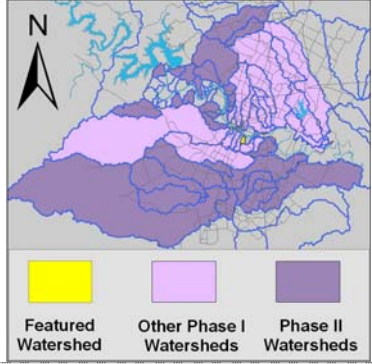


Harpers Branch Watershed

Summary Sheet

Catchment	Total area	1 square miles			
	Area in recharge	none			
	Creek length	1 mile			
	Receiving water	Town Lake			
Demographics	2000 population	2,963			
	2030 projected population	3,316			
	30 year projected % increase	12 %			
Land Use	Impervious cover (2003 estimate)	53.41 %			
Overall EII Scores	2000	2003	2006	2009	2011
	48	47	46	46	36



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

Site #	Site Name	2003						2006					2009				2010	2011				
		Feb WQ	Mar WQ	Mar Bio	May WQ	Sep WQ	Dec WQ	Feb WQ	May WQ	Jul Bio	Aug WQ	Nov WQ	Feb WQ	May WQ	May Bio	Oct WQ	Dec WQ	Dec WQ	Mar WQ	Jun WQ	Jun Bio	Sep WQ
484	Riverside	B	B	B	B	B	B															
844	Woodland	B	B	B	B	B	B	B	B	B	n	B	n	B	B	B	B	B	B	n	n	n

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

Summary of 2011 Data for Harper's Branch

Summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	D.O. mg/l	3.0	3.1	2.9	Consistently low concentrations.
	pH st.units	7.50	7.51	7.48	Some low values.
	Cond uS/cm	858	871	845	Above average, but within normal range.
Nutrients	NH ₃ mg/l	0.032	0.049	0.015	Within normal range.
	NO ₃ mg/l	0.766	0.866	0.666	Within normal range.
	Ortho P mg/l	0.095	0.100	0.090	Above average, but within normal range.
Sediment Load	TSS mg/l	10.0	15.5	4.4	Consistently above average, with some high concentrations.
	Turbidity ntu	12.50	13.52	11.47	Consistently above average, with some high concentrations.
Biology	E.Coli /100ml	74	74	74	Within normal range.
Benthic Macroinvertebrates and Diatoms: evaluations are provided in the introduction of this report					

Index scores* for Harpers Branch Sites by Year

Reach	Site	Site Name	Year	Water Quality	Sediment**	Contact Rec.	Non-Contact Rec.	Physical Integrity	Aquatic Life	Benthic subindex	Diatom subindex	Total EII Score
HRP1	484	Harpers Branch Creek @ Riverside Dr	2000	46	59	63	57	27	30	29	31	47
HRP1	844	Harpers Branch Creek @ Woodland Ave	2000	41	59	67	79	38	22	27	16	51
HRP1	855	Harpers Branch Creek @ Fairlawn	2000		59		64	49	19	29	9	48
HRP1	877	Harpers Branch Creek @ Windoak Drive	2000		59		52	25	21	31	11	39
HRP1	484	Harpers Branch Creek @ Riverside Dr	2003	46	57	70	31	36	19	19	18	43
HRP1	844	Harpers Branch Creek @ Woodland Ave	2003	45	57	47	65	56	33	30	35	51
HRP1	844	Harpers Branch Creek @ Woodland Ave	2006	39	51	33	66	46	43	26	60	46
HRP1	844	Harpers Branch Creek @ Woodland Ave	2009	36	54	25	76	39	46	22	70	46
HRP1	844	Harpers Branch Creek @ Woodland Ave	2011	32	58	44	28	34	17	17		36

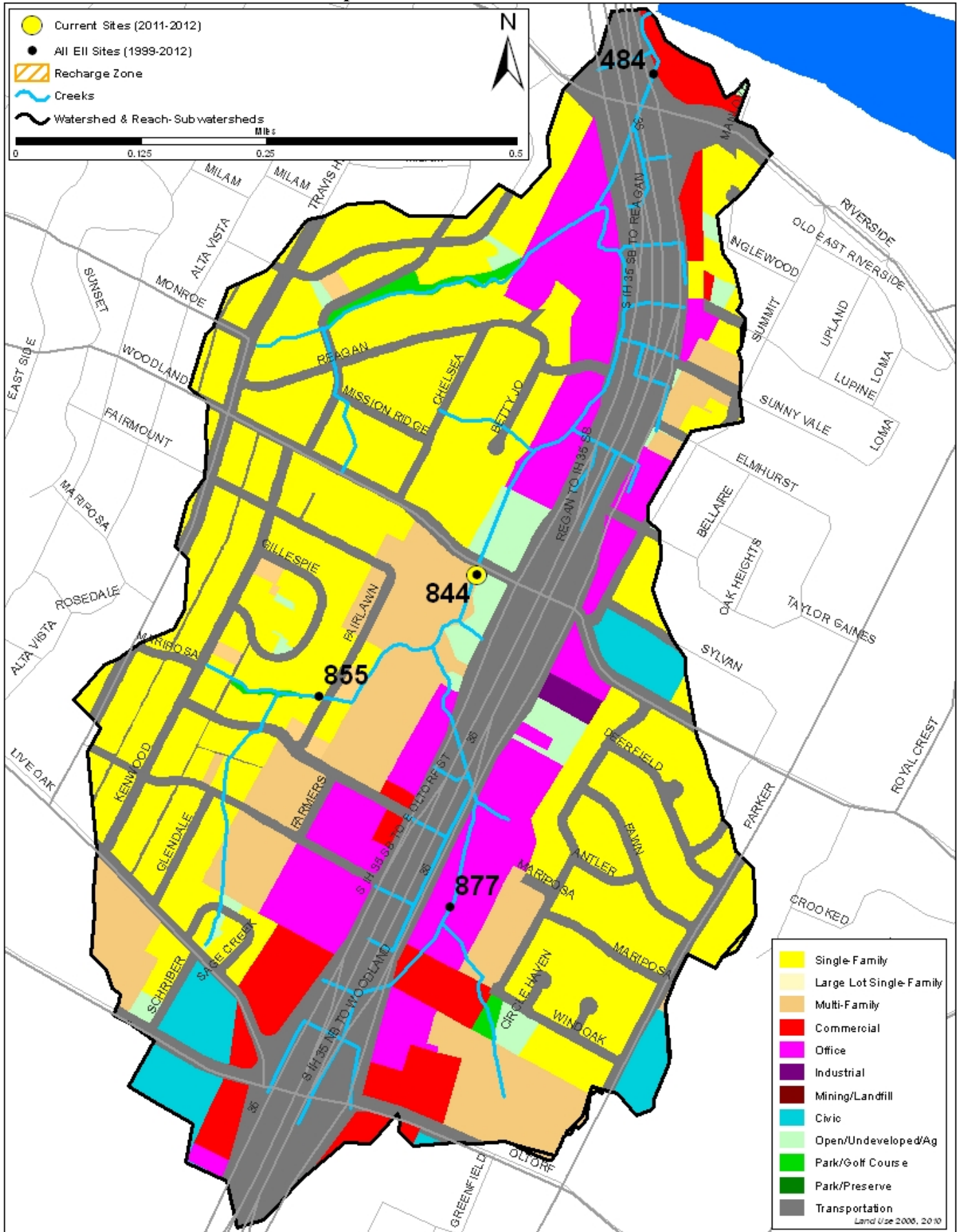
* blank cells indicate parameter was not collected, blank row indicate site was dropped

