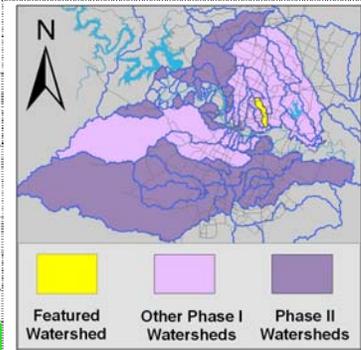


Fort Branch Watershed

Summary Sheet

Catchment	Total area	3 square miles			
	Area in recharge	none			
	Creek length	6 miles			
	Receiving water	Boggy Creek			
Demographics	2000 population	16,796			
	2030 projected population	19,659			
	30 year projected % increase	17 %			
Land Use	Impervious cover (2003 estimate)	38.2 %			
Overall EII Scores	2000	2003	2006	2009	
	60	55	52	47	



Flow Regime* for Sample Sites on Fort Branch Upstream to Downstream

Site # upstream to downstream	Site Name	2003					2006					2009				
		Feb WQ	Mar Bio	May WQ	Sep WQ	Dec WQ	Feb WQ	May WQ	Jul Bio	Aug WQ	Nov WQ	Feb WQ	Jun WQ	un-July Bio	Oct WQ	Dec WQ
126	Fort Branch at Glencrest	B	B	B	B	B	B	B	B	B	B	B	B	n	B	B
125	Fort Branch above Manor Rd	B	B	B	B	B	B	B	B	n	B	n	n	n	n	n
898	Fort Branch at Carson Hill (Single Shot)	B	B	B	B	n	n	n	n	n	n	n	n	n	n	B
123	Fort Branch at North Boggy	B	B	B	B	n	n	n	n	n	n	n	n	n	n	B

* B = baseflow n = no flow S = storm flow blue = Samples were taken grey = Samples were not taken blank = not visited

Summary of 2009 Data for Fort Branch

2009 Summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	D.O. mg/l	9.0	9.6	5.5	Generally within normal range, but a large swing from high to low
	pH st.units	7.8	7.9	7.7	Within normal range
	Cond uS/cm	600	640	505	Within normal range
Nutrients	NH ₃ mg/l	0.01	0.009	0.005	Average for 2009, but high concentration in upper reaches for previous years
	NO ₃ mg/l	0.13	0.51	0.004	Average for 2009, but high concentration in upper reaches for previous years
	Ortho P mg/l	0.04	0.07	0.03	Average for 2009, but high concentration in upper reaches for previous years
Sediment Load	TSS mg/l	1.2	7.3	0.5	Higher than average, with some very high concentrations in 2003
	Turbidity ntu	1.3	2.2	0.6	Within normal range, no apparent trend
Biology	E.Coli /100ml	372	1203	67	High concentrations of concern in the upper reach (site 126)
	Benthic Macs	Lower watershed hampered by lack of baseflow, site 126 had low diversity (6 taxa) which lowers scores			
	Diatoms	Chronically poor. Low Cymbella richness, low diversity in general, very high percent motile taxa.			

Index scores* for Fort Branch Sites by Year

Reach	Site	Site Name	Year	Water Quality	Sediment**	Contact Recreation	Non-Contact Recreation	Physical Integrity	Aquatic Life	Benthic subindex	Diatom subindex	Total EII Score
FOR1	123	Fort Branch @ North Boggy Creek	2000	65	88	86	69	31	37	31	42	63
FOR2	898	Fort Branch @ Carson Hill (Single Shot)	2000	62	88	71	67	39	32	40	23	60
FOR3	125	Fort Branch Above Manor Rd	2000	59	88	78	67	33	34	29	39	60
FOR4	126	Fort Branch @ Glencrest Drive	2000	45	88	73	72	43	17	31	3	56
FOR1	123	Fort Branch @ North Boggy Creek	2003	68	78	79	74	43	22	19	24	61
FOR2	898	Fort Branch @ Carson Hill (Single Shot)	2003	49	78	41	60	46	21	25	16	49
FOR3	125	Fort Branch Above Manor Rd	2003	54	78	71	75	41	15	17	12	56
FOR4	126	Fort Branch @ Glencrest Drive	2003	33	78	62	73	44	20	26	14	52
FOR1	123	Fort Branch @ North Boggy Creek	2006		67		35	37				35
FOR2	898	Fort Branch @ Carson Hill (Single Shot)	2006		67		71	49				47
FOR3	125	Fort Branch Above Manor Rd	2006	75	67	60	75	41	66	62	70	64
FOR4	126	Fort Branch @ Glencrest Drive	2006	44	67	25	89	59	42	39	44	54
FOR1	123	Fort Branch @ North Boggy Creek	2009	79	77	54	12	34				43
FOR2	898	Fort Branch @ Carson Hill (Single Shot)	2009	71	77	36	28	33				41
FOR3	125	Fort Branch Above Manor Rd	2009		77		63	51				48
FOR4	126	Fort Branch @ Glencrest Drive	2009	65	77	28	55	56	39	27	50	53

