7.5	13.5	19	31	45	120
<b>Nutrients (mg/L)</b>													
NH3 as N	29	6	N/A				0.01	0.01	0.02	0.07	0.09	0.15	0.35
NO2 + NO3 as N	29	0	N/A				0.01	0.24	0.4	0.53	0.64	0.72	0.88
TKN as N	29	1	N/A				0.05	0.16	0.26	0.41	0.62	0.74	1.26
Total Phosphorus	29	2	N/A				0.01	0.05	0.08	0.11	0.12	0.19	0.27
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
29	174		3		10								

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** TOWN CRK AT SR 2168 NR DUKE

**Station #:** Q5360000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.66353

**Longitude:** -80.35418

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-115-(2)

**Time period:** 01/23/2002 to 12/06/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	2	3.4		3.4	4.9	7.2	8.7	10.1	11.2	12.6
	59	0	<5	6	10.2	62.3	3.4	4.9	7.2	8.7	10.1	11.2	12.6
pH (SU)	59	0	<6	1	1.7		5.7	6.3	6.8	7.2	7.9	8.9	9.2
	59	0	>9	2	3.4		5.7	6.3	6.8	7.2	7.9	8.9	9.2
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				56	79	101	116	132	186	229
Water Temperature (°C)	59	0	>32	1	1.7		2.5	7.2	10.7	19.4	26.1	29.6	33
<b>Other</b>													
Chlorophyll a (ug/L)	51	1	>40	16	31.4	100	1	5	22	28	44	54	250
TSS (mg/L)	19	0	N/A				4	6.8	11	15	25	82	290
Turbidity (NTU)	58	0	>25	16	27.6	100	4.9	7.5	11.8	18	29.2	75.2	310
<b>Nutrients (mg/L)</b>													
NH3 as N	42	30	N/A				0.02	0.02	0.02	0.02	0.02	0.06	0.09
NO2 + NO3 as N	42	22	N/A				0.02	0.02	0.02	0.02	0.16	0.27	0.4
TKN as N	42	0	N/A				0.38	0.51	0.56	0.7	0.78	1	1.1
Total Phosphorus	42	0	N/A				0.05	0.06	0.07	0.1	0.11	0.15	0.24
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				180	222	308	590	1175	1590	24000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	2	>7	2	10	67.7	2	2	2	3	4	10	20
Iron, total (Fe)	20	0	>1000	9	45	100	300	370	508	940	1700	3680	18000
Lead, total (Pb)	20	19	>25	0	0		10	10	10	10	10	10	20
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	13	>50	1	5		10	10	10	10	14	24	68

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
56	29	6	11	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** RICH FORK CRK AT SR 1755 NR HIGH POINT

**Station #:** Q5750000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.94891

**Longitude:** -80.10170

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-119-7

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		4	5.3	6.2	7.3	8.9	9.9	11.8
	99	0	<5	3	3		4	5.3	6.2	7.3	8.9	9.9	11.8
pH (SU)	85	0	<6	0	0		6.6	6.8	6.9	7.1	7.5	8	8.3
	85	0	>9	0	0		6.6	6.8	6.9	7.1	7.5	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				72	106	129	158	189	222	368
Water Temperature (°C)	99	0	>32	0	0		2.8	5.8	12.7	18.7	21.9	23.2	25.1
<b>Other</b>													
Turbidity (NTU)	60	0	>50	3	5		2.1	4.1	7	10.5	17	35.8	230
<b>Nutrients (mg/L)</b>													
NH3 as N	60	10	N/A				0.01	0.01	0.02	0.05	0.08	0.16	0.88
NO2 + NO3 as N	60	3	N/A				0.01	0.03	0.08	0.19	0.25	0.31	0.38
TKN as N	60	6	N/A				0.1	0.2	0.21	0.34	0.51	0.69	1.86
Total Phosphorus	60	1	N/A				0.01	0.05	0.06	0.08	0.12	0.25	1.28

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>
60	120	5	8	

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** RICH FORK AT SR 1800 NR THOMASVILLE

**Station #:** Q5780000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.92668

**Longitude:** -80.12464

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-119-7

**Time period:** 01/08/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		4.7	5.2	5.9	8	9.8	11.5	13.5
	59	0	<5	3	5.1		4.7	5.2	5.9	8	9.8	11.5	13.5
pH (SU)	59	0	<6	0	0		6.5	6.7	7	7.2	7.3	7.5	7.7
	59	0	>9	0	0		6.5	6.7	7	7.2	7.3	7.5	7.7
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				68	179	217	263	325	466	586
Water Temperature (°C)	59	0	>32	0	0		4	7.1	11.3	17.5	22.8	25.1	27.5
<b>Other</b>													
TSS (mg/L)	20	1	N/A				2.5	3.2	7.4	18	28.5	86.3	89
Turbidity (NTU)	59	0	>50	4	6.8		2.3	5	7.7	13	29	45	250
<b>Nutrients (mg/L)</b>													
NH3 as N	59	10	N/A				0.02	0.02	0.03	0.06	0.12	0.28	1.1
NO2 + NO3 as N	59	0	N/A				0.33	0.6	1.1	2.4	5.2	8.6	11
TKN as N	59	0	N/A				0.52	0.62	0.82	1.1	1.4	1.8	4.9
Total Phosphorus	59	0	N/A				0.1	0.11	0.18	0.26	0.52	0.75	2.6
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				100	197	315	755	1175	5030	13000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	8	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	0	>7	2	10	67.7	2	2	3	4	4	11	21
Iron, total (Fe)	19	0	>1000	10	52.6	100	340	340	740	1200	1300	6000	15000
Lead, total (Pb)	20	19	>25	0	0		10	10	10	10	10	10	15
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	2	>50	1	5		10	10	13	17	28	41	72
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>							
58	391			25	43	100							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** RICH FORK CRK AT SR 1792 NR HIGH POINT

**Station #:** Q5785000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.89843

**Longitude:** -80.14540

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-119-7

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	99	0	<4	7	7.1		3.2	4.2	5.1	5.7	7.8	9.1	11.3
	99	0	<5	20	20.2	99.9	3.2	4.2	5.1	5.7	7.8	9.1	11.3
pH (SU)	85	0	<6	0	0		6.4	6.5	6.7	7	7.5	7.9	8.4
	85	0	>9	0	0		6.4	6.5	6.7	7	7.5	7.9	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				84	140	170	222	300	383	491
Water Temperature (°C)	99	0	>32	0	0		2.7	6	13.3	19.2	22.2	24.1	25.7
<b>Other</b>													
Turbidity (NTU)	60	0	>50	2	3.3		4.3	5.8	8.5	14.5	21.5	30	400
<b>Nutrients (mg/L)</b>													
NH3 as N	60	5	N/A				0.01	0.01	0.04	0.08	0.17	0.36	1.56
NO2 + NO3 as N	60	0	N/A				0.19	0.7	1.72	2.84	4.49	5.82	8.93
TKN as N	60	1	N/A				0.1	0.48	0.63	0.81	1.19	1.69	3.86
Total Phosphorus	60	1	N/A				0.01	0.12	0.15	0.23	0.33	0.45	1.22
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	156		5		8								

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** RICH FORK CRK AT SR 2123 NR HIGH POINT

**Station #:** Q5790000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.85433

**Longitude:** -80.18215

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-119-7

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		4.7	5.6	6.1	6.9	8.8	10.3	11.4
	99	0	<5	1	1		4.7	5.6	6.1	6.9	8.8	10.3	11.4
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7	7.4	7.9	8.3
	85	0	>9	0	0		6.7	6.8	6.9	7	7.4	7.9	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				88	116	142	168	216	310	402
Water Temperature (°C)	99	0	>32	0	0		2.1	5.4	13.5	19.1	22.4	23.9	25.5
<b>Other</b>													
Turbidity (NTU)	60	0	>50	2	3.3		2.7	5.7	8	12.5	16.8	34	300
<b>Nutrients (mg/L)</b>													
NH3 as N	60	5	N/A				0.01	0.01	0.03	0.07	0.12	0.22	0.58
NO2 + NO3 as N	60	0	N/A				0.33	0.49	0.95	1.38	1.84	2.38	6.24
TKN as N	60	1	N/A				0.2	0.32	0.46	0.67	0.85	1.08	1.9
Total Phosphorus	60	2	N/A				0.01	0.08	0.11	0.14	0.18	0.24	1.51
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	103		5		8								

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** HAMBY CRK AT SR 2775 OLD EMANUEL CHURCH RD NR THOMASVILLE

**Station #:** Q5860000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.85009

**Longitude:** -80.10637

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-119-7-4

**Time period:** 09/21/2004 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	39	0	<4	0	0		6.4	6.5	6.9	7.3	9.8	11.2	12.2
	39	0	<5	0	0		6.4	6.5	6.9	7.3	9.8	11.2	12.2
pH (SU)	39	0	<6	0	0		6.7	6.8	6.9	7	7.1	7.2	7.5
	39	0	>9	0	0		6.7	6.8	6.9	7	7.1	7.2	7.5
Spec. conductance (umhos/cm at 25°C)	39	0	N/A				87	91	102	115	127	155	173
Water Temperature (°C)	39	0	>32	0	0		4.8	6.6	11.5	16.7	21.9	23.8	24
<b>Other</b>													
Turbidity (NTU)	28	0	>50	1	3.6		3.3	5.2	6.7	12	20.8	37.2	72
<b>Nutrients (mg/L)</b>													
NH3 as N	28	2	N/A				0.01	0.02	0.03	0.06	0.08	0.12	0.16
NO2 + NO3 as N	28	0	N/A				0.34	0.62	0.86	1.42	2.17	3.08	3.56
TKN as N	28	5	N/A				0.2	0.2	0.29	0.56	0.75	0.91	0.95
Total Phosphorus	28	0	N/A				0.04	0.06	0.09	0.14	0.49	1.14	1.79
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
28	40			0 0									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** HAMBY CRK AT SR 2790 NR HOLLY GROVE

**Station #:** Q5906000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.83240

**Longitude:** -80.17472

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-119-7-4

**Time period:** 01/08/2002 to 12/18/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		4.7	6.1	7.1	8.6	11	13.8	14.8
	59	0	<5	1	1.7		4.7	6.1	7.1	8.6	11	13.8	14.8
pH (SU)	59	0	<6	0	0		6.2	6.8	7	7.2	7.4	7.6	8.3
	59	0	>9	0	0		6.2	6.8	7	7.2	7.4	7.6	8.3
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				80	180	233	323	401	622	923
Water Temperature (°C)	59	0	>32	0	0		3	6	11.2	16.9	22.3	24.6	26.8
<b>Other</b>													
TSS (mg/L)	20	3	N/A				2.5	2.5	2.6	5	13.5	37.6	90
Turbidity (NTU)	59	1	>50	3	5.1		1	2.4	3.3	5.8	11	22	310
<b>Nutrients (mg/L)</b>													
NH3 as N	59	30	N/A				0.02	0.02	0.02	0.02	0.05	0.6	3.8
NO2 + NO3 as N	59	0	N/A				0.79	1.8	2.8	6.1	9.9	16	21
TKN as N	59	3	N/A				0.16	0.39	0.52	0.7	1	1.8	4.2
Total Phosphorus	59	0	N/A				0.16	0.2	0.5	0.71	1.2	1.9	2.8
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				57	62	104	305	572	2164	10000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	8	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	19	>50	1	5		25	25	25	25	25	25	54
Copper, total (Cu)	20	0	>7	11	55	100	2	2	4	8	13	24	56
Iron, total (Fe)	20	0	>1000	3	15	86.7	150	242	268	510	870	2270	13000
Lead, total (Pb)	20	19	>25	1	5		10	10	10	10	10	10	34
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	12	>88	0	0		10	10	10	10	15	23	35
Zinc, total (Zn)	20	2	>50	1	5		10	10	12	18	28	43	150
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>							
58	199			14	24	83.1							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ABBOTTS CRK AT SR 1243 AT LEXINGTON

**Station #:** Q5930000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.80629

**Longitude:** -80.23488

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 12-119-(6)

**Time period:** 01/16/2002 to 12/18/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	77	0	<4	0	0		4.7	5.4	6	7.6	10.4	11.6	13
	77	0	<5	1	1.3		4.7	5.4	6	7.6	10.4	11.6	13
pH (SU)	76	0	<6	0	0		6.3	6.8	7	7.2	7.3	7.6	7.9
	76	0	>9	0	0		6.3	6.8	7	7.2	7.3	7.6	7.9
Spec. conductance (umhos/cm at 25°C)	77	0	N/A				54	117	152	182	217	335	583
Water Temperature (°C)	77	0	>32	0	0		3	6.8	10.6	17.1	24.1	26.2	27.9
<b>Other</b>													
TSS (mg/L)	48	1	N/A				4	4.2	6	17	26	43	220
Turbidity (NTU)	76	0	>50	9	11.8	77.4	3.5	7.4	10.2	18.5	27.8	68	210
<b>Nutrients (mg/L)</b>													
NH3 as N	60	16	N/A				0.02	0.02	0.02	0.04	0.07	0.14	0.22
NO2 + NO3 as N	60	0	N/A				0.21	0.54	0.86	1.3	1.67	2.67	5.1
TKN as N	60	0	N/A				0.35	0.44	0.51	0.64	0.73	0.9	1.3
Total Phosphorus	60	0	N/A				0.09	0.12	0.14	0.17	0.24	0.35	0.55
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				200	230	500	870	1350	5010	7000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	8	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	2	>7	3	15	86.7	2	2	3	4	7	9	24
Iron, total (Fe)	20	0	>1000	13	65	100	650	695	822	1250	1650	3780	8400
Lead, total (Pb)	20	19	>25	0	0		10	10	10	10	10	10	25
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	19	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	9	>50	1	5		10	10	10	12	16	28	100
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
57	196		14		25		84.8						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** ABBOTTS CRK AT I 85 NR LEXINGTON