**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

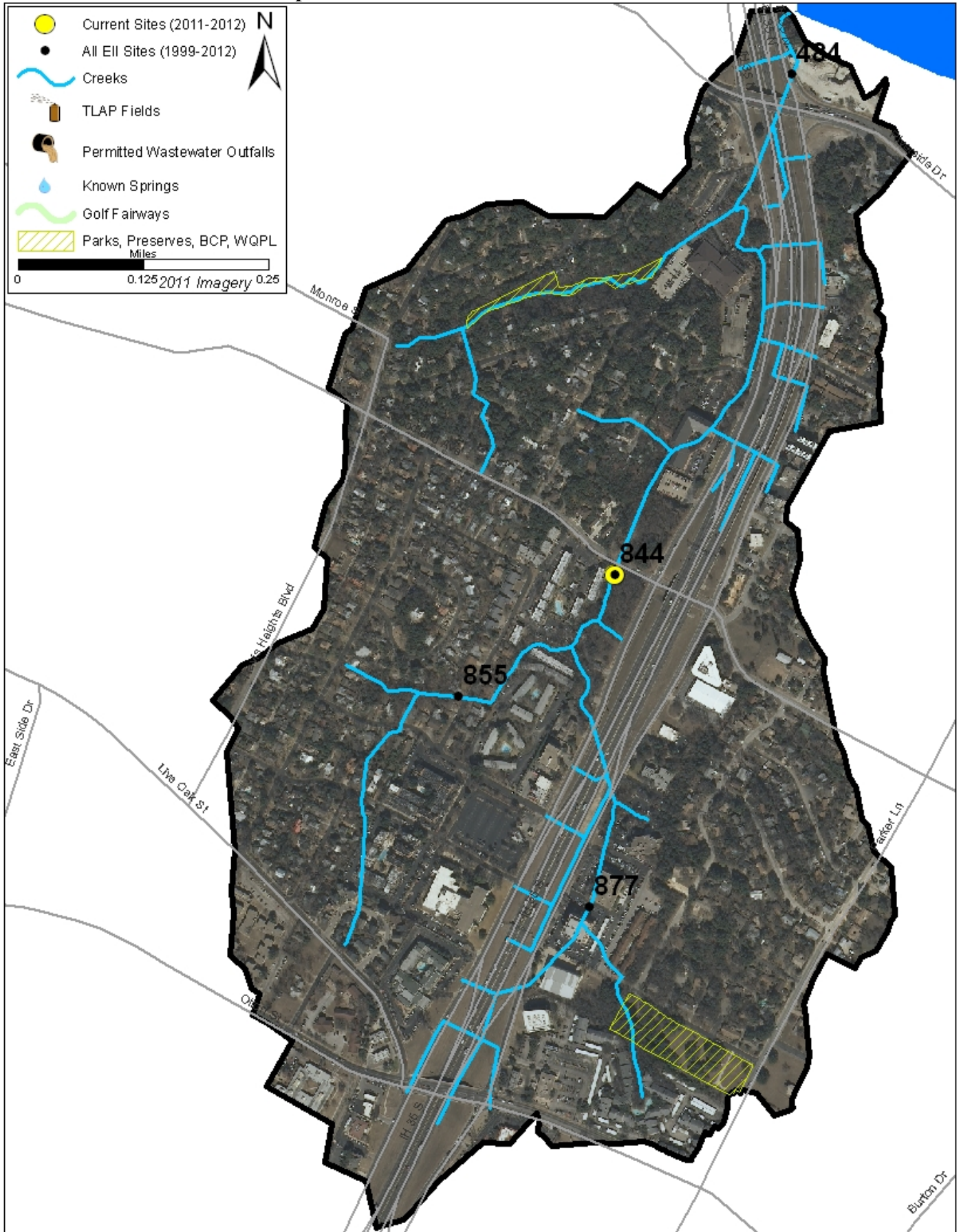
Harpers Branch Watershed

Land Use Map



Harpers Branch Watershed

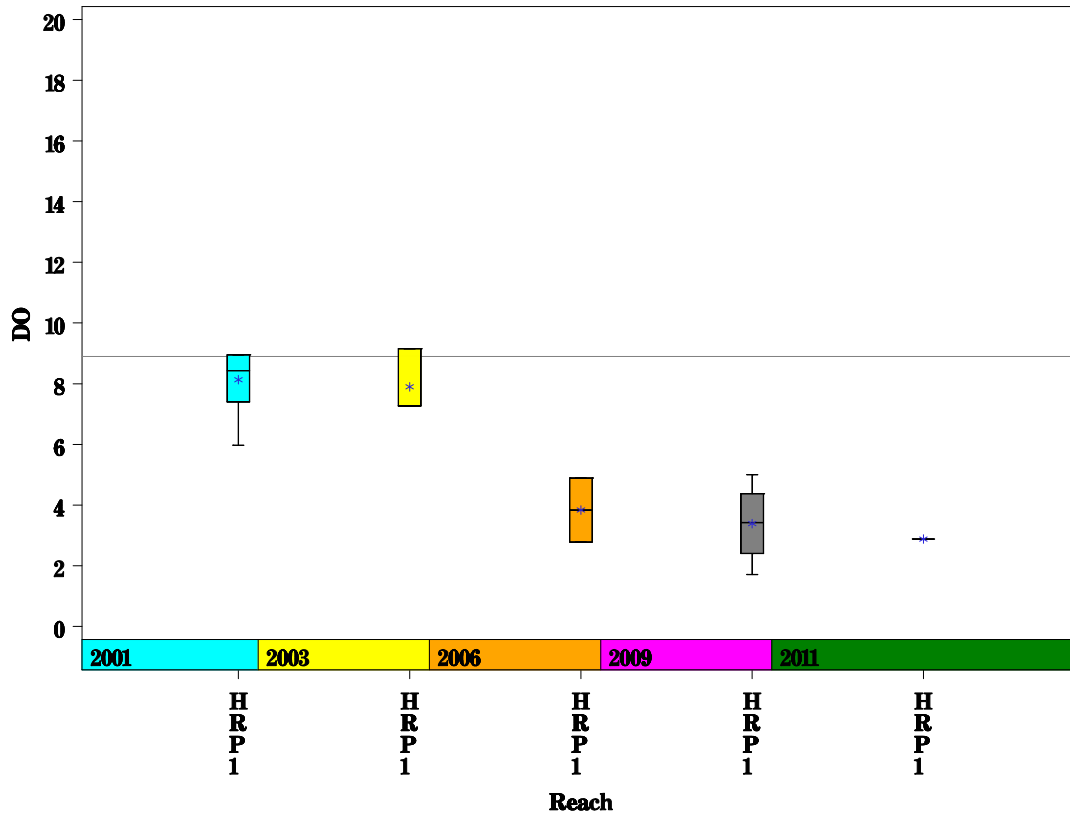
Aerial Map



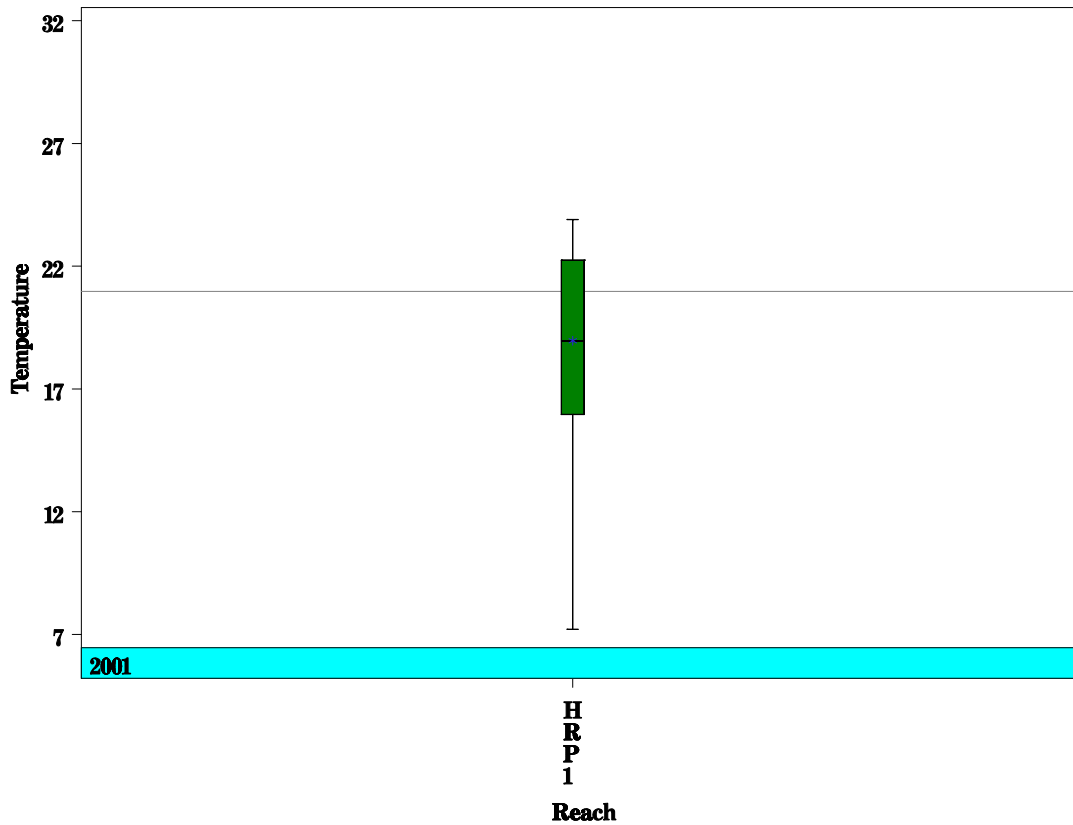