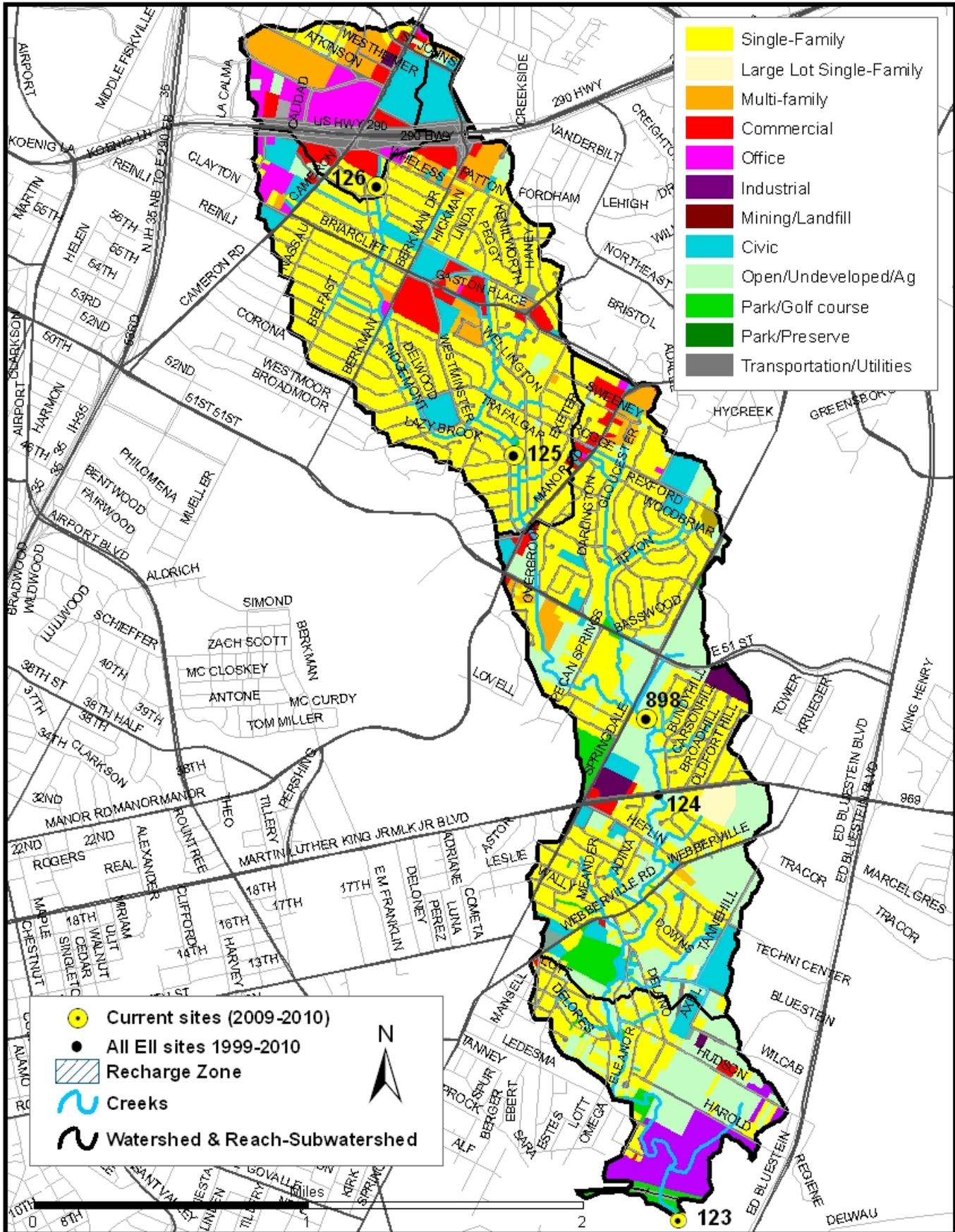
* * blank cells indicate parameter was not collected, blank row indicate site was dropped

**sediment samples only collected at the downstream site

100-87.5 Excellent 87.5-75 V. Good 75-62.5 Good 62.5-50 Fair 50-37.5 Marginal 37.5-25 Poor 25-12.5 Bad 12.5-0 V. Bad