**Station #:** Q5940000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.78730

**Longitude:** -80.23565

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 12-119-6

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		5.2	5.6	6	7.3	8.9	10.5	11.7
	99	0	<5	0	0		5.2	5.6	6	7.3	8.9	10.5	11.7
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7.1	7.4	8	8.2
	85	0	>9	0	0		6.7	6.8	6.9	7.1	7.4	8	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				56	95	106	136	187	220	320
Water Temperature (°C)	99	0	>32	0	0		4.7	6.5	13.8	20.1	23.1	24.6	28.3
<b>Other</b>													
TSS (mg/L)	21	0	N/A				5.8	6.7	8.2	10	15.5	26.2	61
Turbidity (NTU)	60	0	>50	3	5		4.5	8.1	10.2	16	23	37.4	220
<b>Nutrients (mg/L)</b>													
NH3 as N	60	6	N/A				0.01	0.01	0.04	0.08	0.13	0.24	7.21
NO2 + NO3 as N	60	0	N/A				0.17	0.5	0.74	1.16	1.86	3.87	8.05
TKN as N	60	3	N/A				0.16	0.28	0.45	0.69	0.9	1.07	2.27
Total Phosphorus	60	1	N/A				0.01	0.09	0.11	0.16	0.24	0.7	2.27

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400: %Conf:</b>
60	79	5	8

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** ABBOTTS CRK AT NC 47 NR COTTON GROVE

**Station #:** Q5970000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.74795

**Longitude:** -80.24140

**Stream class:** WS-V&B

**Agency:** NCAMBNT

**NC stream index:** 12-118.5

**Time period:** 01/08/2002 to 12/18/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		4.3	5.7	6.9	8.4	10.2	11.7	13.4
	59	0	<5	3	5.1		4.3	5.7	6.9	8.4	10.2	11.7	13.4
pH (SU)	59	0	<6	0	0		6.2	6.6	6.9	7.2	7.4	7.9	8.9
	59	0	>9	0	0		6.2	6.6	6.9	7.2	7.4	7.9	8.9
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				80	125	148	180	216	341	581
Water Temperature (°C)	59	0	>32	1	1.7		2	6.8	11.3	18.1	25.3	29.8	33
<b>Other</b>													
Chlorophyll a (ug/L)	54	1	>40	6	11.1	70.7	1	2	3	7	20	42	140
TSS (mg/L)	20	0	N/A				3	5	12.2	21.5	26	36.4	40
Turbidity (NTU)	58	0	>50	5	8.6		5.4	9.5	15	22.5	34	47.5	150
<b>Nutrients (mg/L)</b>													
NH3 as N	42	15	N/A				0.02	0.02	0.02	0.02	0.06	0.11	0.23
NO2 + NO3 as N	42	4	>10	0	0		0.02	0.06	0.61	1.05	1.3	1.9	4
TKN as N	42	0	N/A				0.45	0.47	0.62	0.75	1.1	1.2	1.9
Total Phosphorus	42	0	N/A				0.1	0.13	0.14	0.2	0.24	0.28	0.32
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				200	283	800	1150	1750	2940	3100
Arsenic, total (As)	20	20	>10	0	0		5	5	5	8	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	1	>7	2	10	67.7	2	3	3	4	5	7	8
Iron, total (Fe)	20	0	>1000	17	85	100	710	780	1200	1400	1775	2380	2600
Lead, total (Pb)	20	20	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	19	0	>200	6	31.6	99.8	16	69	110	170	240	320	360
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	19	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	7	>50	1	5		10	10	10	14	21	37	51

## Fecal coliform (#/100mL)

# results: 56      Geomean: 114      # > 400: 8      % > 400: 14      %Conf:

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ABBOTTS CRK AT NC 47 NR COTTON GROVE

**Station #:** Q5970000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.74795

**Longitude:** -80.24140

**Stream class:** WS-V&B

**Agency:** YPDRBA

**NC stream index:** 12-118.5

**Time period:** 01/15/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	1	1		3.8	5.3	5.5	6.8	8.7	9.7	11.7
	99	0	<5	2	2		3.8	5.3	5.5	6.8	8.7	9.7	11.7
pH (SU)	85	0	<6	0	0		6.6	6.7	6.9	7	7.3	7.9	8.2
	85	0	>9	0	0		6.6	6.7	6.9	7	7.3	7.9	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				97	114	130	177	217	248	317
Water Temperature (°C)	99	0	>32	0	0		4.4	6.6	13.8	20.2	23.9	25.7	28.8
<b>Other</b>													
Chlorophyll a (ug/L)	21	3	>40	2	9.5		1	1	1	5	13	60	76
Turbidity (NTU)	60	0	>50	3	5		4.9	8.9	12.2	20.5	30.8	39	270
<b>Nutrients (mg/L)</b>													
NH3 as N	60	8	N/A				0.01	0.01	0.03	0.07	0.11	0.17	0.36
NO2 + NO3 as N	60	1	>10	0	0		0.01	0.4	0.66	1	1.84	4.06	6.5
TKN as N	60	0	N/A				0.25	0.4	0.5	0.7	1	1.48	1.95
Total Phosphorus	60	1	N/A				0.01	0.1	0.14	0.18	0.24	0.88	2
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	0	N/A				142	215	326	502	1012	1527	10133
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	26	>50	0	0		5	5	5	5	5	6	22
Copper, total (Cu)	29	7	>7	2	6.9		2	2	2	3	5	6	21
Iron, total (Fe)	29	0	>1000	20	69	100	568	750	959	1129	1722	2069	16100
Lead, total (Pb)	29	28	>25	0	0		5	5	5	5	5	5	16
Manganese, total (Mn)	29	0	>200	12	41.4	100	62	103	128	182	259	322	616
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	27	>25	0	0		10	10	10	10	10	10	14
Zinc, total (Zn)	29	19	>50	0	0		10	10	10	10	11	22	41

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	114	9	15	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** YADKIN RIV AT SR 1002 AT HIGH ROCK

**Station #:** Q6120000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.59680 **Longitude:** -80.23128

**Stream class:** WS-IV&B CA

**Agency:** NCAMBNT

**NC stream index:** 12-(124.5)

**Time period:** 01/08/2002 to 11/07/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	58	0	<4	4	6.9		2.9	4.2	5.2	7.6	10.7	12	13.4
	58	0	<5	11	19	98.9	2.9	4.2	5.2	7.6	10.7	12	13.4
pH (SU)	58	0	<6	2	3.4		5.7	6.5	6.7	7.1	7.5	7.8	8.1
	58	0	>9	0	0		5.7	6.5	6.7	7.1	7.5	7.8	8.1
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				58	76	87	98	110	149	312
Water Temperature (°C)	58	0	>32	0	0		4	6.8	11.2	19	24.6	27.7	29.1
<b>Other</b>													
TSS (mg/L)	19	0	N/A				6.5	7	8	10	15	34	79
Turbidity (NTU)	57	0	>50	4	7		4.7	6.1	9.4	14	20	40	180
<b>Nutrients (mg/L)</b>													
NH3 as N	41	5	N/A				0.02	0.02	0.04	0.1	0.15	0.21	0.28
NO2 + NO3 as N	41	0	>10	0	0		0.08	0.26	0.36	0.49	0.68	0.82	0.89
TKN as N	41	0	N/A				0.28	0.33	0.42	0.55	0.63	0.7	0.79
Total Phosphorus	41	0	N/A				0.04	0.05	0.06	0.07	0.09	0.11	0.15
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	19	0	N/A				120	180	360	430	1200	2900	6500
Arsenic, total (As)	19	19	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	19	19	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	19	19	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	19	10	>7	0	0		2	2	2	2	4	6	6
Iron, total (Fe)	19	0	>1000	6	31.6	99.8	240	290	500	710	1200	3100	5600
Lead, total (Pb)	19	19	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	18	0	>200	0	0		43	50	63	96	132	153	180
Mercury, total (Hg)	19	19	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	19	19	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	19	14	>50	0	0		10	10	10	10	12	25	28

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
54	36	2	4	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** YADKIN RIV AT SR 1002 AT HIGH ROCK

**Station #:** Q6120000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.59680

**Longitude:** -80.23128

**Stream class:** WS-IV&B CA

**Agency:** YPDRBA

**NC stream index:** 12-(124.5)

**Time period:** 09/23/2004 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	39	0	<4	0	0		5.5	5.9	6.4	6.8	9.6	10.3	10.8
	39	0	<5	0	0		5.5	5.9	6.4	6.8	9.6	10.3	10.8
pH (SU)	39	0	<6	0	0		6.8	6.8	7	7	7.1	7.2	7.3
	39	0	>9	0	0		6.8	6.8	7	7	7.1	7.2	7.3
Spec. conductance (umhos/cm at 25°C)	39	0	N/A				90	98	112	121	138	160	186
Water Temperature (°C)	39	0	>32	0	0		6	7.3	12.1	19.1	23.4	25.1	25.7
<b>Other</b>													
Chlorophyll a (ug/L)	11	0	>40	0	0		2	2	3	5	16	21	22
TSS (mg/L)	28	0	N/A				2.7	4.1	5.4	8	10.8	13.3	63
Turbidity (NTU)	28	0	>50	1	3.6		3.5	4.1	6.1	9.7	13	23.5	70
<b>Nutrients (mg/L)</b>													
NH3 as N	28	0	N/A				0.02	0.02	0.04	0.06	0.09	0.12	0.19
NO2 + NO3 as N	28	0	>10	0	0		0.02	0.17	0.22	0.42	0.63	0.76	0.81
TKN as N	28	0	N/A				0.31	0.34	0.41	0.52	0.76	1.02	4.96
Total Phosphorus	28	0	N/A				0.03	0.05	0.07	0.09	0.12	0.21	1.5
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	15	0	N/A				79	128	240	265	560	970	1293
Arsenic, total (As)	15	15	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	15	15	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	15	15	>50	0	0		5	5	5	5	5	7	10
Copper, total (Cu)	15	4	>7	0	0		2	2	2	2	3	4	4
Iron, total (Fe)	15	0	>1000	4	26.7	98.7	188	275	425	642	1051	1470	1569
Lead, total (Pb)	15	15	>25	0	0		5	5	5	5	5	5	5
Manganese, total (Mn)	15	0	>200	0	0		36	38	42	56	74	124	192
Mercury, total (Hg)	15	15	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	15	15	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	15	10	>50	0	0		10	10	10	10	11	22	23
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
28	52			0 0									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** LICK CRK AT SR 1002 NR HEALING SPRINGS

**Station #:** Q6140000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.61638

**Longitude:** -80.17543

**Stream class:** WS-IV

**Agency:** YPDRBA

**NC stream index:** 12-126-(3)

**Time period:** 01/09/2003 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	68	0	<4	0	0		4.3	5.5	6.2	7.1	9.8	10.4	11.1
	68	0	<5	1	1.5		4.3	5.5	6.2	7.1	9.8	10.4	11.1
pH (SU)	68	0	<6	0	0		6.6	6.8	6.9	7	7.2	7.3	7.9
	68	0	>9	0	0		6.6	6.8	6.9	7	7.2	7.3	7.9
Spec. conductance (umhos/cm at 25°C)	68	0	N/A				116	131	144	163	180	214	360
Water Temperature (°C)	68	0	>32	0	0		4.1	7.1	12.1	19.9	24.1	25.2	27
<b>Other</b>													
Turbidity (NTU)	48	0	>50	1	2.1		3.1	4.8	7.2	10	16.5	38	160
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
48	105		4		8								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** UT TO LICK CRK AT SR 2505 NR DENTON

**Station #:** Q6180000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.61596

**Longitude:** -80.14043

**Stream class:** WS-IV

**Agency:** YPDRBA

**NC stream index:** 12-126-(3)

**Time period:** 01/17/2002 to 12/11/2002

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	17	0	<4	0	0		5.2	5.2	5.2	5.7	7.1	10.2	10.2
	17	0	<5	0	0		5.2	5.2	5.2	5.7	7.1	10.2	10.2
pH (SU)	17	0	<6	0	0		7.7	7.9	7.9	8.1	8.1	8.1	8.1
	17	0	>9	0	0		7.7	7.9	7.9	8.1	8.1	8.1	8.1
Spec. conductance (umhos/cm at 25°C)	16	0	N/A				162	176	214	263	332	375	384
Water Temperature (°C)	17	0	>32	0	0		4.8	5.1	9.4	21.3	25	26	26.2
<b>Other</b>													
Turbidity (NTU)	12	0	>50	0	0		2.7	3.7	6.1	7.8	8.8	25.5	30
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>		<b>% &gt; 400:</b>	<b>%Conf:</b>						
12	31			0		0							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** YADKIN RIV AT NC 8 AND NC 49 NR RICHFIELD

**Station #:** Q6360000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.50602

**Longitude:** -80.18413

**Stream class:** WS-IV&B CA

**Agency:** YPDRBA

**NC stream index:** 12-(124.5)

**Time period:** 01/17/2002 to 08/24/2004

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	46	0	<4	0	0		5	5.2	5.4	6.7	9.2	10.2	11.2
	46	0	<5	0	0		5	5.2	5.4	6.7	9.2	10.2	11.2
pH (SU)	46	0	<6	0	0		6.8	7	7.1	7.4	8	8.2	8.4
	46	0	>9	0	0		6.8	7	7.1	7.4	8	8.2	8.4
Spec. conductance (umhos/cm at 25°C)	45	0	N/A				76	89	102	109	122	148	168
Water Temperature (°C)	46	0	>32	0	0		4.3	6.6	12.1	22.4	25.3	28.2	29.2
<b>Other</b>													
Chlorophyll a (ug/L)	13	0	>40	0	0		1	2	8	18	20	31	33
TSS (mg/L)	32	0	N/A				3	4	6.1	7.7	11	15.8	46
Turbidity (NTU)	32	0	>50	1	3.1		2.7	4.8	7.3	8.4	12.8	21.4	95
<b>Nutrients (mg/L)</b>													
NH3 as N	32	10	N/A				0.01	0.01	0.01	0.04	0.08	0.16	0.23
NO2 + NO3 as N	32	1	>10	0	0		0.01	0.01	0.19	0.36	0.58	0.73	0.9
TKN as N	32	1	N/A				0.1	0.36	0.42	0.51	0.64	0.88	1.26
Total Phosphorus	32	1	N/A				0.01	0.04	0.05	0.06	0.09	0.14	1.24
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	32	1	N/A				50	158	223	331	472	1369	3325
Arsenic, total (As)	32	31	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	32	31	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	32	28	>50	0	0		5	5	5	5	5	6	6
Copper, total (Cu)	32	18	>7	1	3.1		2	2	2	2	3	5	13
Iron, total (Fe)	32	0	>1000	6	18.8	96.4	211	229	332	488	827	1362	2081
Lead, total (Pb)	32	31	>25	0	0		5	5	5	5	5	5	5
Manganese, total (Mn)	14	0	>200	0	0		29	36	55	64	88	122	145
Mercury, total (Hg)	32	32	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	32	31	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	32	26	>50	0	0		10	10	10	10	10	12	37
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
32	36			0 0									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** UWHARRIE RIV AT NC 49 NR FARMER