Harpers Branch Watershed

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

Parameter=DISSOLVED OXYGEN Unit=MG/L Watershed=Harper's Branch



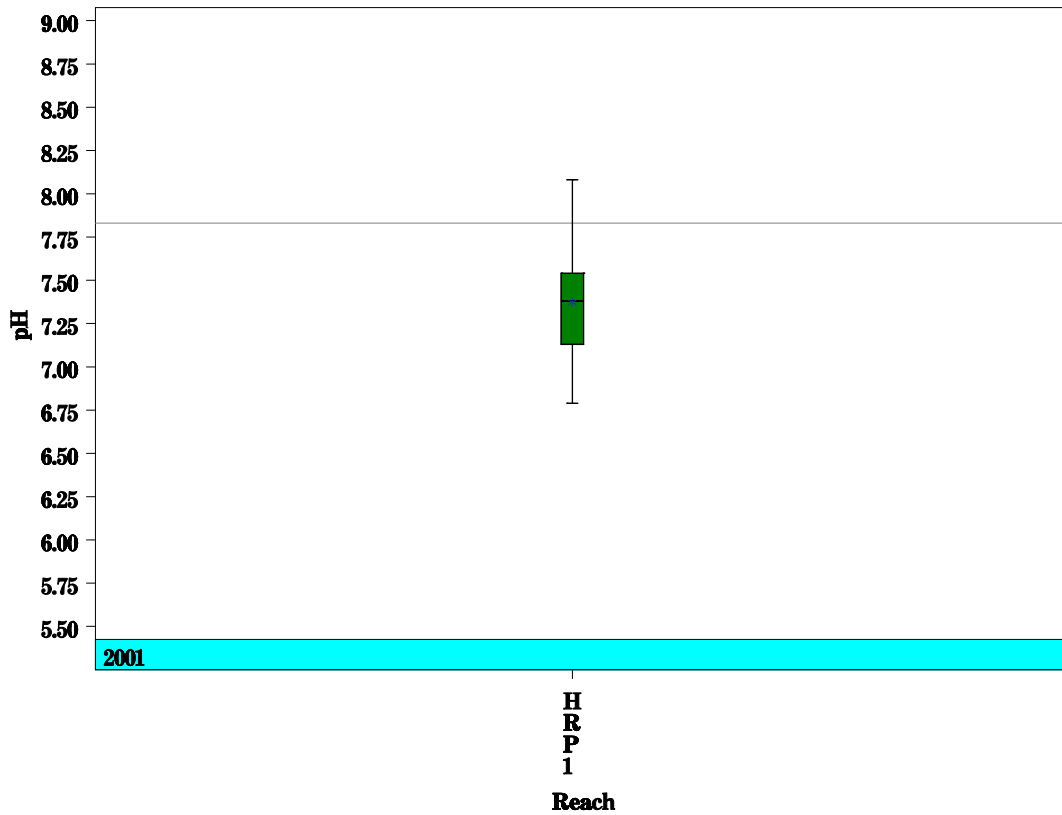
Parameter=WATER TEMPERATURE Unit=Deg. Celsius Watershed=Harper's Branch