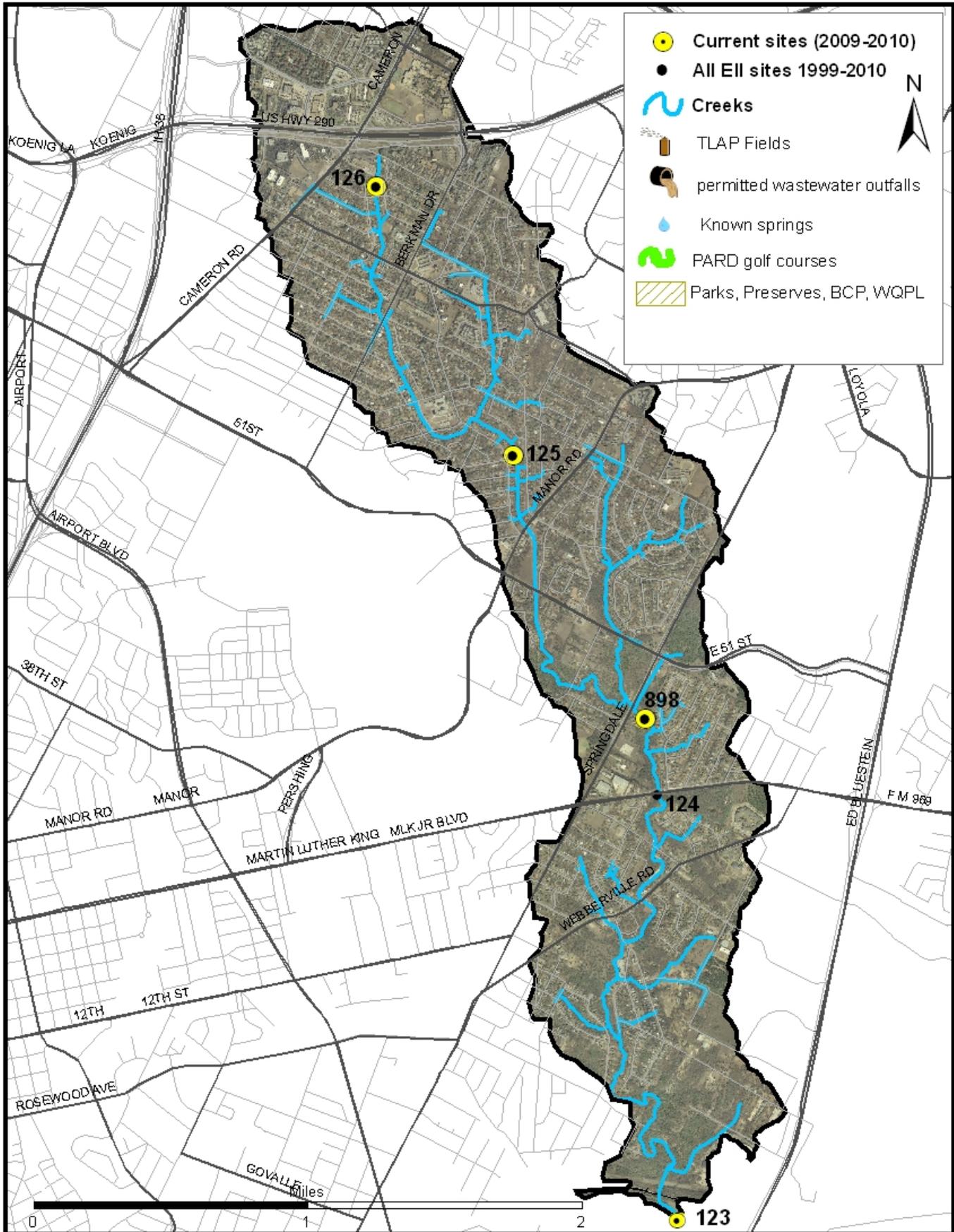
Fort Branch Watershed

Land Use Map



Fort Branch Watershed

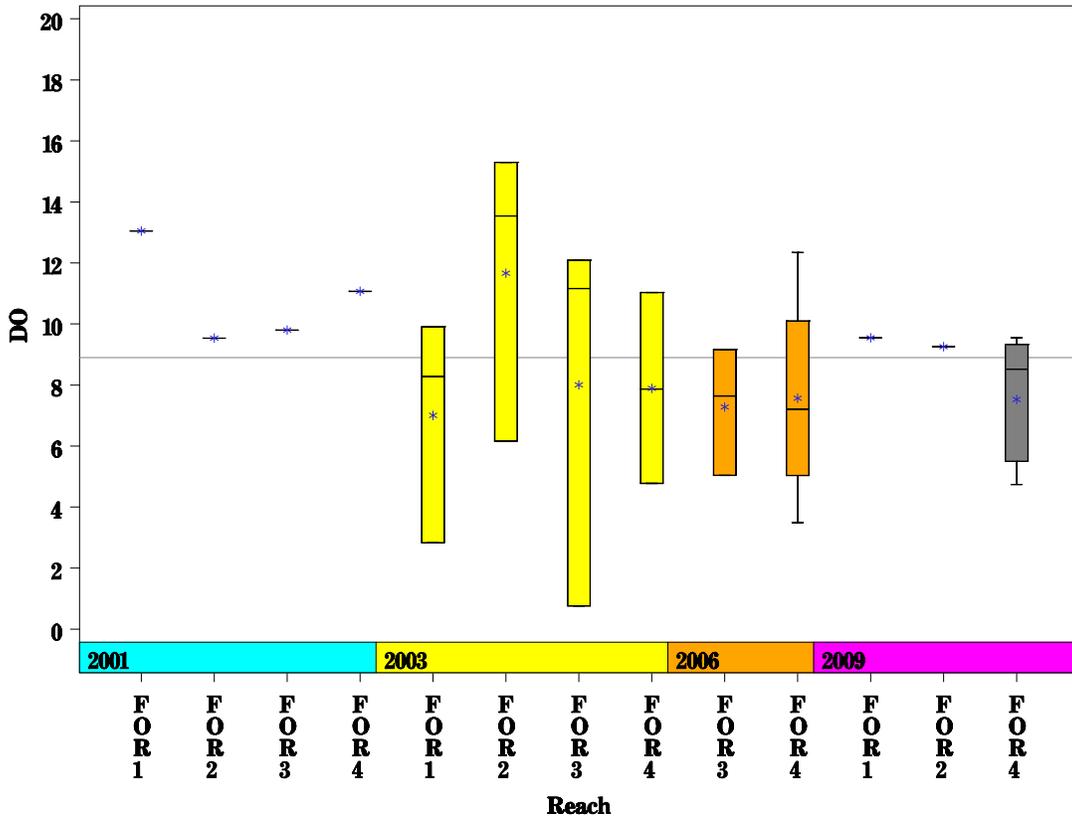
Aerial Map



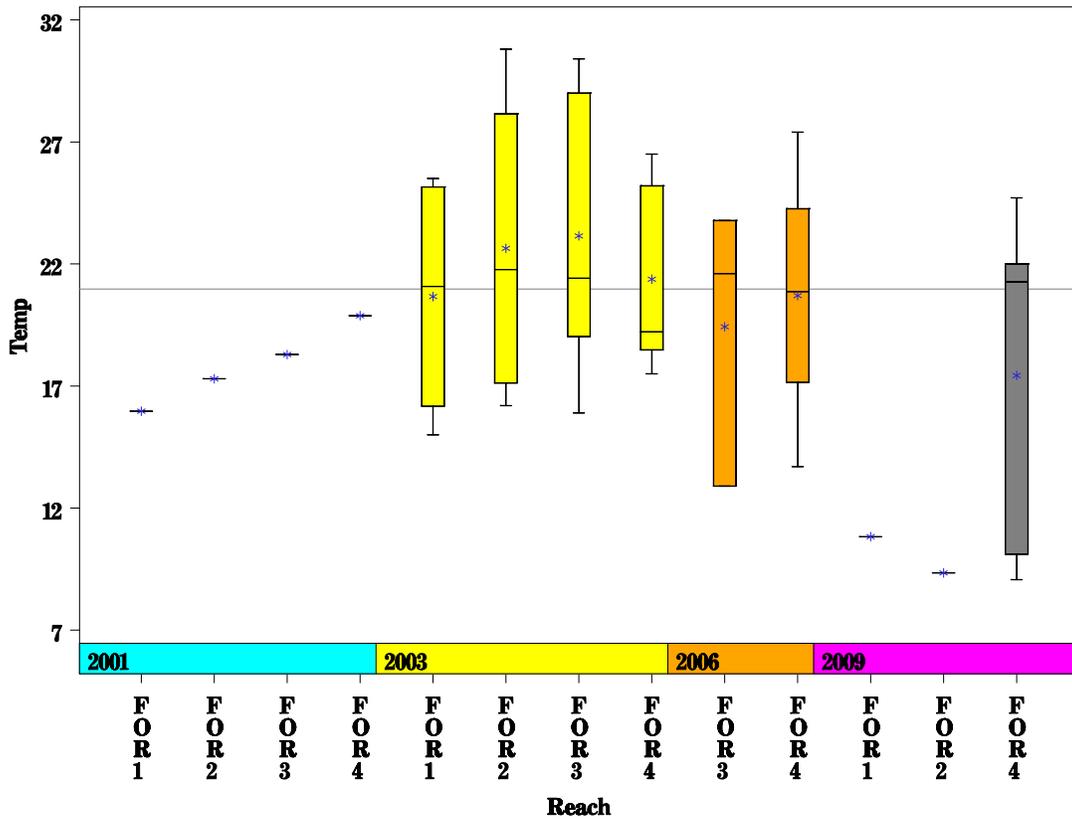
Fort Branch Watershed

Data Summary Graphs – Dissolved Oxygen and Temperature (Downstream to Upstream by Year)