**Station #:** Q6705000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.64212 **Longitude:** -79.96502

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-2-1.5

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.3	5.5	6	6.9	9.6	10.6	10.9
	85	0	<5	0	0		5.3	5.5	6	6.9	9.6	10.6	10.9
pH (SU)	85	0	<6	0	0		6.7	6.9	7	7.1	7.4	8.1	8.2
	85	0	>9	0	0		6.7	6.9	7	7.1	7.4	8.1	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				62	94	113	124	140	166	204
Water Temperature (°C)	85	0	>32	0	0		4.4	6.9	11.8	20.6	24.1	26	27.1
<b>Other</b>													
Turbidity (NTU)	60	0	>50	3	5		3.5	4.6	6.5	8.6	11.8	32	110
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	72		4		7								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** UWHARRIE RIV AT NC 109 NR UWHARRIE

**Station #:** Q6810000

**Hydrologic Unit Code:** 3040103

**Latitude:** 35.43121

**Longitude:** -80.01640

**Stream class:** WS-IV&B

**Agency:** NCAMBNT

**NC stream index:** 13-2-(17.5)

**Time period:** 01/08/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	47	0	<4	1	2.1		3.6	6.2	7.6	9.4	11.4	12.6	15.2
	47	0	<5	3	6.4		3.6	6.2	7.6	9.4	11.4	12.6	15.2
pH (SU)	48	0	<6	0	0		6.1	6.4	6.7	6.9	7.2	7.4	8
	48	0	>9	0	0		6.1	6.4	6.7	6.9	7.2	7.4	8
Spec. conductance (umhos/cm at 25°C)	48	0	N/A				65	80	86	93	101	108	120
Water Temperature (°C)	48	0	>32	0	0		1.6	5.7	8.5	16.8	23.2	26.4	29.5
<b>Other</b>													
TSS (mg/L)	16	2	N/A				2.5	2.5	2.5	3.5	5.4	20.6	50
Turbidity (NTU)	48	0	>50	2	4.2		1.6	2.1	3.2	7	14.8	27.7	80
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	16	0	N/A				72	82	135	230	378	1670	3000
Arsenic, total (As)	16	16	>10	0	0		5	5	5	5	10	10	10
Cadmium, total (Cd)	16	16	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	16	16	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	16	9	>7	1	6.2		2	2	2	2	3	6	8
Iron, total (Fe)	16	0	>1000	3	18.8	93.2	250	271	422	570	780	1870	3200
Lead, total (Pb)	16	16	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	16	0	>200	0	0		12	16	21	24	33	95	110
Mercury, total (Hg)	16	16	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	16	16	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	16	16	>50	0	0		10	10	10	10	10	10	10

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
45	49	2	4	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** LITTLE MOUNTAIN CRK AT NC 1798 NR BADIN

**Station #:** Q6950000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.36928

**Longitude:** -80.11088

**Stream class:** WS-IV

**Agency:** YPDRBA

**NC stream index:** 13-5-1-(2)

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	79	0	<4	0	0		5.5	5.7	6.4	7.2	10.1	10.7	11.3
	79	0	<5	0	0		5.5	5.7	6.4	7.2	10.1	10.7	11.3
pH (SU)	79	0	<6	0	0		6.6	6.9	7	7.1	7.3	8	8.1
	79	0	>9	0	0		6.6	6.9	7	7.1	7.3	8	8.1
Spec. conductance (umhos/cm at 25°C)	78	0	N/A				86	106	122	133	155	172	206
Water Temperature (°C)	79	0	>32	0	0		4.1	7	10.9	19.2	23.4	24.6	27
<b>Other</b>													
Turbidity (NTU)	55	2	>50	3	5.5		1.5	1.9	3	5.2	9.5	29.4	90
<b>Nutrients (mg/L)</b>													
NH3 as N	55	10	N/A				0.01	0.01	0.02	0.06	0.1	0.17	0.55
NO2 + NO3 as N	55	0	>10	0	0		0.01	0.19	0.4	0.68	0.99	1.78	2.89
TKN as N	55	4	N/A				0.1	0.21	0.33	0.49	0.63	0.91	1.69
Total Phosphorus	55	1	N/A				0.01	0.04	0.06	0.11	0.16	0.2	3.31
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
55	68			2 4									

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** PEE DEE RIV AT BOAT RAMP AT MORROW MOUNTAIN STATE PARK

**Station #:** Q6960000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.37970

**Longitude:** -80.06130

**Stream class:** WS-IV&B CA

**Agency:** YPDRBA

**NC stream index:** 13-(1)

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.7	6.1	6.9	9.8	10.6	10.8
	85	0	<5	0	0		5.2	5.7	6.1	6.9	9.8	10.6	10.8
pH (SU)	85	0	<6	0	0		6.5	6.9	7	7.2	7.5	8	8.3
	85	0	>9	0	0		6.5	6.9	7	7.2	7.5	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				78	94	101	108	126	142	173
Water Temperature (°C)	85	0	>32	0	0		4.4	7.6	11.7	20.7	24.2	25.2	28.9
<b>Other</b>													
Chlorophyll a (ug/L)	25	0	>40	0	0		1	1	2	4	6	10	38
Turbidity (NTU)	60	1	>50	1	1.7		1.5	2.8	3.6	5.7	12	29.5	65
<b>Nutrients (mg/L)</b>													
NH3 as N	60	11	N/A				0.01	0.01	0.01	0.04	0.08	0.13	0.27
NO2 + NO3 as N	60	1	>10	0	0		0.01	0.15	0.28	0.48	0.68	0.97	1.41
TKN as N	60	3	N/A				0.1	0.2	0.36	0.47	0.63	0.86	1.81
Total Phosphorus	60	2	N/A				0.01	0.04	0.05	0.08	0.13	0.18	18.02

## Fecal coliform (#/100mL)

# results: 60      Geomean: 44      # > 400: 3      % > 400: 5%      %Conf: 5

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** PEE DEE RIV AT NC 24 NC 27 AND NC 73 NR ALBEMARLE

**Station #:** Q7030000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.30825

**Longitude:** -80.07972

**Stream class:** WS-IV&B CA

**Agency:** YPDRBA

**NC stream index:** 13-(1)

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.3	6.1	6.9	9.5	10.6	11.5
	85	0	<5	0	0		5.2	5.3	6.1	6.9	9.5	10.6	11.5
pH (SU)	85	0	<6	0	0		6.5	6.9	6.9	7.1	7.3	8	8.3
	85	0	>9	0	0		6.5	6.9	6.9	7.1	7.3	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				62	82	92	108	124	145	184
Water Temperature (°C)	85	0	>32	0	0		4.2	7.3	11.3	20.3	24.1	26	29.6
<b>Other</b>													
Chlorophyll a (ug/L)	24	1	>40	0	0		1	1	3	4	8	14	18
TSS (mg/L)	60	0	N/A				1.6	2.8	3.9	6.5	9	21.7	240
Turbidity (NTU)	60	0	>50	2	3.3		1.8	3.3	4.4	7.3	11	19	80
<b>Nutrients (mg/L)</b>													
NH3 as N	59	12	N/A				0.01	0.01	0.02	0.05	0.07	0.15	0.21
NO2 + NO3 as N	60	3	>10	0	0		0.01	0.01	0.08	0.26	0.42	0.53	2.05
TKN as N	60	0	N/A				0.18	0.3	0.38	0.5	0.7	0.91	1.86
Total Phosphorus	60	2	N/A				0.01	0.04	0.05	0.06	0.09	0.11	0.94
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	18	1	N/A				50	113	158	388	644	2694	5007
Arsenic, total (As)	18	17	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	18	17	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	18	17	>50	0	0		5	5	5	5	5	5	9
Copper, total (Cu)	18	12	>7	0	0		2	2	2	2	2	3	5
Iron, total (Fe)	18	0	>1000	3	16.7	90.2	117	159	234	564	803	3670	3974
Lead, total (Pb)	18	17	>25	0	0		5	5	5	5	5	5	5
Mercury, total (Hg)	18	18	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	18	17	>25	1	5.6		10	10	10	10	10	12	28
Zinc, total (Zn)	18	15	>50	0	0		10	10	10	10	10	13	23

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
60	35	3	5	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** PEE DEE RIV AT NC 731 NR SHANKLE

**Station #:** Q7150000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.20052

**Longitude:** -80.06248

**Stream class:** WS-V&B

**Agency:** NCAMBNT

**NC stream index:** 13-(15.5)

**Time period:** 01/22/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	58	0	<4	4	6.9		3.1	4.4	6	8.2	11.1	12.5	14.5
	58	0	<5	8	13.8	87.9	3.1	4.4	6	8.2	11.1	12.5	14.5
pH (SU)	58	0	<6	3	5.2		5.8	6	6.3	6.8	7.2	7.7	8.1
	58	0	>9	0	0		5.8	6	6.3	6.8	7.2	7.7	8.1
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				64	71	79	88	102	115	131
Water Temperature (°C)	58	0	>32	0	0		5	8.1	10.8	18.8	24.1	27.2	28.7
<b>Other</b>													
TSS (mg/L)	20	5	N/A				2.5	2.5	2.6	4	5	6.9	20
Turbidity (NTU)	58	0	>50	1	1.7		1.7	2.5	3.4	5	7.9	14.2	75
<b>Nutrients (mg/L)</b>													
NH3 as N	41	16	N/A				0.02	0.02	0.02	0.02	0.05	0.08	0.2
NO2 + NO3 as N	41	0	>10	0	0		0.19	0.25	0.37	0.5	0.63	0.79	0.89
TKN as N	41	0	N/A				0.21	0.23	0.29	0.33	0.39	0.45	0.56
Total Phosphorus	41	0	N/A				0.02	0.03	0.03	0.04	0.06	0.07	4
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	1	N/A				50	75	118	190	265	841	4000
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	10	>7	0	0		2	2	2	2	3	5	7
Iron, total (Fe)	20	0	>1000	2	10	67.7	82	102	198	265	478	1073	2900
Lead, total (Pb)	20	20	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	20	0	>200	2	10	67.7	19	21	25	50	104	205	410
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	19	>50	1	5		10	10	10	10	10	10	63
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>			<b>% &gt; 400: %Conf:</b>						
56	10			0			0						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** CLARKS CRK AT SR 1187 NR MOUNT GILEAD

**Station #:** Q7210000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.20438

**Longitude:** -80.05752

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-16

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.7	6.4	7.3	9.9	10.8	11.5
	85	0	<5	0	0		5.2	5.7	6.4	7.3	9.9	10.8	11.5
pH (SU)	85	0	<6	0	0		6.7	6.9	7	7.1	7.4	8.1	8.5
	85	0	>9	0	0		6.7	6.9	7	7.1	7.4	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				72	90	110	139	154	168	211
Water Temperature (°C)	85	0	>32	0	0		3.6	6.5	10.7	19.8	23.5	24.5	26.7
<b>Other</b>													
Turbidity (NTU)	60	1	>50	3	5		1.5	2.8	5.1	8.1	13	37.8	160
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	64		4		7								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ROCKY RIV AT SR 2420 NR DAVIDSON

**Station #:** Q7330000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.47490

**Longitude:** -80.77948

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-17

**Time period:** 01/29/2002 to 12/11/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		6.1	6.8	7.3	8.4	10	11.5	12.4
	59	0	<5	0	0		6.1	6.8	7.3	8.4	10	11.5	12.4
pH (SU)	59	0	<6	0	0		6	6.6	6.8	7.1	7.4	7.6	7.7
	59	0	>9	0	0		6	6.6	6.8	7.1	7.4	7.6	7.7
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				124	186	224	289	346	400	559
Water Temperature (°C)	59	0	>32	0	0		3.4	7	10.7	17.2	21.5	24.8	27.6
<b>Other</b>													
TSS (mg/L)	19	0	N/A				8	9	13	20	33	82	165
Turbidity (NTU)	59	0	>50	7	11.9	76.6	1.2	7.5	11	17	29	70	450
<b>Nutrients (mg/L)</b>													
NH3 as N	56	19	N/A				0.02	0.02	0.02	0.02	0.04	0.09	0.78
NO2 + NO3 as N	56	0	N/A				0.13	1.17	4.48	7.15	9.57	13	18
TKN as N	56	3	N/A				0.2	0.31	0.41	0.52	0.71	0.97	2.6
Total Phosphorus	56	0	N/A				0.08	0.34	0.74	1	1.3	1.63	2.3
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	0	N/A				400	453	540	715	1175	3650	4900
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	1	>7	2	10	67.7	2	2	3	4	6	7	8
Iron, total (Fe)	20	0	>1000	10	50	100	540	578	720	1045	1550	3610	5100
Lead, total (Pb)	20	19	>25	0	0		10	10	10	10	10	10	12
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	1	>50	0	0		10	10	16	20	21	32	37
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>							
59	478			27	46	100							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** ROCKY RIV AT SR 2420 NR DAVIDSON

**Station #:** Q7330000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.47490

**Longitude:** -80.77948

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.6	6	6.5	8	10.1	11.2	11.9
	85	0	<5	0	0		5.6	6	6.5	8	10.1	11.2	11.9
pH (SU)	85	0	<6	0	0		6.5	6.7	6.8	7	7.4	8.1	8.3
	85	0	>9	0	0		6.5	6.7	6.8	7	7.4	8.1	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				91	106	125	168	217	298	372
Water Temperature (°C)	85	0	>32	0	0		2.4	5	9.6	18.2	21.7	23.2	26.9
<b>Other</b>													
Turbidity (NTU)	60	0	>50	7	11.7	75.2	2.7	5.5	8.2	14	26.8	64.5	220
<b>Nutrients (mg/L)</b>													
NH3 as N	42	3	N/A				0.01	0.01	0.03	0.06	0.08	0.17	0.34
NO2 + NO3 as N	42	0	N/A				0.05	0.12	0.24	0.31	0.38	0.44	0.61
TKN as N	42	6	N/A				0.1	0.2	0.22	0.33	0.42	0.62	1.15
Total Phosphorus	42	1	N/A				0.02	0.03	0.05	0.08	0.12	0.2	0.31
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
60	109			5 8									

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ROCKY RIV AT US 29 NR HARRISBURG