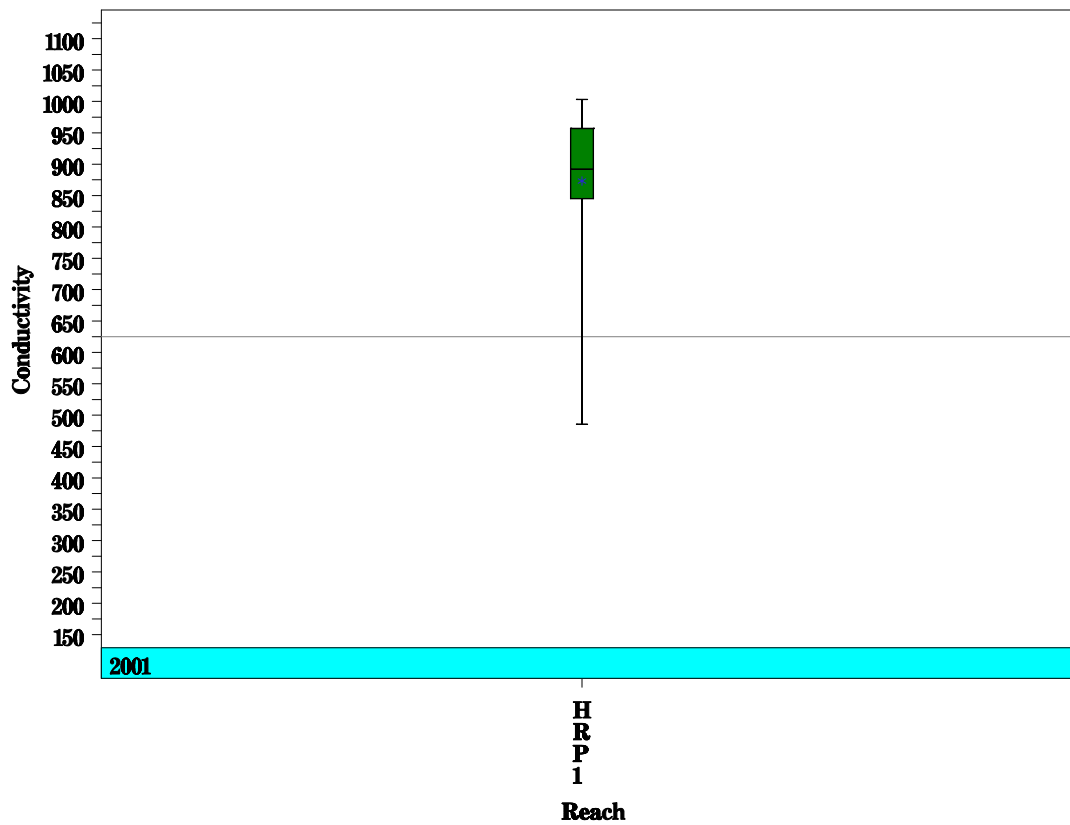
Harpers Branch Watershed

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

Parameter=PH Unit=Standard units Watershed=Harper's Branch



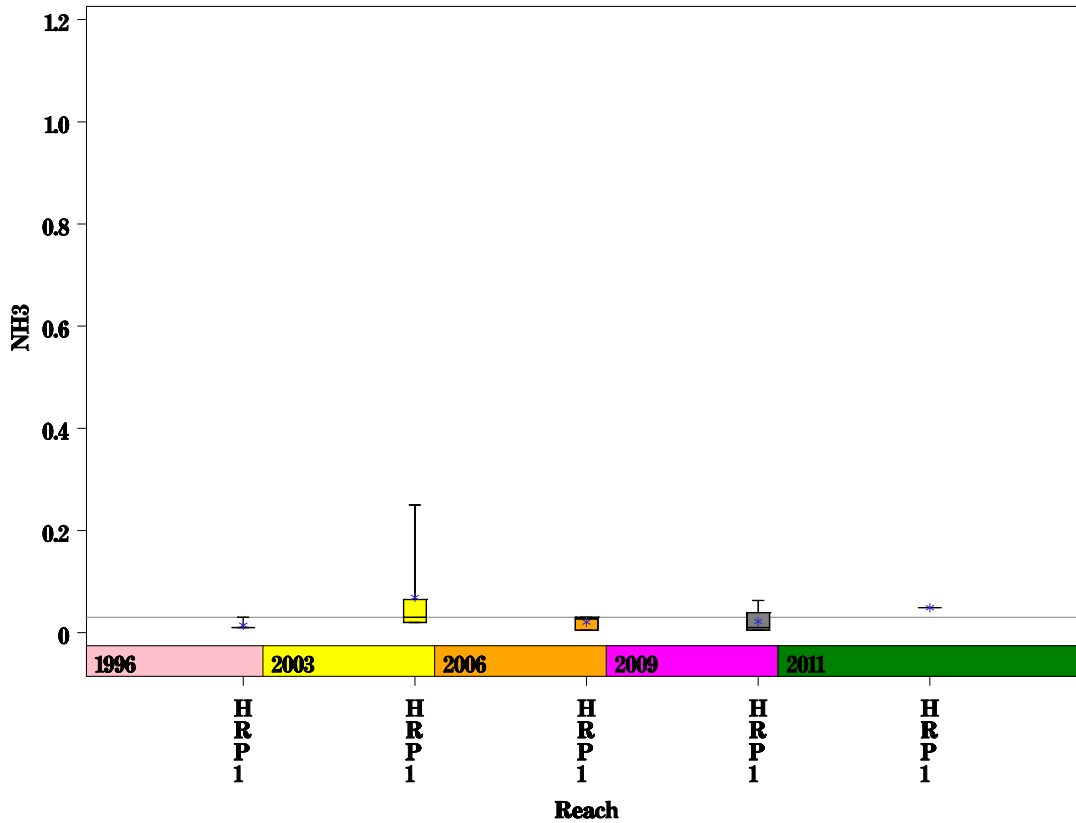
Parameter=CONDUCTIVITY Unit=uS/cm Watershed=Harper's Branch