Parameter=DISSOLVED OXYGEN Unit=MG/L Watershed=Fort Branch



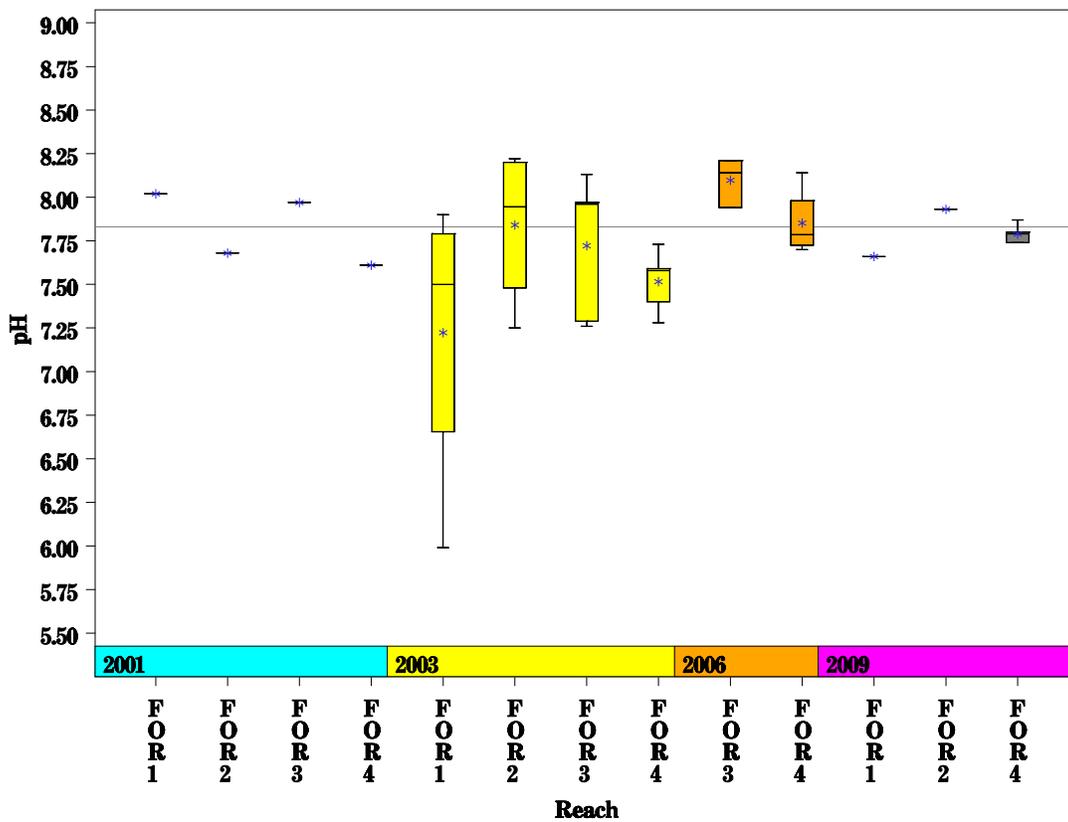
Parameter=WATER TEMPERATURE Unit=Deg C Watershed=Fort Branch



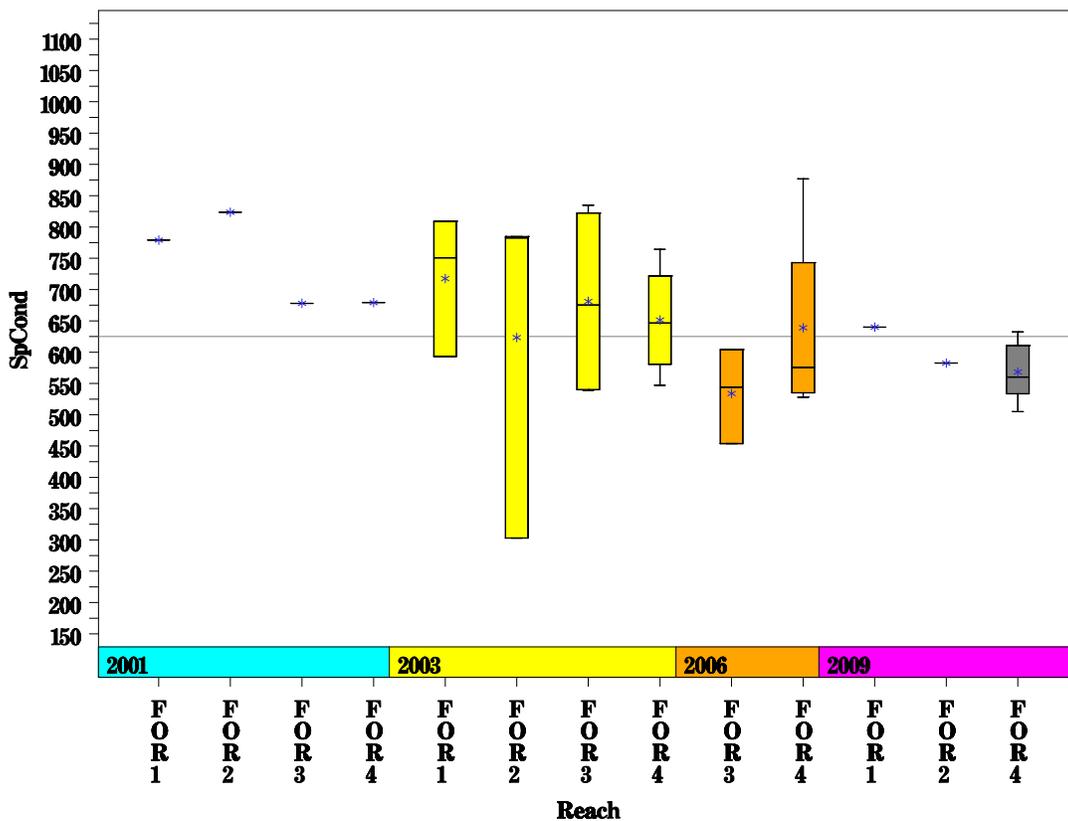
Fort Branch Watershed

Data Summary Graphs – pH and Conductivity (Downstream to Upstream by Year)