**Station #:** Q7450000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.35897

**Longitude:** -80.67506

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.5	5.8	6.3	7.6	10.2	10.8	12.7
	85	0	<5	0	0		5.5	5.8	6.3	7.6	10.2	10.8	12.7
pH (SU)	85	0	<6	0	0		6.5	6.8	6.9	7.1	7.4	8.1	8.4
	85	0	>9	0	0		6.5	6.8	6.9	7.1	7.4	8.1	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				59	102	120	147	178	212	281
Water Temperature (°C)	85	0	>32	0	0		2.1	4.9	10.1	18.4	22.1	23.5	27.5
<b>Other</b>													
Turbidity (NTU)	60	0	>50	7	11.7	75.2	3	5.1	7	14.5	31.5	77.5	196
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	107		4		7								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** MALLARD CRK AT PAVILLION RD NR HARRISBURG

**Station #:** Q7550000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.33232      **Longitude:** -80.71573

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-5

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.7	6.2	7.4	9.9	10.8	12.4
	85	0	<5	0	0		5.2	5.7	6.2	7.4	9.9	10.8	12.4
pH (SU)	85	0	<6	0	0		6.4	6.8	7	7.1	7.5	8.2	9
	85	0	>9	0	0		6.4	6.8	7	7.1	7.5	8.2	9
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				62	118	133	156	188	218	256
Water Temperature (°C)	85	0	>32	0	0		2.2	5	10.3	18.7	22.4	24.2	27.8
<b>Other</b>													
Turbidity (NTU)	60	0	>50	8	13.3	85.8	1.9	3.5	5.4	10.3	31	78.5	240
<b>Nutrients (mg/L)</b>													
NH3 as N	42	4	N/A				0.01	0.01	0.04	0.08	0.13	0.25	1.14
NO2 + NO3 as N	42	0	N/A				0.04	0.08	0.12	0.26	0.36	0.51	1.44
TKN as N	42	6	N/A				0.1	0.2	0.25	0.36	0.65	1.1	1.91
Total Phosphorus	42	0	N/A				0.02	0.04	0.05	0.08	0.12	0.25	0.77
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	2	N/A				50	56	152	291	1640	6261	13371
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	22	>50	0	0		5	5	5	5	5	11	18
Copper, total (Cu)	29	8	>7	6	20.7	97.8	2	2	2	3	7	18	33
Iron, total (Fe)	29	0	>1000	18	62.1	100	268	562	790	1199	2796	9285	13735
Lead, total (Pb)	29	28	>25	0	0		5	5	5	5	5	5	11
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	28	>88	0	0		10	10	10	10	10	10	13
Zinc, total (Zn)	29	23	>50	1	3.4		10	10	10	10	10	23	52

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400: %Conf:</b>
60	107	2	3

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** MALLARD CRK AT SR 1300 NR HARRISBURG  
**Station #:** Q7570000 **Hydrologic Unit Code:** 3040105  
**Latitude:** 35.33378 **Longitude:** -80.66817 **Stream class:** C  
**Agency:** YPDRBA **NC stream index:** 13-17-5  
**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	Results not meeting EL EL	#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.6	6.2	7.3	9.7	10.6	12.5
	85	0	<5	0	0		5.2	5.6	6.2	7.3	9.7	10.6	12.5
pH (SU)	85	0	<6	0	0		6.5	6.8	6.9	7.1	7.4	8.1	8.5
	85	0	>9	0	0		6.5	6.8	6.9	7.1	7.4	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				106	156	170	200	246	286	361
Water Temperature (°C)	85	0	>32	0	0		2.6	5.3	10.5	19.2	22.6	24.2	28.1
<b>Other</b>													
Turbidity (NTU)	60	0	>50	8	13.3	85.8	2.1	3.8	5.5	8.8	19.5	79.5	250
<b>Nutrients (mg/L)</b>													
NH3 as N	42	1	N/A				0.01	0.02	0.03	0.06	0.1	0.18	0.3
NO2 + NO3 as N	42	0	N/A				0.09	0.25	0.34	0.48	4.09	12.47	14.64
TKN as N	42	3	N/A				0.2	0.23	0.33	0.58	0.9	1.19	1.64
Total Phosphorus	42	0	N/A				0.04	0.05	0.07	0.11	0.78	1.62	2.17
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	0	N/A				68	85	184	280	814	6041	15882
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	28	>2	1	3.4		1	1	1	1	1	1	4
Chromium, total (Cr)	29	24	>50	0	0		5	5	5	5	5	10	14
Copper, total (Cu)	29	8	>7	7	24.1	99.4	2	2	2	3	8	16	40
Iron, total (Fe)	29	0	>1000	10	34.5	100	365	467	624	841	1245	6270	20875
Lead, total (Pb)	29	29	>25	0	0		5	5	5	5	5	5	5
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	27	>88	0	0		10	10	10	10	10	10	19
Zinc, total (Zn)	29	13	>50	1	3.4		10	10	10	11	16	29	82
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>							
60	122	4		7									

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** ROCKY RIV AT SR 1304 NR HARRISBURG

**Station #:** Q7600000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.33445

**Longitude:** -80.64435

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.6	6.1	7.6	9.7	10.5	12.2
	85	0	<5	0	0		5.2	5.6	6.1	7.6	9.7	10.5	12.2
pH (SU)	85	0	<6	0	0		6.4	6.7	6.9	7.1	7.3	8	8.5
	85	0	>9	0	0		6.4	6.7	6.9	7.1	7.3	8	8.5
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				83	122	132	188	228	288	373
Water Temperature (°C)	85	0	>32	0	0		2.5	5.2	10.3	19	22.8	23.9	28.2
<b>Other</b>													
Turbidity (NTU)	60	0	>50	11	18.3	98.5	3.8	7	9.9	16	32.8	147	350
<b>Nutrients (mg/L)</b>													
NH3 as N	42	2	N/A				0.01	0.01	0.05	0.08	0.12	0.25	2.02
NO2 + NO3 as N	42	0	N/A				0.34	1.31	3.41	4.34	5.57	6.02	9.32
TKN as N	42	0	N/A				0.27	0.39	0.52	0.69	0.85	1.05	2.53
Total Phosphorus	42	0	N/A				0.3	0.37	0.49	0.62	0.82	1.04	1.49
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	47	0	N/A				110	147	335	701	2458	8863	12558
Arsenic, total (As)	47	46	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	47	46	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	47	38	>50	0	0		5	5	5	5	5	10	19
Copper, total (Cu)	47	6	>7	11	23.4	99.8	2	2	2	4	7	16	33
Iron, total (Fe)	47	0	>1000	33	70.2	100	460	636	824	1373	2402	9094	18630
Lead, total (Pb)	47	43	>25	0	0		5	5	5	5	5	5	12
Mercury, total (Hg)	47	47	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	47	45	>88	0	0		10	10	10	10	10	10	21
Zinc, total (Zn)	47	17	>50	0	0		10	10	10	12	21	31	39
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>							
60	107	5		8									

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NC DENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** CODDLE CRK AT SR 1304 ROBERTA RD NR ROBERTA MILL

**Station #:** Q7700000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.35919 **Longitude:** -80.63469

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-6-(5.5)

**Time period:** 07/16/2003 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	60	0	<4	0	0		5.3	5.9	6.4	7.7	10.1	11	12.6
	60	0	<5	0	0		5.3	5.9	6.4	7.7	10.1	11	12.6
pH (SU)	60	0	<6	0	0		6.6	6.7	6.8	7	7.2	7.3	7.5
	60	0	>9	0	0		6.6	6.7	6.8	7	7.2	7.3	7.5
Spec. conductance (umhos/cm at 25°C)	60	0	N/A				94	106	116	159	181	194	294
Water Temperature (°C)	60	0	>32	0	0		2.6	5.5	10.5	18.9	22.5	23.5	27.8
<b>Other</b>													
Turbidity (NTU)	42	0	>50	7	16.7	94.6	4.6	5.8	9.5	14.5	26.2	128	230
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
42	71		1		2								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** ROCKY RIV AT SR 1132 NR HARRISBURG

**Station #:** Q7780000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.32443

**Longitude:** -80.56033

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.5	6.4	7.6	10.2	10.8	13.2
	85	0	<5	0	0		5.2	5.5	6.4	7.6	10.2	10.8	13.2
pH (SU)	85	0	<6	0	0		6.6	6.8	6.9	7.1	7.4	8.1	8.3
	85	0	>9	0	0		6.6	6.8	6.9	7.1	7.4	8.1	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				76	106	117	154	200	218	297
Water Temperature (°C)	85	0	>32	0	0		2.7	5.3	10.4	19	22.8	24	28.1
<b>Other</b>													
Turbidity (NTU)	60	0	>50	9	15	92.7	3.4	5.1	7.9	15	30.8	116.5	260
<b>Nutrients (mg/L)</b>													
NH3 as N	60	8	N/A				0.01	0.01	0.02	0.04	0.08	0.15	0.39
NO2 + NO3 as N	60	0	N/A				0.39	0.75	1.34	2.17	3.37	6.16	12.7
TKN as N	60	4	N/A				0.1	0.22	0.37	0.56	0.79	1.15	1.85
Total Phosphorus	60	0	N/A				0.02	0.16	0.19	0.26	0.53	1.07	3.1
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	90		3		5								

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** IRISH BUFFALO CRK AT SR 1132 NR FAGGARTS

**Station #:** Q8090000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.34730

**Longitude:** -80.54769

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-17-9-(2)

**Time period:** 01/29/2002 to 12/06/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	59	0	<4	0	0		5.8	7.4	8.1	9.7	11.4	12.9	16.1
	59	0	<5	0	0		5.8	7.4	8.1	9.7	11.4	12.9	16.1
pH (SU)	59	0	<6	0	0		6	6.5	6.9	7.5	7.9	8.2	9.6
	59	0	>9	1	1.7		6	6.5	6.9	7.5	7.9	8.2	9.6
Spec. conductance (umhos/cm at 25°C)	59	0	N/A				88	134	163	189	198	249	1233
Water Temperature (°C)	59	0	>32	0	0		4	5.8	10.2	16.4	22.7	24.5	28.5
<b>Other</b>													
TSS (mg/L)	20	5	N/A				2.5	2.5	2.6	5.2	46	81.8	99
Turbidity (NTU)	59	0	>50	5	8.5		1	2.6	3.5	6.4	12	50	450
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	19	0	N/A				95	130	140	390	2300	9300	11000
Arsenic, total (As)	19	19	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	19	19	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	19	19	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	19	5	>7	4	21.1	96.5	2	2	2	3	6	11	24
Iron, total (Fe)	19	0	>1000	6	31.6	99.8	180	190	310	510	2400	7400	13000
Lead, total (Pb)	19	17	>25	0	0		10	10	10	10	10	12	13
Mercury, total (Hg)	19	19	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	19	19	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	19	14	>50	0	0		10	10	10	10	11	38	49

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
56	267	16	29	95.7

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** COLD WATER CRK AT SR 1132 MIAMI CHURCH RD NR CONCORD

**Station #:** Q8200000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.36242 **Longitude:** -80.53033

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-9-4-(1.5)

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		4.8	5.4	5.8	7.6	9.4	10.6	12.7
	85	0	<5	1	1.2		4.8	5.4	5.8	7.6	9.4	10.6	12.7
pH (SU)	85	0	<6	0	0		6.6	6.7	6.9	7	7.3	8.2	8.4
	85	0	>9	0	0		6.6	6.7	6.9	7	7.3	8.2	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				72	95	111	138	167	192	262
Water Temperature (°C)	85	0	>32	0	0		1.4	5.2	10.2	18.6	22.4	23.5	28.4
<b>Other</b>													
Turbidity (NTU)	60	0	>50	7	11.7	75.2	3	5	6.2	9.1	18.5	79.5	140
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	133		5		8								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ROCKY RIV AT US 601 NR CONCORD

**Station #:** Q8210000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.32445 **Longitude:** -80.51537

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-17

**Time period:** 01/29/2002 to 08/08/2005

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	44	0	<4	0	0		4.4	6.8	7.2	8.4	10	11.6	12.1
	44	0	<5	1	2.3		4.4	6.8	7.2	8.4	10	11.6	12.1
pH (SU)	44	0	<6	1	2.3		5.8	6.4	6.8	7.2	7.5	7.6	8.5
	44	0	>9	0	0		5.8	6.4	6.8	7.2	7.5	7.6	8.5
Spec. conductance (umhos/cm at 25°C)	44	0	N/A				96	134	192	246	316	518	870
Water Temperature (°C)	44	0	>32	0	0		5	8.1	10.7	18.6	24.5	26.2	27.1
<b>Other</b>													
TSS (mg/L)	15	0	N/A				3	4.8	6	14	90	326	500
Turbidity (NTU)	44	0	>50	11	25	99.9	3.4	4.5	6.1	13	66.2	130	250
<b>Nutrients (mg/L)</b>													
NH3 as N	43	6	N/A				0.02	0.02	0.03	0.06	0.14	0.46	1.3
NO2 + NO3 as N	43	0	N/A				0.46	0.92	1.5	3	4.9	6.3	9.3
TKN as N	43	0	N/A				0.3	0.49	0.57	0.69	0.88	1.46	2.4
Total Phosphorus	43	0	N/A				0.04	0.31	0.36	0.61	0.94	1.52	3.4
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	15	0	N/A				170	188	270	990	6200	21240	39000
Arsenic, total (As)	15	15	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	15	15	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	15	15	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	15	0	>7	6	40	100	3	3	3	5	13	26	36
Iron, total (Fe)	15	0	>1000	8	53.3	100	370	388	610	1300	6700	22000	31000
Lead, total (Pb)	15	15	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	15	15	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	15	14	>88	0	0		10	10	10	10	10	11	12
Zinc, total (Zn)	15	2	>50	1	6.7		10	10	12	17	29	46	64
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>							
43	331			15	35	99.3							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** ROCKY RIV AT US 601 NR CONCORD