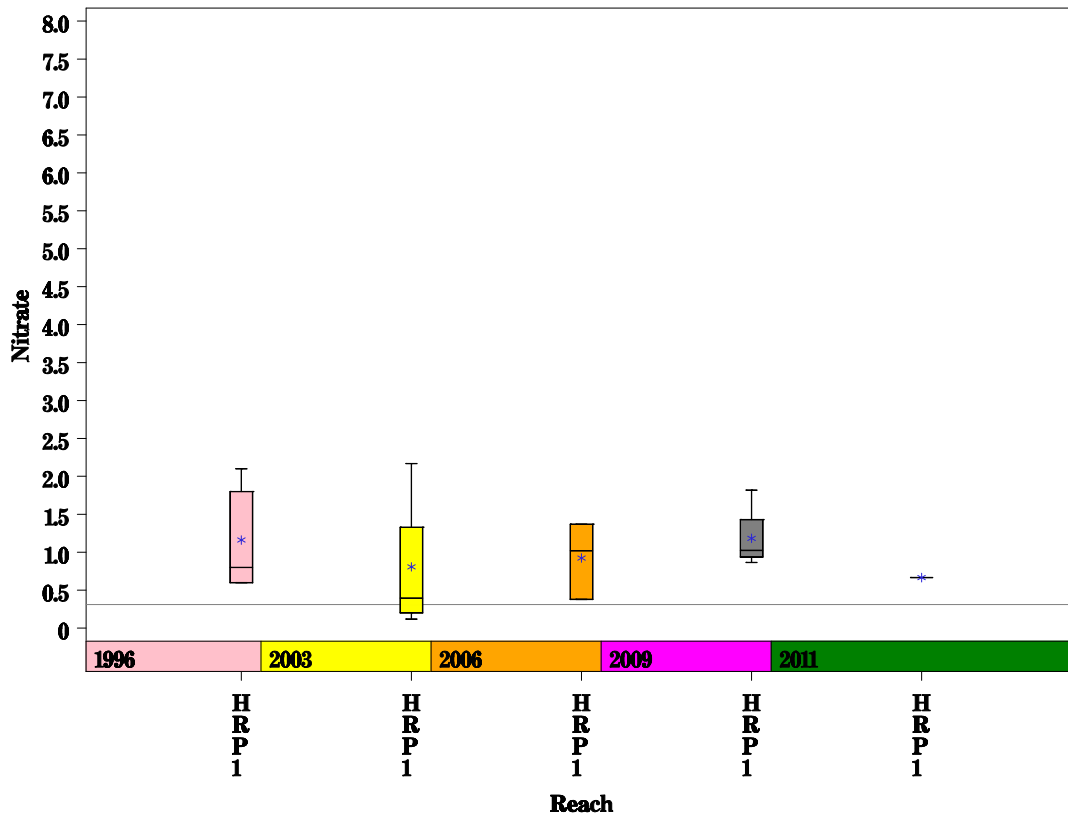
Harpers Branch Watershed

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

Parameter=AMMONIA AS N Unit=MG/L Watershed=Harper's Branch



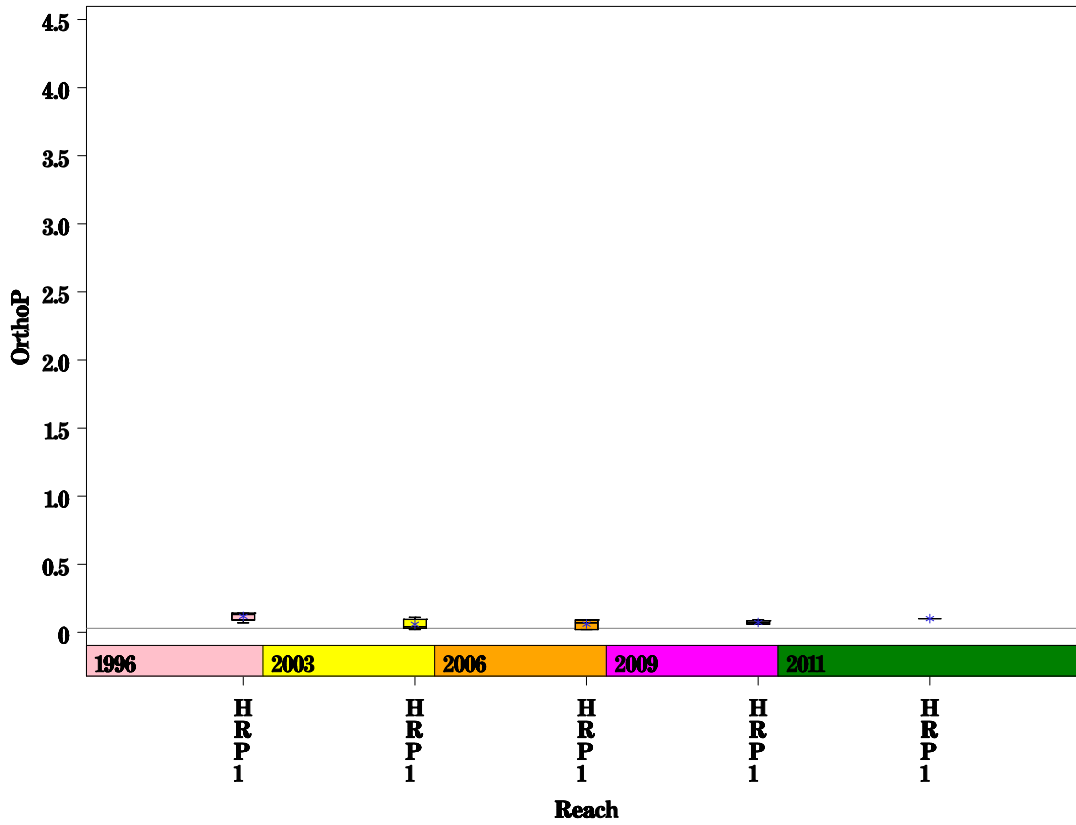
Parameter=NITRATE AS N Unit=MG/L Watershed=Harper's Branch