Parameter=PH Unit=Standard units Watershed=Fort Branch



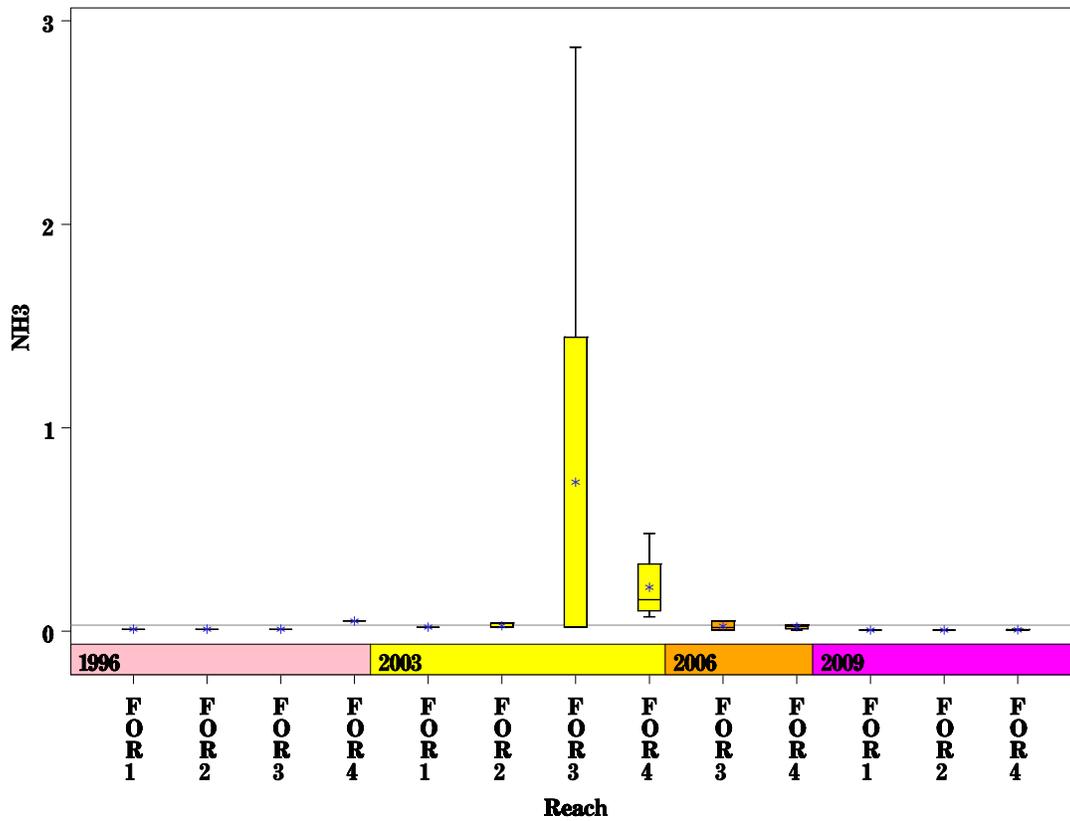
Parameter=CONDUCTIVITY Unit=uS/cm Watershed=Fort Branch



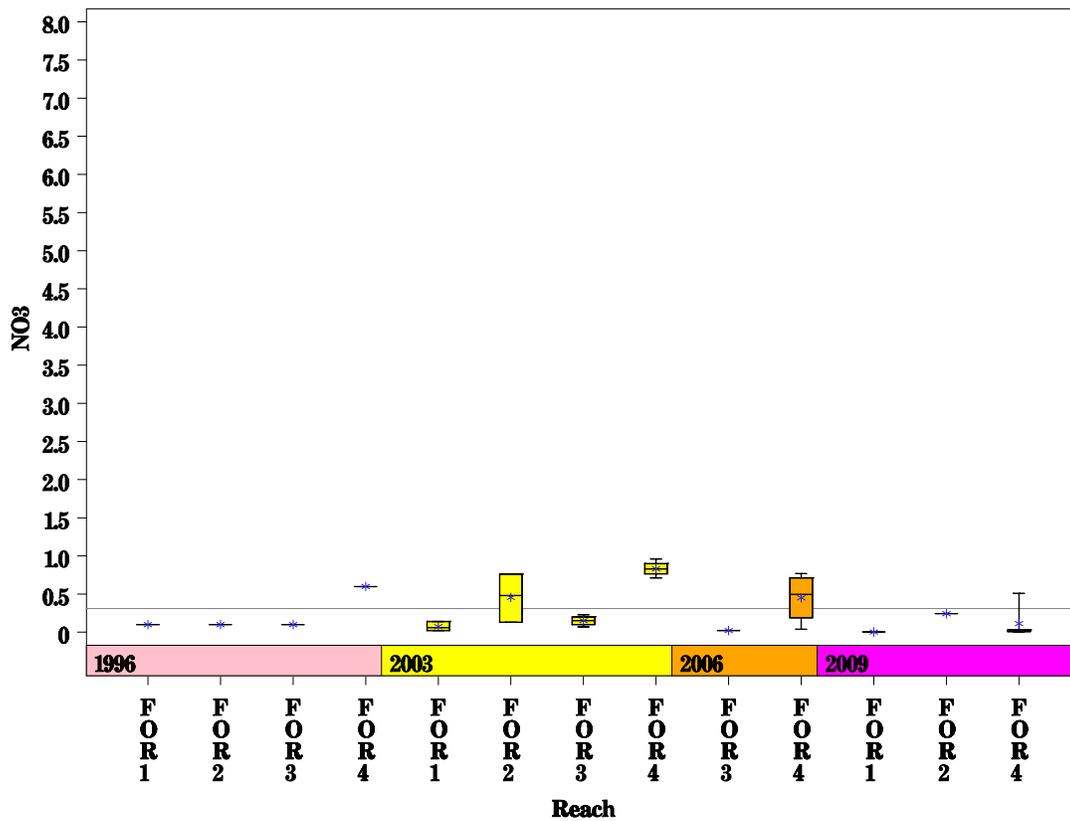
Fort Branch Watershed

Data Summary Graphs – Ammonia and Nitrate/Nitrite (Downstream to Upstream by Year)