**Station #:** Q8210000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.32445

**Longitude:** -80.51537

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5	5.7	6.5	7.6	9.3	10.9	12.6
	85	0	<5	0	0		5	5.7	6.5	7.6	9.3	10.9	12.6
pH (SU)	85	0	<6	0	0		6.6	6.9	7	7.1	7.4	8.1	8.3
	85	0	>9	0	0		6.6	6.9	7	7.1	7.4	8.1	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				92	116	124	145	168	187	328
Water Temperature (°C)	85	0	>32	0	0		3.1	6	10.5	19.1	22.6	23.8	28.3
<b>Other</b>													
Turbidity (NTU)	60	0	>50	8	13.3	85.8	3	5.1	7.9	13.5	25.8	120	520
<b>Nutrients (mg/L)</b>													
NH3 as N	60	9	N/A				0.01	0.01	0.02	0.06	0.11	0.18	0.79
NO2 + NO3 as N	60	1	N/A				0.01	0.19	0.49	1.25	2.25	3.91	5.53
TKN as N	60	1	N/A				0.16	0.22	0.34	0.49	0.78	1.06	1.88
Total Phosphorus	60	2	N/A				0.01	0.06	0.14	0.23	0.36	0.62	3.81
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
60	86			1 2									

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ROCKY RIV AT SR 1006 NR CONCORD

**Station #:** Q8220000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.31397

**Longitude:** -80.47864

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-17

**Time period:** 10/06/2005 to 12/06/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	15	0	<4	0	0		6	6.1	7	9.2	10.8	11.4	11.6
	15	0	<5	0	0		6	6.1	7	9.2	10.8	11.4	11.6
pH (SU)	15	0	<6	0	0		6.1	6.2	6.4	6.7	7.4	7.6	7.6
	15	0	>9	0	0		6.1	6.2	6.4	6.7	7.4	7.6	7.6
Spec. conductance (umhos/cm at 25°C)	15	0	N/A				142	142	204	238	281	362	380
Water Temperature (°C)	15	0	>32	0	0		6.9	7.6	11.1	15.9	23.3	25.1	25.3
<b>Other</b>													
TSS (mg/L)	5	0	N/A				6.8	6.8	6.8	25	63	99	99
Turbidity (NTU)	15	0	>50	3	20	94.4	2.9	4.5	9.1	19	50	210	300
<b>Nutrients (mg/L)</b>													
NH3 as N	15	2	N/A				0.02	0.02	0.04	0.07	0.1	0.12	0.13
NO2 + NO3 as N	15	0	N/A				1.4	1.46	2.4	3.3	4.5	7.66	8.5
TKN as N	15	0	N/A				0.53	0.55	0.67	0.72	0.89	1.28	1.4
Total Phosphorus	15	0	N/A				0.34	0.34	0.38	0.64	0.79	1.4	1.7
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	5	0	N/A				210	210	250	1200	7750	14000	14000
Arsenic, total (As)	5	5	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	5	5	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	5	5	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	5	0	>7	1	20		3	3	3	4	19	31	31
Iron, total (Fe)	5	0	>1000	3	60		420	420	455	1800	10150	18000	18000
Lead, total (Pb)	5	4	>25	0	0		10	10	10	10	14	17	17
Mercury, total (Hg)	5	5	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	5	5	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	5	0	>50	1	20		13	13	16	21	54	85	85
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400: % &gt; 400: %Conf:</b>									
15	365			4 27 83.6									

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** CLEAR CRK AT SR 1118 BEN BLACK RD NR BRIEF

**Station #:** Q8341000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.21628

**Longitude:** -80.54555

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-17

**Time period:** 06/26/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	88	0	<4	0	0		5	5.5	5.8	7.1	9	10.4	11.2
	88	0	<5	0	0		5	5.5	5.8	7.1	9	10.4	11.2
pH (SU)	78	0	<6	0	0		6.5	6.8	6.9	7.1	7.3	7.9	8.3
	78	0	>9	0	0		6.5	6.8	6.9	7.1	7.3	7.9	8.3
Spec. conductance (umhos/cm at 25°C)	78	0	N/A				77	108	115	132	152	180	361
Water Temperature (°C)	88	0	>32	0	0		5.1	6.7	13.7	20.2	23.2	24.5	29.2
<b>Other</b>													
Turbidity (NTU)	54	0	>50	6	11.1	70.7	1.6	3.5	5.1	9.4	20	68	221
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
54	90		4		7								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** CLEAR CRK AT US 601 NR BRIEF

**Station #:** Q8342000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.19465

**Longitude:** -80.52928

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-17

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		4.5	5.8	6.1	7.3	8.9	10.5	11.6
	99	0	<5	2	2		4.5	5.8	6.1	7.3	8.9	10.5	11.6
pH (SU)	85	0	<6	0	0		6.5	6.9	7	7.1	7.4	8	8.3
	85	0	>9	0	0		6.5	6.9	7	7.1	7.4	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				71	96	104	126	160	203	483
Water Temperature (°C)	99	0	>32	0	0		5	6.7	12.5	20.1	23	24.2	29
<b>Other</b>													
Turbidity (NTU)	60	0	>50	8	13.3	85.8	1.8	4.1	6.2	12	23.8	137	190
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>		<b>% &gt; 400:</b>	<b>%Conf:</b>						
60	85			4		7							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ROCKY RIV AT SR 1114 NR MIDLAND

**Station #:** Q8355000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.22117 **Longitude:** -80.48712

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		4.3	5.5	6.1	7.3	8.8	10.4	13
	85	0	<5	2	2.4		4.3	5.5	6.1	7.3	8.8	10.4	13
pH (SU)	85	0	<6	0	0		6.4	6.9	7	7.1	7.4	8	8.2
	85	0	>9	0	0		6.4	6.9	7	7.1	7.4	8	8.2
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				71	94	109	136	178	234	342
Water Temperature (°C)	85	0	>32	0	0		1.6	7.1	12.1	20.4	23.4	24.7	28.7
<b>Other</b>													
TSS (mg/L)	42	0	N/A				1.9	2.7	5.3	8.8	21.2	252.5	1270
Turbidity (NTU)	60	0	>50	8	13.3	85.8	2.5	3.4	5.6	13.5	25	174	400
<b>Nutrients (mg/L)</b>													
NH3 as N	36	1	N/A				0.01	0.02	0.03	0.05	0.12	0.27	0.55
NO2 + NO3 as N	36	0	N/A				0.3	0.98	1.84	2.61	3.77	5.1	7.45
TKN as N	36	0	N/A				0.25	0.37	0.49	0.68	0.79	1.32	2.57
Total Phosphorus	36	0	N/A				0.04	0.2	0.26	0.42	0.56	0.94	1.57
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	1	N/A				50	94	138	537	1022	15300	30592
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	10
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	24	>50	0	0		5	5	5	5	5	19	48
Copper, total (Cu)	29	5	>7	6	20.7	97.8	2	2	2	5	7	27	99
Iron, total (Fe)	29	0	>1000	15	51.7	100	236	348	537	1163	1780	14900	45300
Lead, total (Pb)	29	25	>25	0	0		5	5	5	5	5	9	13
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	26	>88	0	0		10	10	10	10	10	12	32
Zinc, total (Zn)	29	16	>50	2	6.9		10	10	10	10	14	43	134
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>			<b>% &gt; 400: %Conf:</b>						
60	90			4			7						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** GOOSE CRK IN HUNLEY CREEK SUBDIVISION

**Station #:** Q8359500

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.13855

**Longitude:** -80.63363

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-18

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		4.8	5.4	5.7	6.9	8.5	9.9	11.3
	99	0	<5	1	1		4.8	5.4	5.7	6.9	8.5	9.9	11.3
pH (SU)	85	0	<6	0	0		6.6	6.8	6.9	7.1	7.4	8.1	8.3
	85	0	>9	0	0		6.6	6.8	6.9	7.1	7.4	8.1	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				83	96	112	142	182	207	331
Water Temperature (°C)	99	0	>32	0	0		5.4	7.8	13.6	20.6	23.4	24.4	29.2
<b>Other</b>													
Turbidity (NTU)	60	0	>50	6	10	60.6	2.1	5.3	7.1	14	24.8	67.5	400
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	120		5		8								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** GOOSE CRK AT SR 1524 NR MINT HILL

**Station #:** Q8360000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.13090

**Longitude:** -80.63105

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-17-18

**Time period:** 01/07/2002 to 12/12/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	60	0	<4	4	6.7		1	5.1	6.8	8.4	10.4	12.3	14.7
	60	0	<5	5	8.3		1	5.1	6.8	8.4	10.4	12.3	14.7
pH (SU)	60	0	<6	1	1.7		5.9	6.3	6.6	6.8	7.4	7.9	8.6
	60	0	>9	0	0		5.9	6.3	6.6	6.8	7.4	7.9	8.6
Spec. conductance (umhos/cm at 25°C)	60	0	N/A				91	101	121	141	212	358	609
Water Temperature (°C)	60	0	>32	0	0		4	7.7	11.3	17.9	22.9	25.2	30.9
<b>Other</b>													
TSS (mg/L)	20	2	N/A				2.5	2.6	4	5	14.5	27.8	48
Turbidity (NTU)	60	0	>50	4	6.7		2.1	4	4.9	10.3	20	48.9	80
<b>Nutrients (mg/L)</b>													
NH3 as N	58	10	N/A				0.02	0.02	0.02	0.07	0.41	1.66	18
NO2 + NO3 as N	58	0	N/A				0.17	0.37	0.62	0.92	1.7	3.37	6.6
TKN as N	58	3	N/A				0.2	0.28	0.35	0.5	1.95	4.84	20
Total Phosphorus	58	0	N/A				0.06	0.07	0.09	0.2	0.96	2.41	4.8
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	22	0	N/A				110	133	150	265	715	1350	2200
Arsenic, total (As)	22	22	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	22	22	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	22	22	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	22	6	>7	2	9.1		2	2	2	3	5	11	18
Iron, total (Fe)	22	0	>1000	4	18.2	93.8	330	352	418	535	930	1100	3400
Lead, total (Pb)	22	22	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	22	22	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	22	22	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	22	10	>50	1	4.5		10	10	10	12	28	42	90

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
59	582	33	56	100

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** GOOSE CRK AT SR 1524 NR MINT HILL

**Station #:** Q8360000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.13090 **Longitude:** -80.63105

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-18

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	2	2		3.6	5.1	5.4	6.6	8	9.5	11
	99	0	<5	8	8.1		3.6	5.1	5.4	6.6	8	9.5	11
pH (SU)	85	0	<6	0	0		6.5	6.8	6.9	7.1	7.4	8.1	8.4
	85	0	>9	0	0		6.5	6.8	6.9	7.1	7.4	8.1	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				98	127	140	187	228	271	367
Water Temperature (°C)	99	0	>32	0	0		6.3	8	13.7	20.5	23.8	25.1	29.4
<b>Other</b>													
Turbidity (NTU)	60	0	>50	8	13.3	85.8	3.1	4.9	6.6	12	29.8	55	128
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	142		9		15								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** ROCKY RIV AT SR 1606 NR MONROE

**Station #:** Q8385000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.16987

**Longitude:** -80.47277

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		5.2	5.8	6.1	7.3	8.9	10.6	11.4
	85	0	<5	0	0		5.2	5.8	6.1	7.3	8.9	10.6	11.4
pH (SU)	85	0	<6	0	0		6.6	6.8	7	7.1	7.5	8.1	8.3
	85	0	>9	0	0		6.6	6.8	7	7.1	7.5	8.1	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				78	110	130	152	171	196	403
Water Temperature (°C)	85	0	>32	0	0		6	7.6	12.2	20.5	23.3	24.8	28.6
<b>Other</b>													
Turbidity (NTU)	60	0	>50	9	15	92.7	1.8	3.4	6.7	12.5	27.8	146.7	1240
<b>Nutrients (mg/L)</b>													
NH3 as N	42	3	N/A				0.01	0.01	0.03	0.07	0.12	0.22	0.32
NO2 + NO3 as N	42	0	N/A				0.69	1.02	1.64	2.55	3.42	5.21	5.94
TKN as N	42	0	N/A				0.2	0.28	0.43	0.56	0.72	1.32	2.18
Total Phosphorus	42	0	N/A				0.13	0.22	0.26	0.38	0.59	0.84	2.03
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	29	0	N/A				69	95	175	571	1038	13871	46471
Arsenic, total (As)	29	29	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	29	29	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	29	24	>50	1	3.4		5	5	5	5	5	20	56
Copper, total (Cu)	29	6	>7	5	17.2	93.6	2	2	2	4	5	28	180
Iron, total (Fe)	29	0	>1000	16	55.2	100	219	354	517	1159	1636	18310	49950
Lead, total (Pb)	29	25	>25	0	0		5	5	5	5	5	8	20
Mercury, total (Hg)	29	29	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	29	26	>88	0	0		10	10	10	10	10	12	47
Zinc, total (Zn)	29	18	>50	3	10.3	67.1	10	10	10	10	12	52	188
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	60	<b>Geomean</b>	67	<b># &gt; 400:</b>	2	<b>% &gt; 400:</b>	3	<b>%Conf:</b>					

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** N FORK CROOKED CRK AT SR 1520 NR MONROE

**Station #:** Q8386000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.10785

**Longitude:** -80.61538

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-20-1

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	99	0	<4	5	5.1		3.2	4.6	5.1	5.9	7.5	8.4	10.6
	99	0	<5	21	21.2	100	3.2	4.6	5.1	5.9	7.5	8.4	10.6
pH (SU)	85	0	<6	0	0		6.4	6.6	6.7	6.9	7.5	8	8.3
	85	0	>9	0	0		6.4	6.6	6.7	6.9	7.5	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				104	140	164	210	304	344	472
Water Temperature (°C)	99	0	>32	0	0		6	7.6	13.7	20.7	23.4	24.8	29.6
<b>Other</b>													
Turbidity (NTU)	60	0	>50	8	13.3	85.8	5.4	7.7	10	17	30.5	69.5	126
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>	<b>% &gt; 400:</b>		<b>%Conf:</b>							
60	215		17	28		95.7							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NC DENR, Division of Water Quality

Basinwide Assessment Report

**Location:** N FORK CROOKED CRK AT SR 1514 NR MONROE

**Station #:** Q8386200

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.10235

**Longitude:** -80.58428

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-20-1

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	5	5.1		3.1	4.5	5.1	6	7.7	8.7	10.3
	99	0	<5	18	18.2	99.6	3.1	4.5	5.1	6	7.7	8.7	10.3
pH (SU)	85	0	<6	0	0		6.5	6.7	6.7	6.9	7.4	8	8.3
	85	0	>9	0	0		6.5	6.7	6.7	6.9	7.4	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				119	162	187	250	320	366	487
Water Temperature (°C)	99	0	>32	0	0		5.7	7.6	13.9	20.8	23.2	25	29.3
<b>Other</b>													
Turbidity (NTU)	60	0	>50	7	11.7	75.2	1	5.2	8	17	26.8	60	121
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>	<b>% &gt; 400:</b>		<b>%Conf:</b>							
60	222		16	27		92.3							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** CROOKED CRK AT NC 218 NR MONROE