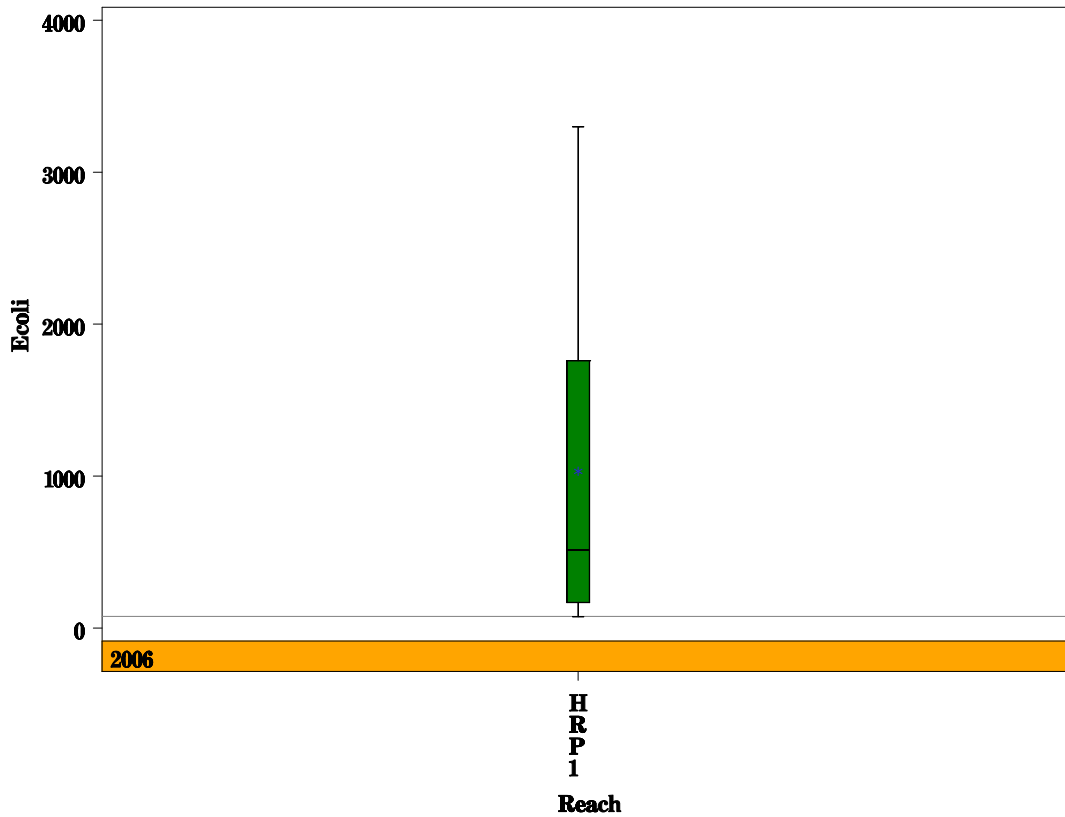
Harpers Branch Watershed

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

Parameter=ORTHOPHOSPHORUS AS P Unit=MG/L Watershed=Harper's Branch



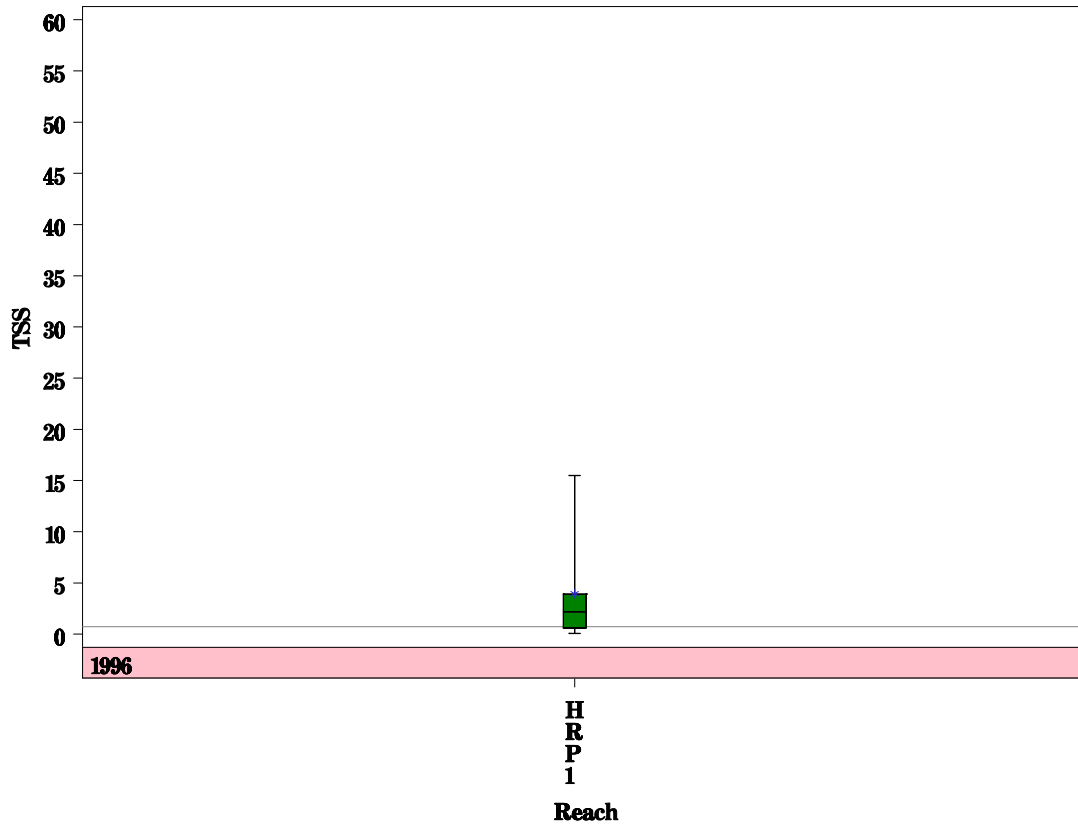
Parameter=E COLI BACTERIA Unit=MPN/100ML Watershed=Harper's Branch