Parameter=AMMONIA AS N Unit=MG/L Watershed=Fort Branch



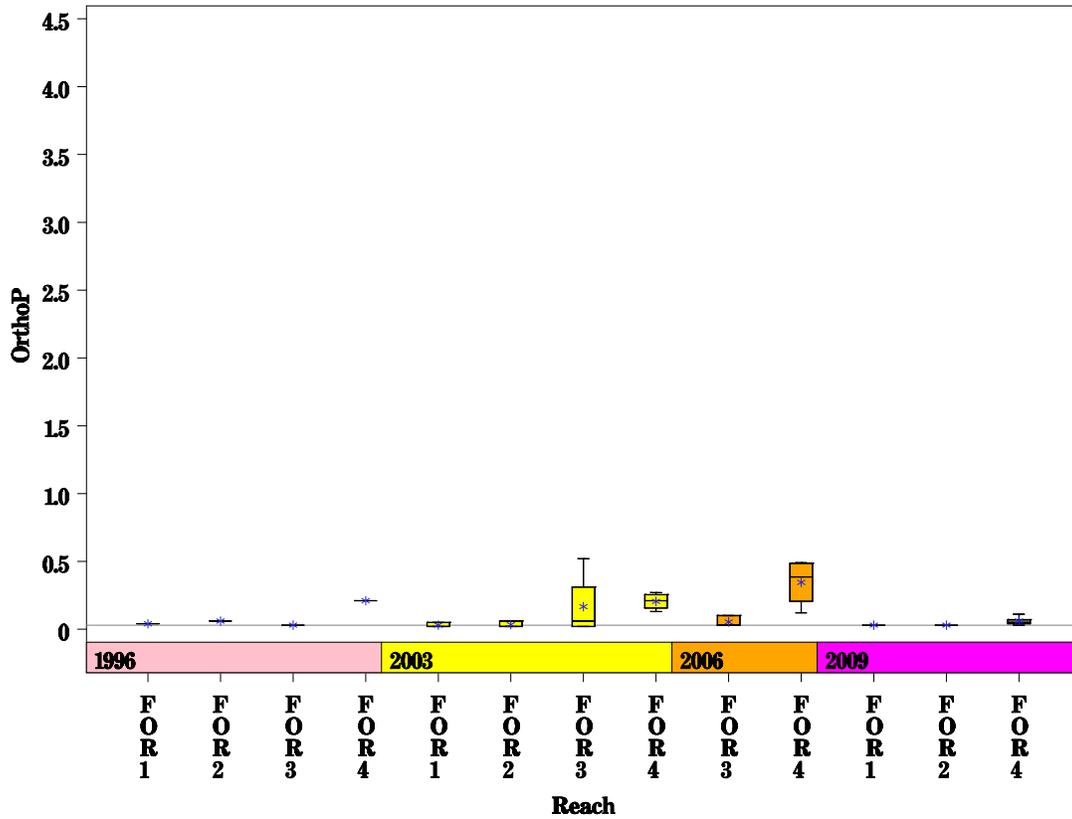
Parameter=NITRATE AS N Unit=MG/L Watershed=Fort Branch



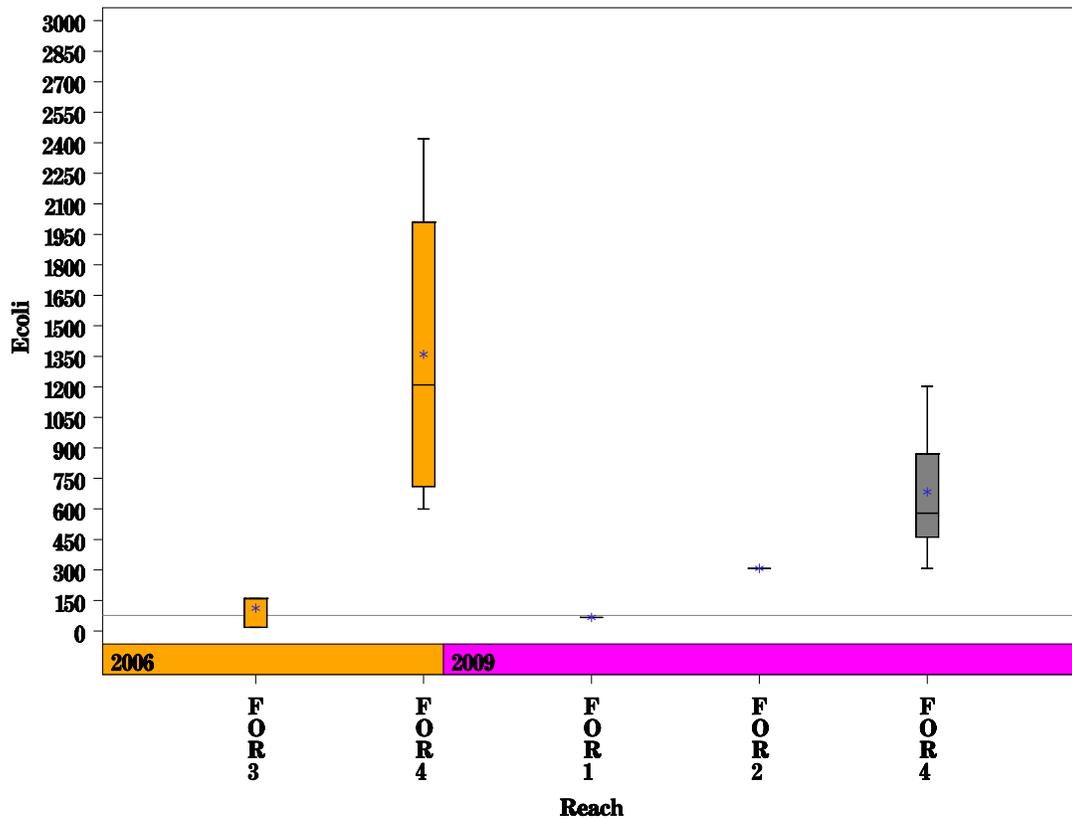
Fort Branch Watershed

Data Summary Graphs – Orthophosphate and E.coli (Downstream to Upstream by Year)