**Station #:** Q8388000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.13302 **Longitude:** -80.48958

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-20

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		4.7	5.3	5.7	6.8	8.4	9.7	11
	99	0	<5	4	4		4.7	5.3	5.7	6.8	8.4	9.7	11
pH (SU)	85	0	<6	0	0		6.5	6.7	6.8	7.1	7.5	8	8.3
	85	0	>9	0	0		6.5	6.7	6.8	7.1	7.5	8	8.3
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				98	126	141	178	205	254	496
Water Temperature (°C)	99	0	>32	0	0		5.1	7.5	13.7	20.8	23.4	25	29.1
<b>Other</b>													
Turbidity (NTU)	60	0	>50	5	8.3		2.4	4.1	6.7	13.5	26.5	44.9	150
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	112		5		8								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** CROOKED CRK AT SR 1601 NR MONROE

**Station #:** Q8388900

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.13808

**Longitude:** -80.50538

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-20

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		4.1	5.1	5.6	6.4	8.2	9.3	10.6
	99	0	<5	8	8.1		4.1	5.1	5.6	6.4	8.2	9.3	10.6
pH (SU)	85	0	<6	0	0		6.5	6.7	6.8	7	7.4	8	8.4
	85	0	>9	0	0		6.5	6.7	6.8	7	7.4	8	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				93	130	152	176	221	275	468
Water Temperature (°C)	99	0	>32	0	0		5.3	7.3	13.4	20.6	23.4	24.9	29.4
<b>Other</b>													
Turbidity (NTU)	60	0	>50	5	8.3		1.9	4.7	6	15	30.5	44.5	160
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	131		7		12								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** LONG CRK AT SR 1968 NR OAKBORO

**Station #:** Q8715000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.26667 **Longitude:** -80.25693

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-31

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	1	1.2		3.9	5.2	5.6	6.9	9.2	10.1	11.8
	85	0	<5	6	7.1		3.9	5.2	5.6	6.9	9.2	10.1	11.8
pH (SU)	85	0	<6	0	0		6.5	6.7	6.8	7.1	7.4	8	8.4
	85	0	>9	0	0		6.5	6.7	6.8	7.1	7.4	8	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				92	154	170	234	319	440	733
Water Temperature (°C)	85	0	>32	0	0		3.6	5.9	10.7	19.3	23.2	24.9	29.2
<b>Other</b>													
Turbidity (NTU)	60	2	>50	1	1.7		1	1.9	2.8	5.4	9.5	22.9	65
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	166		9		15								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** LONG CRK AT SR 1917 NR ROCKY RIVER SPRINGS

**Station #:** Q8720000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.22392

**Longitude:** -80.25857

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-17-31

**Time period:** 01/22/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	58	0	<4	0	0		4.5	7	7.8	8.8	10.9	12.5	15
	58	0	<5	1	1.7		4.5	7	7.8	8.8	10.9	12.5	15
pH (SU)	58	0	<6	1	1.7		5.9	6.4	6.7	7.2	7.7	8.2	8.8
	58	0	>9	0	0		5.9	6.4	6.7	7.2	7.7	8.2	8.8
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				69	123	137	182	261	521	1020
Water Temperature (°C)	58	0	>32	0	0		4	5.9	10	18.4	24.2	25.7	29.6
<b>Other</b>													
Chlorophyll a (ug/L)	1	0	>40	0	0		9	9	9	9	9	9	9
TSS (mg/L)	20	8	N/A				2.5	2.5	2.5	3.2	5.8	23.9	66
Turbidity (NTU)	58	2	>50	3	5.2		1	1.4	2.1	3.2	5.2	17.1	320
<b>Nutrients (mg/L)</b>													
NH3 as N	1	1	N/A				0.02	0.02	0.02	0.02	0.02	0.02	0.02
NO2 + NO3 as N	1	0	N/A				1.2	1.2	1.2	1.2	1.2	1.2	1.2
TKN as N	1	0	N/A				0.62	0.62	0.62	0.62	0.62	0.62	0.62
Total Phosphorus	1	0	N/A				0.14	0.14	0.14	0.14	0.14	0.14	0.14
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	2	N/A				50	51	66	97	175	600	2500
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	0	>7	13	65	100	3	4	5	8	13	18	19
Iron, total (Fe)	20	0	>1000	1	5		120	124	178	260	442	644	2700
Lead, total (Pb)	20	20	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	8	>50	0	0		10	10	10	10	15	17	36
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
56	118		10		18								

## Key:

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# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** LONG CRK AT SR 1917 NR ROCKY RIVER SPRINGS

**Station #:** Q8720000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.22392 **Longitude:** -80.25857

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-31

**Time period:** 01/16/2002 to 12/13/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	2	2.4		3.6	5.1	5.6	6.7	9	10.1	11.4
	85	0	<5	4	4.7		3.6	5.1	5.6	6.7	9	10.1	11.4
pH (SU)	85	0	<6	0	0		6.5	6.7	6.9	7.1	7.4	8	8.4
	85	0	>9	0	0		6.5	6.7	6.9	7.1	7.4	8	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				106	130	155	263	324	519	787
Water Temperature (°C)	85	0	>32	0	0		3.7	6	10.7	19.4	23.2	24.6	29.5
<b>Other</b>													
Turbidity (NTU)	60	1	>50	1	1.7		1	1.7	2.6	4.7	9.8	15	80
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	152		11		18								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** RICHARDSON CRK AT SR 1751 WALKUP AVE AT MONROE

**Station #:** Q8800000

**Hydrologic Unit Code:** 3040105

**Latitude:** 34.98970

**Longitude:** -80.50965

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-36-(5)

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		5.1	5.6	6.2	6.8	9.2	10.1	11.3
	99	0	<5	0	0		5.1	5.6	6.2	6.8	9.2	10.1	11.3
pH (SU)	85	0	<6	0	0		6.7	6.8	7	7.1	7.3	8.1	8.5
	85	0	>9	0	0		6.7	6.8	7	7.1	7.3	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				106	127	141	165	193	301	591
Water Temperature (°C)	99	0	>32	0	0		2.9	6.2	11.6	19.9	22.8	24.2	27.6
<b>Other</b>													
Turbidity (NTU)	60	0	>50	2	3.3		1.8	4.3	5.9	10	20.5	40	110
<b>Nutrients (mg/L)</b>													
NH3 as N	60	6	N/A				0.01	0.01	0.03	0.07	0.12	0.17	0.56
NO2 + NO3 as N	60	3	N/A				0.01	0.06	0.18	0.69	6.09	11.97	13.88
TKN as N	60	1	N/A				0.05	0.47	0.77	1.01	1.23	1.54	2.5
Total Phosphorus	60	0	N/A				0.02	0.07	0.12	0.31	1.36	1.96	2.96
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
59	83		3		5								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** RICHARDSON CRK AT SR 1006 NR MONROE

**Station #:** Q8820000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.03220

**Longitude:** -80.47163

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-36-(5)

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	99	0	<4	0	0		5.3	5.8	6.3	6.8	9.1	10.1	11.1
	99	0	<5	0	0		5.3	5.8	6.3	6.8	9.1	10.1	11.1
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7.1	7.4	8.1	8.5
	85	0	>9	0	0		6.7	6.8	6.9	7.1	7.4	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				103	126	156	193	291	494	685
Water Temperature (°C)	99	0	>32	0	0		2.7	6	11.4	20	22.7	24.3	27.9
<b>Other</b>													
Turbidity (NTU)	60	0	>50	4	6.7		1.7	1.9	3.4	6.8	10.8	43.5	150
<b>Nutrients (mg/L)</b>													
NH3 as N	60	8	N/A				0.01	0.01	0.03	0.07	0.13	0.26	0.73
NO2 + NO3 as N	60	0	N/A				0.51	1.92	5.54	11.44	16.94	22.59	28.5
TKN as N	60	1	N/A				0.1	0.81	1.03	1.35	1.73	2.05	2.18
Total Phosphorus	60	0	N/A				0.35	0.57	1.26	2.38	3.26	4.82	10.52
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	95		2		3								

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** RICHARDSON CRK AT SR 1630 NR MONROE

**Station #:** Q8850000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.04597 **Longitude:** -80.45607

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-17-36-(5)

**Time period:** 01/17/2002 to 06/25/2003

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	39	0	<4	0	0		5.3	5.6	6	6.4	8.7	10	11.2
	39	0	<5	0	0		5.3	5.6	6	6.4	8.7	10	11.2
pH (SU)	25	0	<6	0	0		6.9	7	7.5	8	8.3	8.5	8.9
	25	0	>9	0	0		6.9	7	7.5	8	8.3	8.5	8.9
Spec. conductance (umhos/cm at 25°C)	24	0	N/A				173	192	209	324	487	606	663
Water Temperature (°C)	39	0	>32	0	0		6.2	7.7	15.8	21.3	23.8	25.5	28.3
<b>Other</b>													
Turbidity (NTU)	18	0	>50	2	11.1	73.4	1.5	1.7	2.4	5.2	11.2	59.5	100

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400: %Conf:
18	155	2	11

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** RICHARDSON CRK AT SR 1649 NR FAIRFIELD

**Station #:** Q8917000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.07111

**Longitude:** -80.40662

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-17-36-(5)

**Time period:** 01/22/2002 to 12/19/2006

	# result	# ND	Results not meeting EL EL	#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	57	0	<4	0	0		5.7	6.4	7.4	8.5	11.1	12.7	15.4
	57	0	<5	0	0		5.7	6.4	7.4	8.5	11.1	12.7	15.4
pH (SU)	57	0	<6	0	0		6.2	6.5	6.8	7.2	7.6	8.1	8.7
	57	0	>9	0	0		6.2	6.5	6.8	7.2	7.6	8.1	8.7
Spec. conductance (umhos/cm at 25°C)	57	0	N/A				60	144	198	368	533	763	925
Water Temperature (°C)	57	0	>32	0	0		5	7.2	11.4	18.5	23.5	26.1	27.9
<b>Other</b>													
TSS (mg/L)	20	8	N/A				2.5	2.5	2.5	3.8	5.8	11.7	41
Turbidity (NTU)	57	2	>50	3	5.3		1	1.5	2.3	3.3	8.6	28.4	220
<b>Nutrients (mg/L)</b>													
NH3 as N	41	18	N/A				0.02	0.02	0.02	0.02	0.03	0.11	0.36
NO2 + NO3 as N	41	0	N/A				0.1	1.32	3.5	7.9	12	16.8	25
TKN as N	41	0	N/A				0.33	0.71	0.86	1	1.1	1.46	2.2
Total Phosphorus	41	0	N/A				0.35	0.44	0.74	1.4	2.35	2.98	4.3
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	20	1	N/A				50	53	67	130	245	774	2500
Arsenic, total (As)	20	20	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	20	20	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	20	20	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	20	0	>7	6	30	99.8	4	4	5	6	7	9	14
Iron, total (Fe)	20	1	>1000	1	5		50	110	130	210	485	898	2700
Lead, total (Pb)	20	20	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	20	20	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	20	20	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	20	5	>50	0	0		10	10	10	20	28	41	43
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
55	133		9		16								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** LANES CRK AT SR 1005 LANDSFORD RD NR MARSHVILLE

**Station #:** Q9021300

**Hydrologic Unit Code:** 3040105

**Latitude:** 34.92316

**Longitude:** -80.34210

**Stream class:** WS-V

**Agency:** YPDRBA

**NC stream index:** 13-17-40-(1)

**Time period:** 10/19/2006 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	3	0	<4	1	33.3		0.7	0.7	0.7	7.2	8.8	8.8	8.8
	3	0	<5	1	33.3		0.7	0.7	0.7	7.2	8.8	8.8	8.8
pH (SU)	3	0	<6	0	0		6.8	6.8	6.8	7.1	7.2	7.2	7.2
	3	0	>9	0	0		6.8	6.8	6.8	7.1	7.2	7.2	7.2
Spec. conductance (umhos/cm at 25°C)	3	0	N/A				206	206	206	245	261	261	261
Water Temperature (°C)	3	0	>32	0	0		9.1	9.1	9.1	15.4	16.1	16.1	16.1
<b>Other</b>													
TSS (mg/L)	3	0	N/A				1.9	1.9	1.9	24	1770	1770	1770
Turbidity (NTU)	3	0	>50	2	66.7		4.9	4.9	4.9	55	800	800	800
<b>Nutrients (mg/L)</b>													
NH3 as N	3	0	N/A				0.02	0.02	0.02	0.04	0.41	0.41	0.41
NO2 + NO3 as N	3	0	>10	0	0		0.06	0.06	0.06	1.56	2.56	2.56	2.56
TKN as N	3	0	N/A				0.61	0.61	0.61	1.05	1.77	1.77	1.77
Total Phosphorus	3	0	N/A				0.1	0.1	0.1	0.15	1.78	1.78	1.78
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	1	0	N/A				28538	28538	28538	28538	28538	28538	28538
Arsenic, total (As)	1	0	>10	0	0		10	10	10	10	10	10	10
Cadmium, total (Cd)	1	1	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	1	0	>50	0	0		35	35	35	35	35	35	35
Copper, total (Cu)	1	0	>7	1	100		20	20	20	20	20	20	20
Iron, total (Fe)	1	0	>1000	1	100		31600	31600	31600	31600	31600	31600	31600
Lead, total (Pb)	1	0	>25	0	0		23	23	23	23	23	23	23
Manganese, total (Mn)	1	0	>200	1	100		1290	1290	1290	1290	1290	1290	1290
Mercury, total (Hg)	1	1	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	1	1	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	1	0	>50	1	100		105	105	105	105	105	105	105
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>			<b>% &gt; 400: %Conf:</b>						
3	53			0			0						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** BARKERS BRANCH AT SR 1005 LANDSFORD RD NR MARSHVILLE