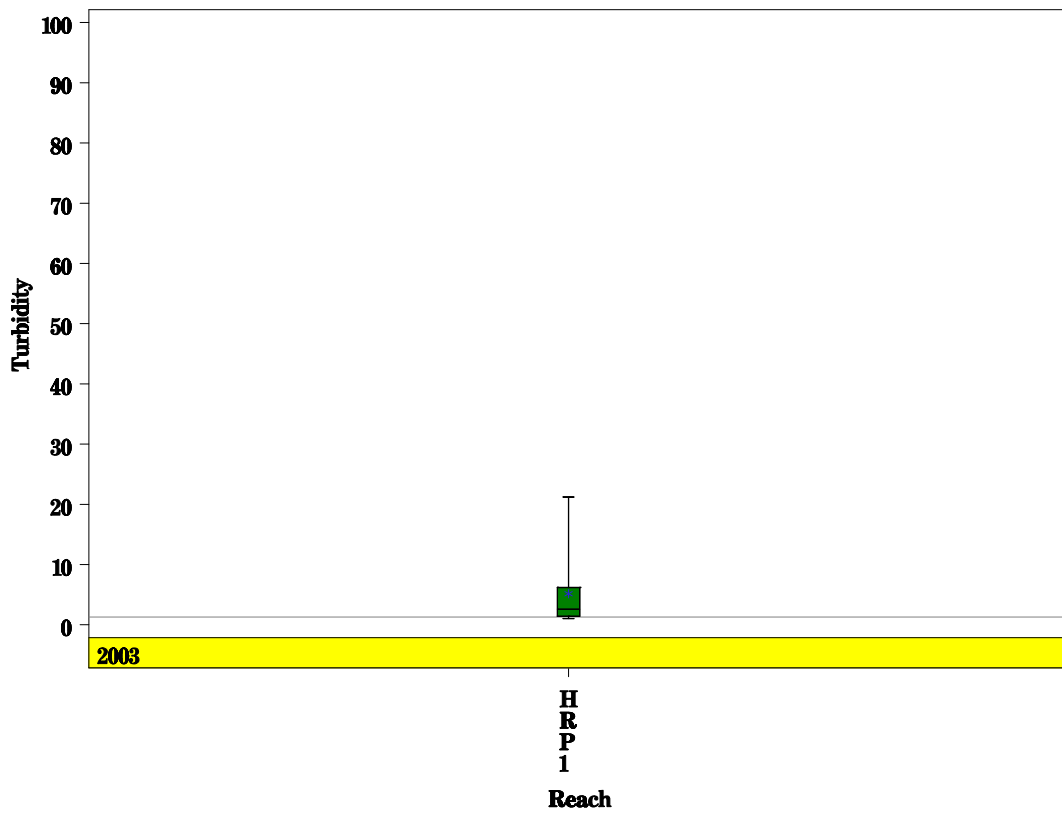
Harper's Branch Watershed

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

Parameter = TOTAL SUSPENDED SOLIDS Unit = MG/L Watershed = Harper's Branch

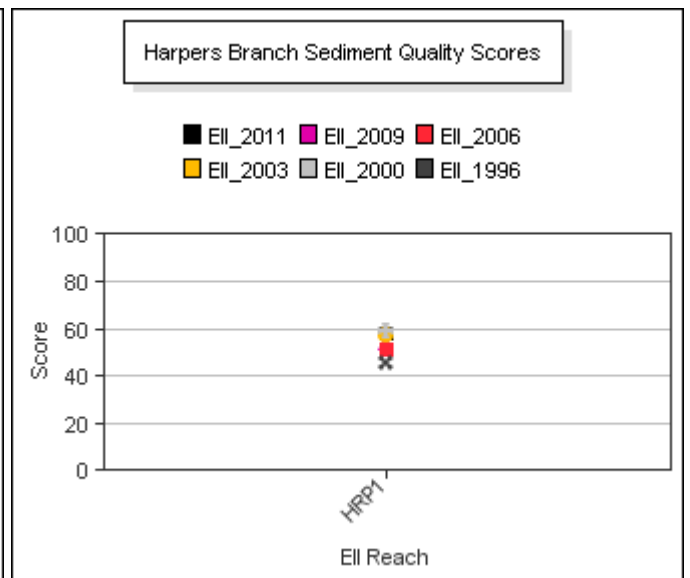
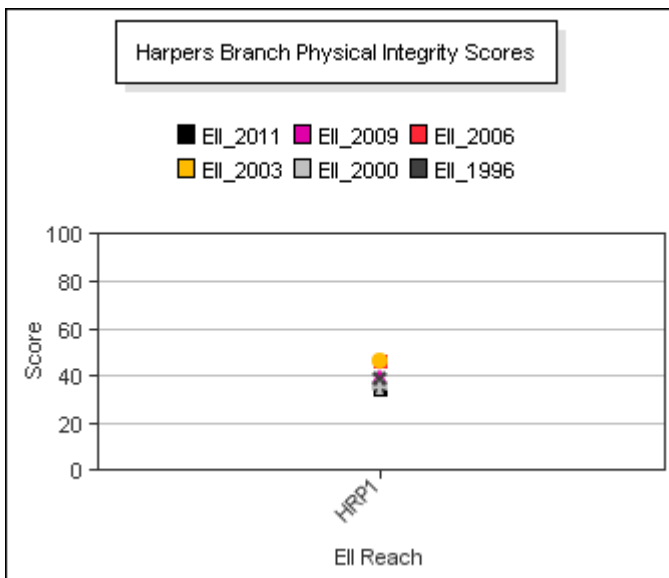
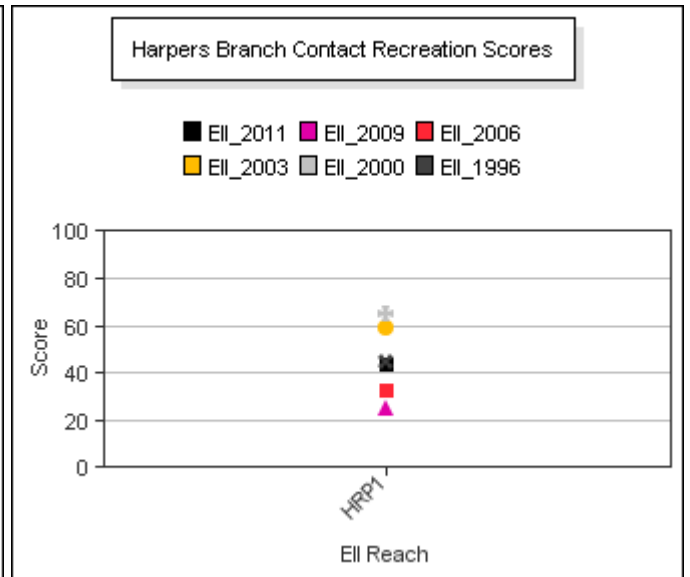
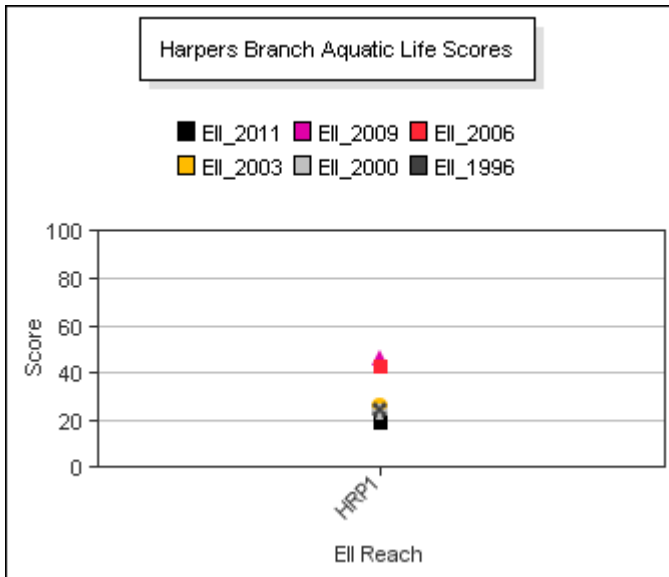
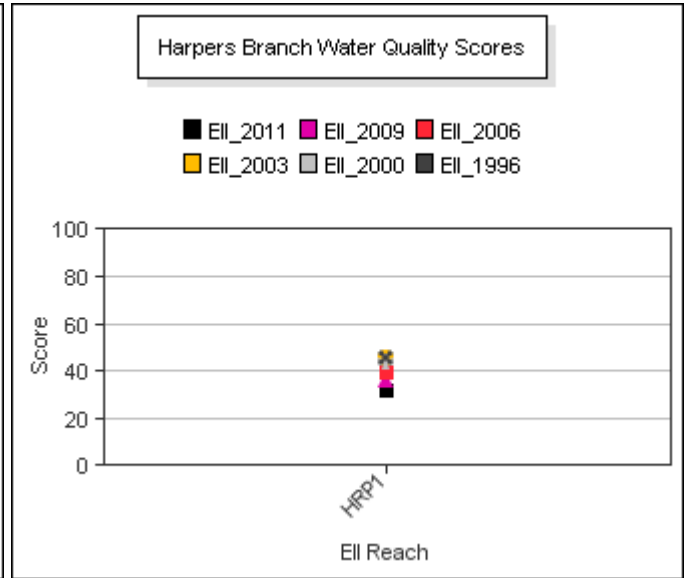
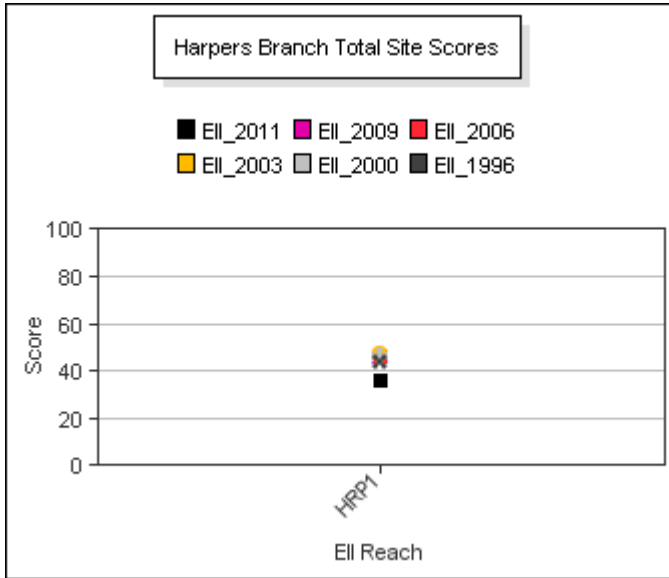


Parameter = TURBIDITY Unit = NTU Watershed = Harper's Branch



Harpers Branch Watershed

Score Summary – Reach scores for each sample year



Harpers Branch Watershed

Site Photographs



844_t00-us-02_16_2001



844_t00-ds-02_16_2001



844_t00-ds-03_11_2003



844_t00-us-03_11_2003



844_t00-us-07_12_2006



844_t00-us1-07_12_2006

Harpers Branch Watershed

Site Photographs



844-t00-us-05-29-2009



844-t00-ds-05-29-2009



484_t00-ur-03_13_2003



484_t00-us-03_13_2003



484_t00-ds-03_13_2003

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