Parameter= ORTHOPHOSPHORUS AS P Unit= MG/L Watershed= Fort Branch

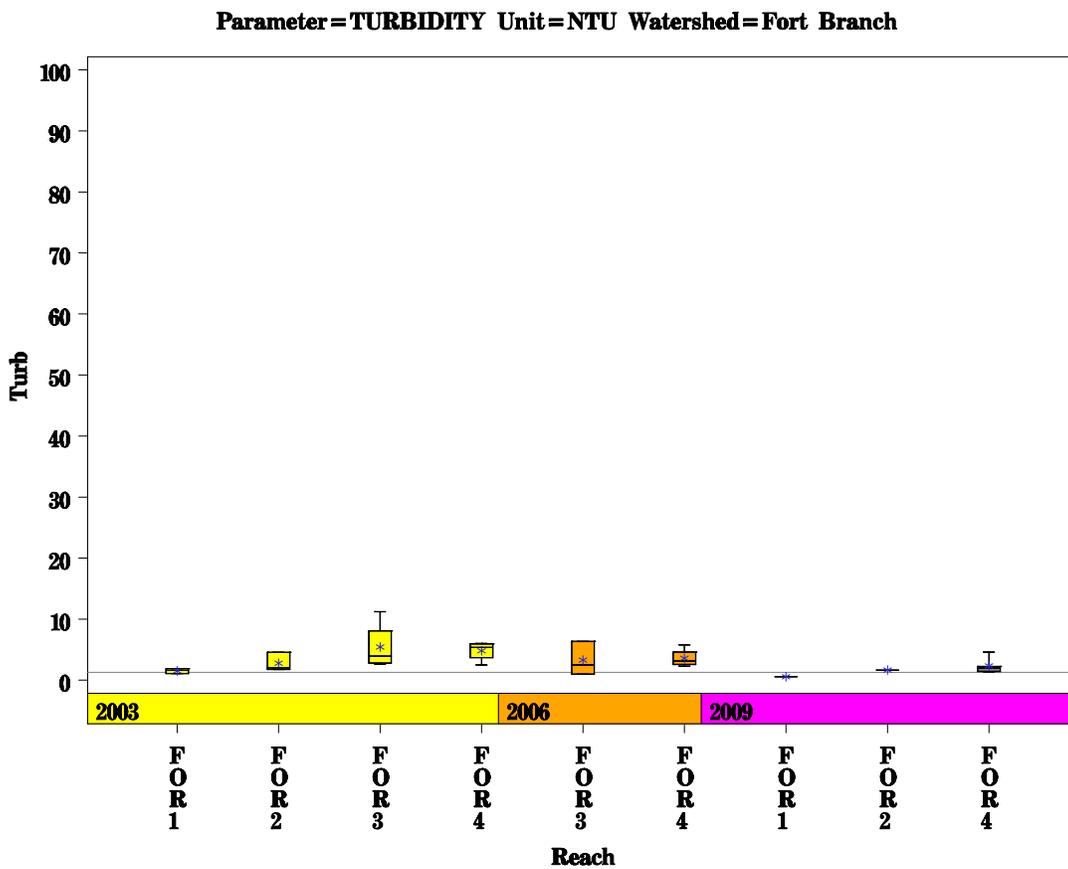
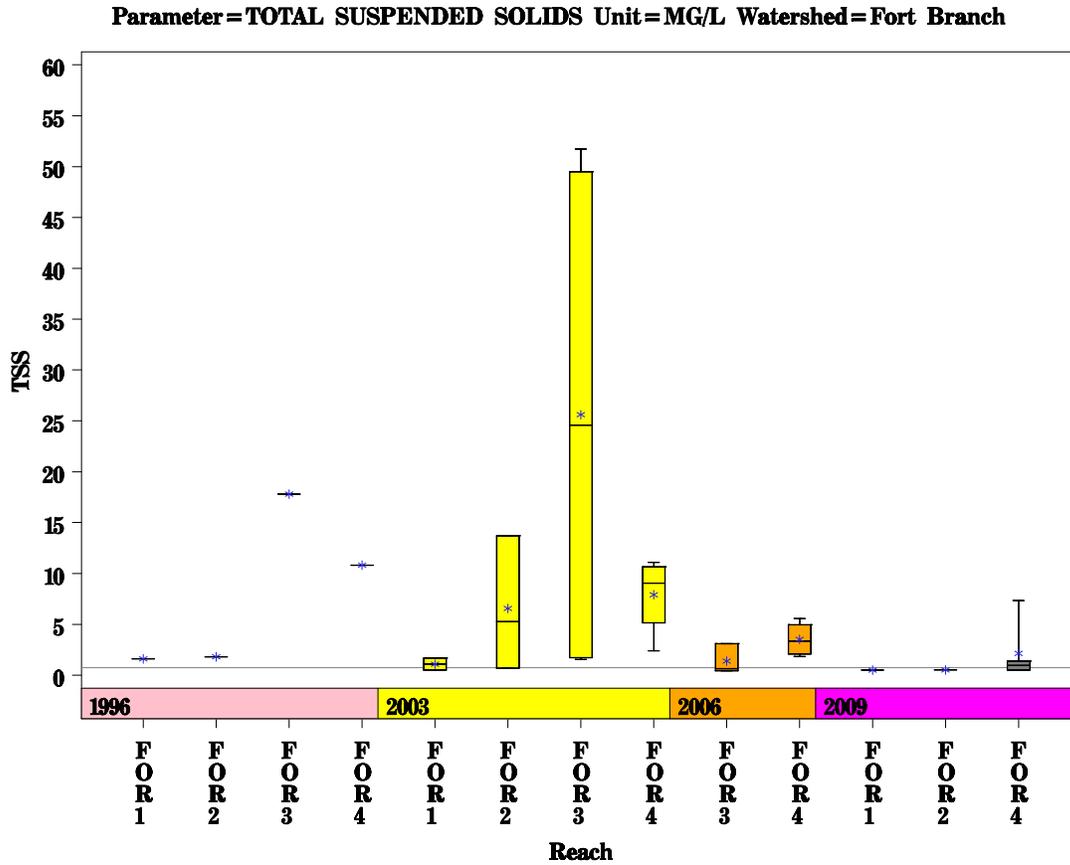