**Station #:** Q9021305

**Hydrologic Unit Code:** 3040105

**Latitude:** 34.93202

**Longitude:** -80.34358

**Stream class:** WS-V

**Agency:** YPDRBA

**NC stream index:** 13-17-40-10

**Time period:** 01/09/2003 to 09/29/2004

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	25	0	<4	0	0		4.2	5	6.2	7	10	10.9	11.1
	25	0	<5	2	8		4.2	5	6.2	7	10	10.9	11.1
pH (SU)	25	0	<6	0	0		6.7	6.8	6.9	7.1	7.2	7.5	8.1
	25	0	>9	0	0		6.7	6.8	6.9	7.1	7.2	7.5	8.1
Spec. conductance (umhos/cm at 25°C)	25	0	N/A				61	80	107	118	128	155	183
Water Temperature (°C)	25	0	>32	0	0		3	5.2	8.5	17.7	23.2	25.9	26.4
<b>Other</b>													
TSS (mg/L)	18	0	N/A				1	1.9	3.2	6.6	18.8	188.5	463
Turbidity (NTU)	18	0	>50	1	5.6		3.6	4.3	5.3	8	15.2	57.2	167
<b>Nutrients (mg/L)</b>													
NH3 as N	18	4	N/A				0.01	0.01	0.04	0.08	0.12	0.25	0.32
NO2 + NO3 as N	18	1	>10	0	0		0.01	0.02	0.06	0.41	1.3	2.85	3.15
TKN as N	18	0	N/A				0.34	0.45	0.73	0.86	1.25	1.65	1.96
Total Phosphorus	18	0	N/A				0.06	0.06	0.12	0.26	0.38	1.05	1.06
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	18	2	N/A				50	94	108	252	395	2671	12072
Arsenic, total (As)	18	17	>10	0	0		5	5	5	5	5	5	8
Cadmium, total (Cd)	18	18	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	18	17	>50	0	0		5	5	5	5	5	6	10
Copper, total (Cu)	18	2	>7	4	22.2	97.2	2	2	3	5	7	17	17
Iron, total (Fe)	18	0	>1000	7	38.9	100	119	274	651	938	2027	3152	9745
Lead, total (Pb)	18	17	>25	0	0		5	5	5	5	5	6	10
Manganese, total (Mn)	12	0	>200	6	50	100	59	59	86	232	365	1049	1247
Mercury, total (Hg)	18	18	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	18	18	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	18	9	>50	0	0		10	10	10	10	17	31	44
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>			<b>% &gt; 400: %Conf:</b>						
18	247			6			33 94.9						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** BEAVERDAM CRK AT SR 1005 NR MARSHVILLE

**Station #:** Q9021510

**Hydrologic Unit Code:** 3040105

**Latitude:** 34.95439

**Longitude:** -80.35166

**Stream class:** WS-V

**Agency:** YPDRBA

**NC stream index:** 13-17-40-11

**Time period:** 01/17/2002 to 09/27/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	50	0	<4	38	76	100	0.1	1.3	1.8	2.5	4	5.6	7.6
	50	0	<5	39	78	100	0.1	1.3	1.8	2.5	4	5.6	7.6
pH (SU)	50	0	<6	0	0		6.3	6.4	6.4	6.6	8	8.3	8.5
	50	0	>9	0	0		6.3	6.4	6.4	6.6	8	8.3	8.5
Spec. conductance (umhos/cm at 25°C)	49	0	N/A				93	122	185	251	355	412	484
Water Temperature (°C)	50	0	>32	0	0		3.2	5.2	9.1	19.3	21.8	22.7	25.6
<b>Other</b>													
TSS (mg/L)	36	2	N/A				1	2.3	3.5	5.7	13	27.3	42
Turbidity (NTU)	36	0	>50	0	0		3	3.7	5.1	8.1	17.2	25.6	47
<b>Nutrients (mg/L)</b>													
NH3 as N	36	5	N/A				0.01	0.01	0.02	0.06	0.17	0.56	1.14
NO2 + NO3 as N	36	6	>10	0	0		0.01	0.01	0.02	0.18	0.93	2.19	3.68
TKN as N	36	0	N/A				0.3	0.54	0.88	1.12	1.72	2.27	3.83
Total Phosphorus	36	0	N/A				0.06	0.15	0.28	0.44	0.84	1.04	1.45
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	25	0	N/A				62	90	114	184	494	1807	6186
Arsenic, total (As)	25	21	>10	1	4		5	5	5	5	5	6	11
Cadmium, total (Cd)	25	24	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	25	23	>50	0	0		5	5	5	5	5	5	6
Copper, total (Cu)	25	7	>7	4	16	90.2	2	2	2	3	6	16	26
Iron, total (Fe)	25	0	>1000	13	52	100	462	571	733	1045	3051	6086	9398
Lead, total (Pb)	25	22	>25	0	0		5	5	5	5	5	6	13
Manganese, total (Mn)	14	0	>200	6	42.9	100	28	34	64	150	530	1125	1293
Mercury, total (Hg)	25	25	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	25	22	>25	0	0		10	10	10	10	10	12	13
Zinc, total (Zn)	25	14	>50	0	0		10	10	10	10	20	34	41

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
36	215	12	33	98.2

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** ROCKY RIV AT SR 1935 NR NORWOOD

**Station #:** Q9120000

**Hydrologic Unit Code:** 3040105

**Latitude:** 35.15688

**Longitude:** -80.16583

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-17

**Time period:** 01/22/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Min	10th	25th	50th	75th	90th	Max
				#	%	%Conf							
<b>Field</b>													
D.O. (mg/L)	58	0	<4	0	0		5.3	6.9	7.8	8.8	10.6	12.3	14.1
	58	0	<5	0	0		5.3	6.9	7.8	8.8	10.6	12.3	14.1
pH (SU)	58	0	<6	0	0		6.1	6.3	6.8	7.4	8.2	8.7	9.2
	58	0	>9	1	1.7		6.1	6.3	6.8	7.4	8.2	8.7	9.2
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				75	126	155	198	241	367	792
Water Temperature (°C)	58	0	>32	0	0		4	6	10.8	19.8	25.9	28.6	30.7
<b>Other</b>													
TSS (mg/L)	21	2	N/A				2.5	3.4	5.9	10	38	101.6	120
Turbidity (NTU)	58	0	>50	13	22.4	99.9	2.3	4	5.4	11	37.5	120	700
<b>Nutrients (mg/L)</b>													
NH3 as N	57	28	N/A				0.01	0.02	0.02	0.02	0.03	0.1	0.22
NO2 + NO3 as N	57	0	N/A				0.55	0.97	1.45	1.8	2.35	3.28	6.5
TKN as N	57	0	N/A				0.23	0.42	0.5	0.64	0.79	0.91	3.4
Total Phosphorus	57	0	N/A				0.09	0.19	0.26	0.39	0.5	0.93	1.5
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	21	0	N/A				93	172	250	330	3100	5020	6700
Arsenic, total (As)	21	21	>10	0	0		5	5	5	10	10	10	10
Cadmium, total (Cd)	21	21	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	21	21	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	21	0	>7	5	23.8	98.6	3	4	4	6	7	13	17
Iron, total (Fe)	21	0	>1000	8	38.1	100	240	254	340	530	2700	4620	6100
Lead, total (Pb)	21	21	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	21	21	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	21	21	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	21	10	>50	0	0		10	10	10	11	14	18	23
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>							
56	139			13	23	78.3							

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** BROWN CRK AT SR 1627 NR PINKSTON

**Station #:** Q9155000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.06372      **Longitude:** -80.05283

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-20

**Time period:** 01/07/2002 to 12/27/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	49	0	<4	10	20.4	99.2	1.4	2.5	4.2	6.7	10	10.9	13
	49	0	<5	16	32.7	100	1.4	2.5	4.2	6.7	10	10.9	13
pH (SU)	48	0	<6	1	2.1		5.9	6.3	6.4	6.7	6.9	7	7.3
	48	0	>9	0	0		5.9	6.3	6.4	6.7	6.9	7	7.3
Spec. conductance (umhos/cm at 25°C)	49	0	N/A				46	74	93	112	126	160	194
Water Temperature (°C)	49	0	>32	0	0		2.1	6	9.8	16	22.2	25.2	27.6
<b>Other</b>													
TSS (mg/L)	16	1	N/A				3.5	3.7	4	5.1	10.8	50	64
Turbidity (NTU)	49	0	>50	3	6.1		3.2	5.7	8.2	17	24.5	50	140
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	16	0	N/A				57	108	195	400	1125	2850	3200
Arsenic, total (As)	16	16	>10	0	0		5	5	5	5	10	10	10
Cadmium, total (Cd)	16	16	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	16	16	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	16	6	>7	2	12.5	78.9	2	2	2	2	4	8	9
Iron, total (Fe)	16	0	>1000	14	87.5	100	570	577	1425	1900	2475	2750	3100
Lead, total (Pb)	16	16	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	16	16	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	16	16	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	16	14	>50	0	0		10	10	10	10	10	10	11

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>
47	106	6	13	

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** PEE DEE RIV AT NC 109 NR MANGUM

**Station #:** Q9160000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.08591

**Longitude:** -79.99888

**Stream class:** WS-V&B

**Agency:** NCAMBNT

**NC stream index:** 13-(15.5)

**Time period:** 01/07/2002 to 12/27/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	49	0	<4	2	4.1		3.6	5.1	6.3	7.8	10	11.6	13.3
	49	0	<5	4	8.2		3.6	5.1	6.3	7.8	10	11.6	13.3
pH (SU)	48	0	<6	1	2.1		5.9	6.3	6.6	6.9	7.2	7.3	7.9
	48	0	>9	0	0		5.9	6.3	6.6	6.9	7.2	7.3	7.9
Spec. conductance (umhos/cm at 25°C)	49	0	N/A				65	82	90	102	126	146	302
Water Temperature (°C)	49	0	>32	0	0		5.5	7.3	9.6	17	24.6	28.2	30.2
<b>Other</b>													
TSS (mg/L)	16	0	N/A				3.2	4.5	6.6	8.5	46.5	75.3	90
Turbidity (NTU)	49	0	>50	7	14.3	88.8	3.7	6.1	8.4	12	30.5	65	110
<b>Nutrients (mg/L)</b>													
NH3 as N	32	9	N/A				0.02	0.02	0.02	0.03	0.04	0.07	0.17
NO2 + NO3 as N	32	0	>10	0	0		0.25	0.34	0.59	0.73	0.9	1.24	3.6
TKN as N	32	0	N/A				0.3	0.31	0.37	0.45	0.56	0.69	0.8
Total Phosphorus	32	0	N/A				0.04	0.05	0.06	0.1	0.19	0.25	0.34
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	16	0	N/A				190	211	248	435	2328	3670	4300
Arsenic, total (As)	16	16	>10	0	0		5	5	5	5	10	10	10
Cadmium, total (Cd)	16	16	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	16	16	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	16	5	>7	2	12.5	78.9	2	2	2	3	5	8	10
Iron, total (Fe)	16	0	>1000	5	31.2	99.7	300	314	340	725	2675	3420	3700
Lead, total (Pb)	16	16	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	16	0	>200	1	6.2		45	46	51	95	135	252	420
Mercury, total (Hg)	16	16	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	16	16	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	16	11	>50	0	0		10	10	10	10	11	16	16

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
47	149	8	17	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** LITTLE RIV AT SR 1340 NR STAR

**Station #:** Q9200000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.38722 **Longitude:** -79.83152

**Stream class:** C HQW

**Agency:** NCAMBNT

**NC stream index:** 13-25-(11.5)

**Time period:** 01/08/2002 to 12/05/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	47	0	<4	0	0		4.7	6.6	8.1	9.8	12.1	12.9	15.7
	47	0	<5	1	2.1		4.7	6.6	8.1	9.8	12.1	12.9	15.7
pH (SU)	48	0	<6	0	0		6	6.4	6.5	6.8	7.2	7.3	7.7
	48	0	>9	0	0		6	6.4	6.5	6.8	7.2	7.3	7.7
Spec. conductance (umhos/cm at 25°C)	48	0	N/A				40	54	59	64	66	72	90
Water Temperature (°C)	48	0	>32	0	0		1.3	5.8	8.3	15.4	21.9	24.3	28.1
<b>Other</b>													
TSS (mg/L)	16	9	N/A				2.5	2.5	2.5	2.6	4.8	10.1	15
Turbidity (NTU)	48	0	>50	0	0		1.1	2.9	3.6	7.6	11.8	23.5	40
<b>Nutrients (mg/L)</b>													
NH3 as N	31	27	N/A				0.02	0.02	0.02	0.02	0.02	0.02	0.08
NO2 + NO3 as N	31	7	N/A				0.02	0.02	0.03	0.14	0.24	0.26	0.61
TKN as N	31	3	N/A				0.2	0.2	0.26	0.32	0.41	0.53	0.62
Total Phosphorus	31	0	N/A				0.02	0.03	0.05	0.06	0.09	0.1	0.16
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	16	0	N/A				88	92	162	195	352	1255	2200
Arsenic, total (As)	16	16	>10	0	0		5	5	5	5	10	10	10
Cadmium, total (Cd)	16	16	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	16	16	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	16	12	>7	0	0		2	2	2	2	2	4	5
Iron, total (Fe)	16	0	>1000	4	25	98.3	460	600	700	815	1052	1480	1900
Lead, total (Pb)	16	16	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	16	16	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	16	16	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	16	15	>50	0	0		10	10	10	10	10	12	16

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
45	99	5	11	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** LITTLE RIV AT SR 1148 NR ELLERBE

**Station #:** Q9320000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.10633

**Longitude:** -79.89895

**Stream class:** WS-IV

**Agency:** YPDRBA

**NC stream index:** 13-25-(37.5)

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		4.2	5.6	6.2	7.1	9.4	10.6	11.4
	85	0	<5	1	1.2		4.2	5.6	6.2	7.1	9.4	10.6	11.4
pH (SU)	85	0	<6	0	0		6.4	6.9	7	7.1	7.4	8.1	8.4
	85	0	>9	0	0		6.4	6.9	7	7.1	7.4	8.1	8.4
Spec. conductance (umhos/cm at 25°C)	84	2	N/A				50	84	96	112	129	150	196
Water Temperature (°C)	85	0	>32	0	0		4.1	6.7	10.4	19.9	23.4	25.1	28.1
<b>Other</b>													
Turbidity (NTU)	60	0	>50	3	5		1.8	3.1	5.3	8.4	15.8	40	150
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
60	62		1		2								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

**Location:** TOMS BRANCH AT SR 1310 NR ELLERBE

**Station #:** Q9340000

**Hydrologic Unit Code:** 3040104

**Latitude:** 35.08783

**Longitude:** -79.78942

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-28-2-4

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	81	0	<4	0	0		5.1	5.7	6.3	7.3	9.7	10.6	11.1
	81	0	<5	0	0		5.1	5.7	6.3	7.3	9.7	10.6	11.1
pH (SU)	81	0	<6	0	0		6.8	6.9	6.9	7.1	7.3	8.1	8.5
	81	0	>9	0	0		6.8	6.9	6.9	7.1	7.3	8.1	8.5
Spec. conductance (umhos/cm at 25°C)	80	1	N/A				50	70	91	117	155	174	240
Water Temperature (°C)	81	0	>32	0	0		3.8	6.2	9.8	19.1	23.3	25.4	28.6
<b>Other</b>													
Turbidity (NTU)	58	0	>50	4	6.9		2.7	4.5	6.7	9.8	16	34.2	280
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
58	71		5		9								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** PEE DEE RIV AT US 74 NR ROCKINGHAM

**Station #:** Q9400000

**Hydrologic Unit Code:** 3040201

**Latitude:** 34.94567

**Longitude:** -79.86910

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-(34)

**Time period:** 01/07/2002 to 12/27/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	49	0	<4	5	10.2	63.5	2.5	3.8	5.4	8.2	10.6	11	15.6
	49	0	<5	8	16.3	94.8	2.5	3.8	5.4	8.2	10.6	11	15.6
pH (SU)	48	0	<6	0	0		6.1	6.1	6.4	6.7	6.9	7	7.3
	48	0	>9	0	0		6.1	6.1	6.4	6.7	6.9	7	7.3
Spec. conductance (umhos/cm at 25°C)	49	0	N/A				66	80	89	99	119	135	172
Water Temperature (°C)	49	0	>32	0	0		6	7.4	9.1	16.8	24.5	27.6	29.1
<b>Other</b>													
TSS (mg/L)	16	3	N/A				2.5	2.5	4.8	9	14	28.3	43
Turbidity (NTU)	49	0	>50	3	6.1		2	3.5	9	17	22	31	85
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	16	0	N/A				130	144	205	360	585	1843	4300
Arsenic, total (As)	16	16	>10	0	0		5	5	5	5	10	10	10
Cadmium, total (Cd)	16	16	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	16	16	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	16	6	>7	1	6.2		2	2	2	2	3	5	8
Iron, total (Fe)	16	0	>1000	1	6.2		160	160	340	595	748	1810	3700
Lead, total (Pb)	16	16	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	16	16	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	16	16	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	16	14	>50	0	0		10	10	10	10	10	12	13

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>
47	59	5	11	

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** PEE DEE RIV AT US 74 NR ROCKINGHAM

**Station #:** Q9400000

**Hydrologic Unit Code:** 3040201

**Latitude:** 34.94567

**Longitude:** -79.86910

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-(34)

**Time period:** 01/17/2002 to 12/14/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	85	0	<4	0	0		4.1	5.6	6	7.2	9.2	10.6	11.4
	85	0	<5	1	1.2		4.1	5.6	6	7.2	9.2	10.6	11.4
pH (SU)	85	0	<6	0	0		6.7	6.8	6.9	7.1	7.3	8	8.4
	85	0	>9	0	0		6.7	6.8	6.9	7.1	7.3	8	8.4
Spec. conductance (umhos/cm at 25°C)	84	0	N/A				71	81	91	112	142	165	202
Water Temperature (°C)	85	0	>32	0	0		3.6	6.6	10	20.1	23.5	25.7	29.1
<b>Other</b>													
TSS (mg/L)	60	0	N/A				2.4	3.3	7.2	10	16.5	33.8	166
Turbidity (NTU)	60	0	>50	3	5		3.2	6.6	8.6	15	21.8	30.9	75
<b>Nutrients (mg/L)</b>													
NH3 as N	60	8	N/A				0.01	0.01	0.04	0.07	0.12	0.17	0.25
NO2 + NO3 as N	60	0	N/A				0.06	0.23	0.39	0.56	0.69	0.83	5.04
TKN as N	60	1	N/A				0.1	0.31	0.37	0.52	0.66	0.81	2.73
Total Phosphorus	60	1	N/A				0.02	0.05	0.07	0.1	0.13	0.19	1
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	47	0	N/A				51	233	429	696	1136	2865	8979
Arsenic, total (As)	47	46	>10	0	0		5	5	5	5	5	5	5
Cadmium, total (Cd)	47	44	>2	0	0		1	1	1	1	1	1	1
Chromium, total (Cr)	47	42	>50	0	0		5	5	5	5	5	6	10
Copper, total (Cu)	47	11	>7	3	6.4		2	2	2	3	5	7	15
Iron, total (Fe)	47	0	>1000	30	63.8	100	271	374	753	1173	1512	3137	11512
Lead, total (Pb)	47	45	>25	0	0		5	5	5	5	5	5	8
Mercury, total (Hg)	47	47	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	47	45	>88	0	0		10	10	10	10	10	10	12
Zinc, total (Zn)	47	33	>50	0	0		10	10	10	10	11	16	26
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>			<b># &gt; 400:</b>			<b>% &gt; 400: %Conf:</b>						
60	68			2			3						

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence



# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** HITCHCOCK CRK AT SR 1109 AT CORDOVA

**Station #:** Q9660000

**Hydrologic Unit Code:** 3040201

**Latitude:** 34.91837 **Longitude:** -79.83003

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-39-(10)

**Time period:** 01/07/2002 to 12/27/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	49	0	<4	1	2		2.5	6.9	7.4	9.4	11.7	12.6	14.6
	49	0	<5	1	2		2.5	6.9	7.4	9.4	11.7	12.6	14.6
pH (SU)	48	0	<6	8	16.7	95.4	5.5	5.7	6	6.2	6.5	6.7	7.5
	48	0	>9	0	0		5.5	5.7	6	6.2	6.5	6.7	7.5
Spec. conductance (umhos/cm at 25°C)	49	0	N/A				27	34	36	39	44	56	130
Water Temperature (°C)	49	0	>32	0	0		3.9	7	9.6	17.9	23	27	27.7
<b>Other</b>													
TSS (mg/L)	16	1	N/A				2.5	2.8	4	5.5	10.6	116.6	328
Turbidity (NTU)	49	0	>50	1	2		2.4	3.7	4.3	5.4	8.6	14	180
<b>Nutrients (mg/L)</b>													
NH3 as N	49	6	N/A				0.02	0.02	0.02	0.03	0.05	0.07	0.17
NO2 + NO3 as N	49	1	N/A				0.02	0.07	0.11	0.2	0.31	0.4	0.52
TKN as N	49	2	N/A				0.2	0.22	0.31	0.39	0.46	0.52	0.88
Total Phosphorus	49	2	N/A				0.02	0.02	0.03	0.04	0.05	0.06	0.39
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	16	0	N/A				110	152	212	265	380	3710	9100
Arsenic, total (As)	16	16	>10	0	0		5	5	5	5	10	10	10
Cadmium, total (Cd)	16	16	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	16	16	>50	0	0		25	25	25	25	25	25	25
Copper, total (Cu)	16	8	>7	1	6.2		2	2	2	2	4	7	12
Iron, total (Fe)	16	0	>1000	11	68.8	100	630	644	860	1250	1875	7330	13000
Lead, total (Pb)	16	15	>25	0	0		10	10	10	10	10	10	11
Mercury, total (Hg)	16	16	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	16	16	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	16	10	>50	0	0		10	10	10	10	13	28	38

## Fecal coliform (#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
47	85	7	15	

### Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
 NCDENR, Division of Water Quality  
 Basinwide Assessment Report

**Location:** JONES CRK AT NC 145 NR PEE DEE

**Station #:** Q9777000

**Hydrologic Unit Code:** 3040201

**Latitude:** 34.90432      **Longitude:** -79.93047

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-42

**Time period:** 01/07/2002 to 12/27/2006

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	49	0	<4	0	0		4.2	5.9	7.2	8.6	11.1	12.5	16.1
	49	0	<5	2	4.1		4.2	5.9	7.2	8.6	11.1	12.5	16.1
pH (SU)	48	0	<6	1	2.1		5.5	6.3	6.5	6.8	7	7.1	7.5
	48	0	>9	0	0		5.5	6.3	6.5	6.8	7	7.1	7.5
Spec. conductance (umhos/cm at 25°C)	49	0	N/A				30	58	66	72	82	105	178
Water Temperature (°C)	49	0	>32	0	0		2.1	6.8	9.7	15.7	21.5	24.3	27.9
<b>Other</b>													
TSS (mg/L)	16	2	N/A				2.5	2.8	3	5	7.4	641	1670
Turbidity (NTU)	49	0	>50	2	4.1		2.4	4.2	5.4	7	12	33	500
<b>Metals (ug/L)</b>													
Aluminum, total (Al)	16	0	N/A				74	106	165	225	340	8750	14000
Arsenic, total (As)	16	16	>10	0	0		5	5	5	5	10	10	10
Cadmium, total (Cd)	16	16	>2	0	0		2	2	2	2	2	2	2
Chromium, total (Cr)	16	15	>50	0	0		25	25	25	25	25	29	39
Copper, total (Cu)	16	11	>7	2	12.5	78.9	2	2	2	2	2	17	34
Iron, total (Fe)	16	0	>1000	11	68.8	100	670	768	985	1250	1800	12390	21000
Lead, total (Pb)	16	15	>25	0	0		10	10	10	10	10	14	22
Mercury, total (Hg)	16	16	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	16	15	>88	0	0		10	10	10	10	10	19	39
Zinc, total (Zn)	16	13	>50	0	0		10	10	10	10	10	31	46

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>
47	144	7	15	

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

# Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** PEE DEE RIV APP 6 MI DNS OF NC 74 NR ROCKINGHAM

**Station #:** Q9830000

**Hydrologic Unit Code:** 3040201

**Latitude:** 34.86595

**Longitude:** -79.87927

**Stream class:** C

**Agency:** YPDRBA

**NC stream index:** 13-(34)

**Time period:** 01/17/2002 to 08/24/2004

	# result	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
<b>Field</b>													
D.O. (mg/L)	46	0	<4	0	0		5.2	5.5	5.7	7.3	8.9	10.8	11.3
	46	0	<5	0	0		5.2	5.5	5.7	7.3	8.9	10.8	11.3
pH (SU)	46	0	<6	0	0		6.8	6.9	7.1	7.2	7.9	8	8.2
	46	0	>9	0	0		6.8	6.9	7.1	7.2	7.9	8	8.2
Spec. conductance (umhos/cm at 25°C)	45	1	N/A				50	89	93	112	141	208	232
Water Temperature (°C)	46	0	>32	0	0		3.5	7	11.4	21.5	24.1	26.7	28.7
<b>Other</b>													
Turbidity (NTU)	32	0	>50	2	6.2		4.1	6.2	8.7	13.5	17.8	32.8	140
<b>Fecal coliform (#/100mL)</b>													
<b># results:</b>	<b>Geomean</b>		<b># &gt; 400:</b>		<b>% &gt; 400:</b>		<b>%Conf:</b>						
32	176		5		16								

## Key:

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

**Ambient Monitoring System Station Summaries**  
NCDENR, Division of Water Quality  
Basinwide Assessment Report

**Location:** MARKS CRK AT SR 1812 NR HAMLET

**Station #:** Q9940000

**Hydrologic Unit Code:** 3040201

**Latitude:** 34.86257      **Longitude:** -79.71915

**Stream class:** C

**Agency:** NCAMBNT

**NC stream index:** 13-45-(2)

**Time period:** 01/09/2002 to 12/19/2006

	# result	# ND	EL	Results not meeting EL			Min	10 <sup>th</sup>	Percentiles					90 <sup>th</sup>	Max
				#	%	%Conf			25 <sup>th</sup>	50 <sup>th</sup>	75 <sup>th</sup>				
<b>Field</b>															
D.O. (mg/L)	48	0	<4	14	29.2	100	0.3	2.1	3.5	6.4	8.9	9.9	12.2		
	48	0	<5	18	37.5	100	0.3	2.1	3.5	6.4	8.9	9.9	12.2		
pH (SU)	47	0	<6	18	38.3	100	5.1	5.6	5.9	6.1	6.5	6.7	7.2		
	47	0	>9	0	0		5.1	5.6	5.9	6.1	6.5	6.7	7.2		
Spec. conductance (umhos/cm at 25°C)	48	0	N/A				26	39	41	44	48	53	65		
Water Temperature (°C)	48	0	>32	0	0		3.6	6.1	11.2	15.8	23.1	26.9	28.9		
<b>Other</b>															
TSS (mg/L)	16	5	N/A				2.5	2.5	2.5	3	4.6	11.2	14		
Turbidity (NTU)	48	3	>50	0	0		1	1	1.3	2	3.2	5.2	19.2		
<b>Metals (ug/L)</b>															
Aluminum, total (Al)	16	0	N/A				60	61	67	79	92	132	160		
Arsenic, total (As)	16	16	>10	0	0		5	5	5	5	10	10	10		
Cadmium, total (Cd)	16	16	>2	0	0		2	2	2	2	2	2	2		
Chromium, total (Cr)	16	16	>50	0	0		25	25	25	25	25	25	25		
Copper, total (Cu)	16	11	>7	0	0		2	2	2	2	2	3	5		
Iron, total (Fe)	16	0	>1000	10	62.5	100	360	444	515	1150	2325	3730	3800		
Lead, total (Pb)	16	16	>25	0	0		10	10	10	10	10	10	10		
Mercury, total (Hg)	16	16	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2		
Nickel, total (Ni)	16	16	>88	0	0		10	10	10	10	10	10	10		
Zinc, total (Zn)	16	11	>50	0	0		10	10	10	10	11	17	20		

**Fecal coliform (#/100mL)**

<b># results:</b>	<b>Geomean</b>	<b># &gt; 400:</b>	<b>% &gt; 400:</b>	<b>%Conf:</b>
45	66	2	4	

**Key:**

# result: number of observations

# ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

## **Appendix B: References**

North Carolina Division of Water Quality, North Carolina Administrative Code Section 15A 2B .0200 (Red Book), May 1, 2007.

Pi-Erh Lin, Duane Meeter, and Xu-Feng Niu, A Nonparametric Procedure for Listing and Delisting Impaired Waters Based on Criterion Exceedances, Florida State University, Tallahassee, FL., October 2000.