Parameter= E COLI BACTERIA Unit= MPN/dL Watershed= Fort Branch



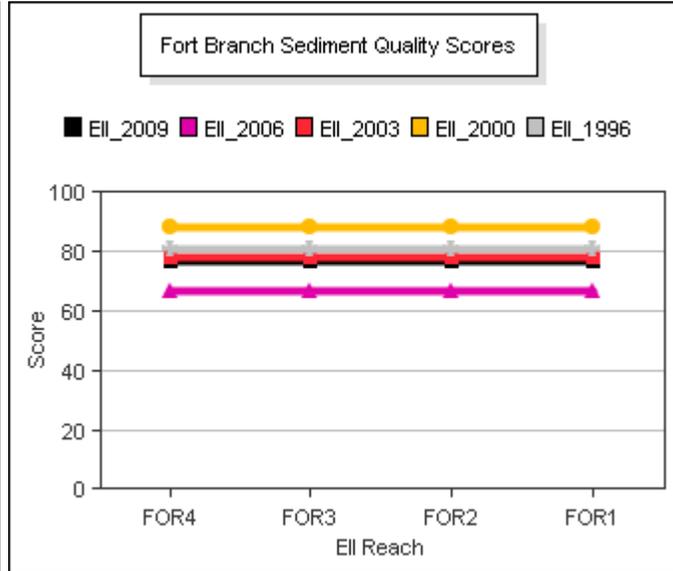
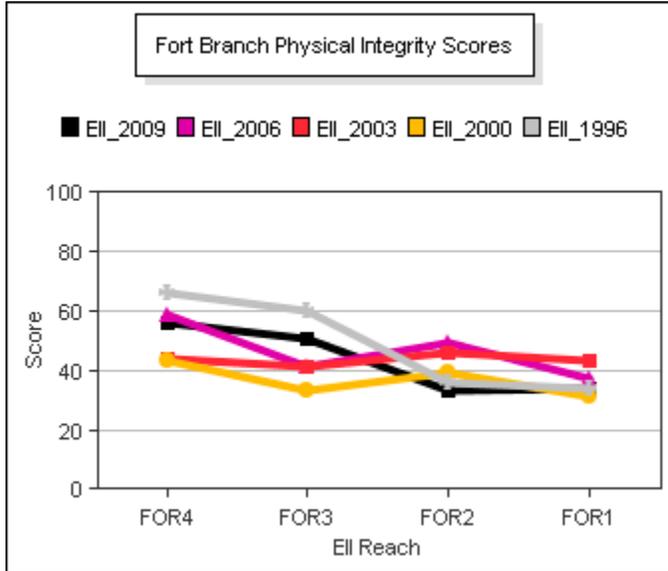
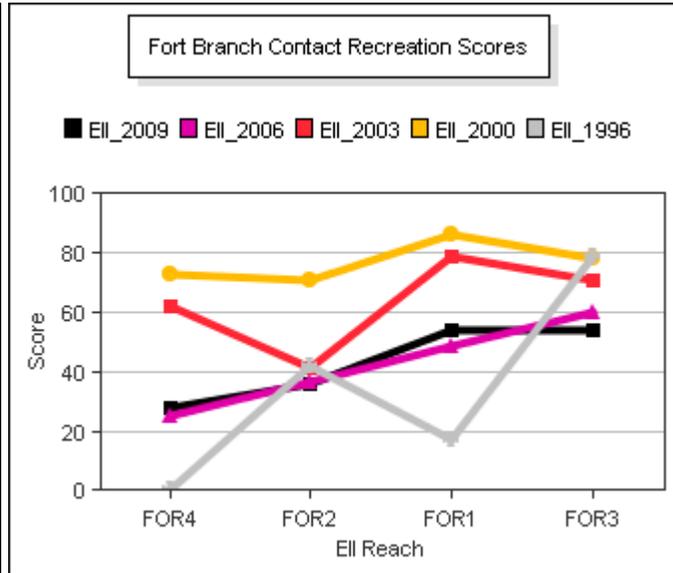
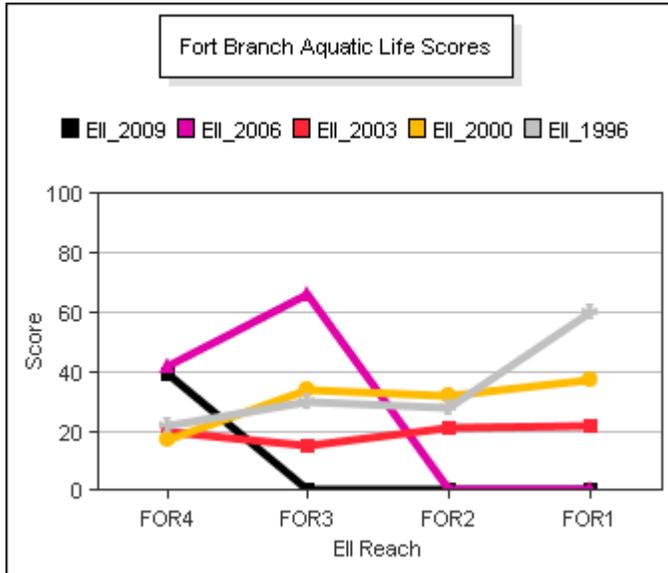
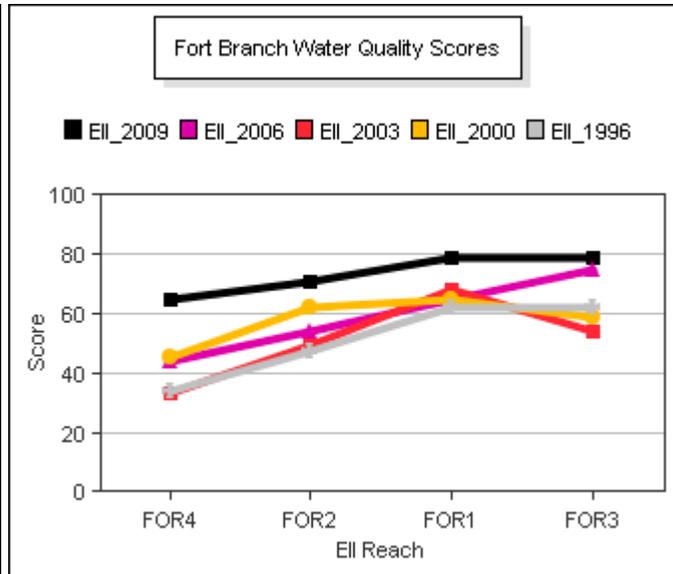
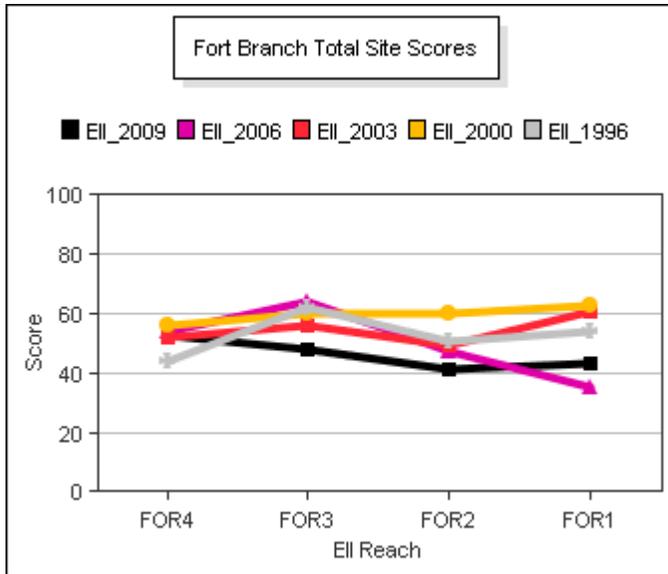
Fort Branch Watershed

Data Summary Graphs – Total Suspended Solids and Turbidity (Downstream to Upstream by Year)



Fort Branch Watershed

Score Summary – Reach scores for each sample year



Fort Branch Watershed

Site Photographs



126_t00-us-02_14_2001



126-t00-dr-06-03-2009



125_t00-us-02_15_2001



125_t00-ds-07_10_2006



125-t00-us-06-03-2009



125-t00-ur-06-03-2009

Fort Branch Watershed

Site Photographs



898_t00-ds-02_15_2001



898_t00-ur-03_12_2003



898_t00-us-07_10_2006



898-t00-ds-06-02-2009



123_t00-us1-07_06_2006



123_t00-ds-07_06_2006

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