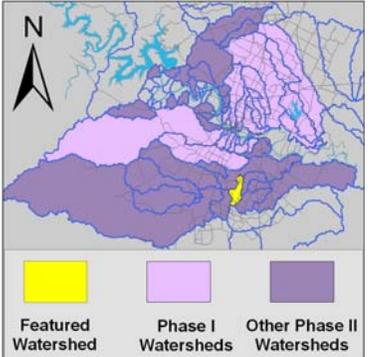


# Marble Creek Watershed

## Summary Sheet

Catchment	Total area	4 sq. miles			
	Area in recharge	0			
	Creek length	7 miles			
	Receiving water	Onion Creek			
Demographics	2000 population	1,028			
	2030 projected population	6,388			
	30 year projected % increase	521 %			
Land Use	Impervious cover (2003 estimate)	5.5 %			
Overall EII Scores	1999	2002	2005	2008	2010
	60	61	59	58	67



### Flow Regime\* for Sample Sites on Marble Creek

Site # upstream to downstream	Site Name	2002					2005					2008					2010					
		Feb WQ	Feb Bio	May WQ	Aug WQ	Nov WQ	Mar WQ	Jun WQ	Jun Bio	Sep WQ	Dec WQ	Feb WQ	May WQ	Jun Bio	Sep WQ	Dec WQ	Mar WQ	May WQ	May Bio	Oct WQ		
232	Marble Cr. at Thaxton	n	n	n	n	B	B	B	B	n	n	n	n	n	n	n	n	n	B	n	n	B
231	Marble Cr. above Onion	B	B	B	B	B	B	B	B	B	B	B	B	B	B	n	B	B	B	B	B	B

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

### Summary of 2010 Data for Marble Creek

2010 Summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	D.O. mg/l	6.4	10.5	2.4	Generally within normal range with some low concentrations
	pH st.units	7.4	7.9	7.2	Generally within normal range
	Cond uS/cm	640	740	519	Generally within normal range
Nutrients	NH <sub>3</sub> mg/l	0.03	0.07	0.01	Generally within normal range
	NO <sub>3</sub> mg/l	1.86	4.61	0.00	Chronically elevated with some high concentrations
	Ortho P mg/l	0.03	0.05	0.02	Consistently low
Sediment Load	TSS mg/l	3.5	6.6	0.9	Consistently above average concentrations
	Turbidity ntu	6.3	12.3	1.4	Consistently above average concentrations
Biology	E.Coli /100ml	119	488	3	Wide range of values, some high but most generally within normal range.
	Benthic Macs	Good diversity, with mostly average metric scores, but a large composition of pollution-tolerant taxa			
	Diatoms	Excellent diversity, average pollution tolerance index values.			

### Index scores\* for Marble Creek Sites by Year

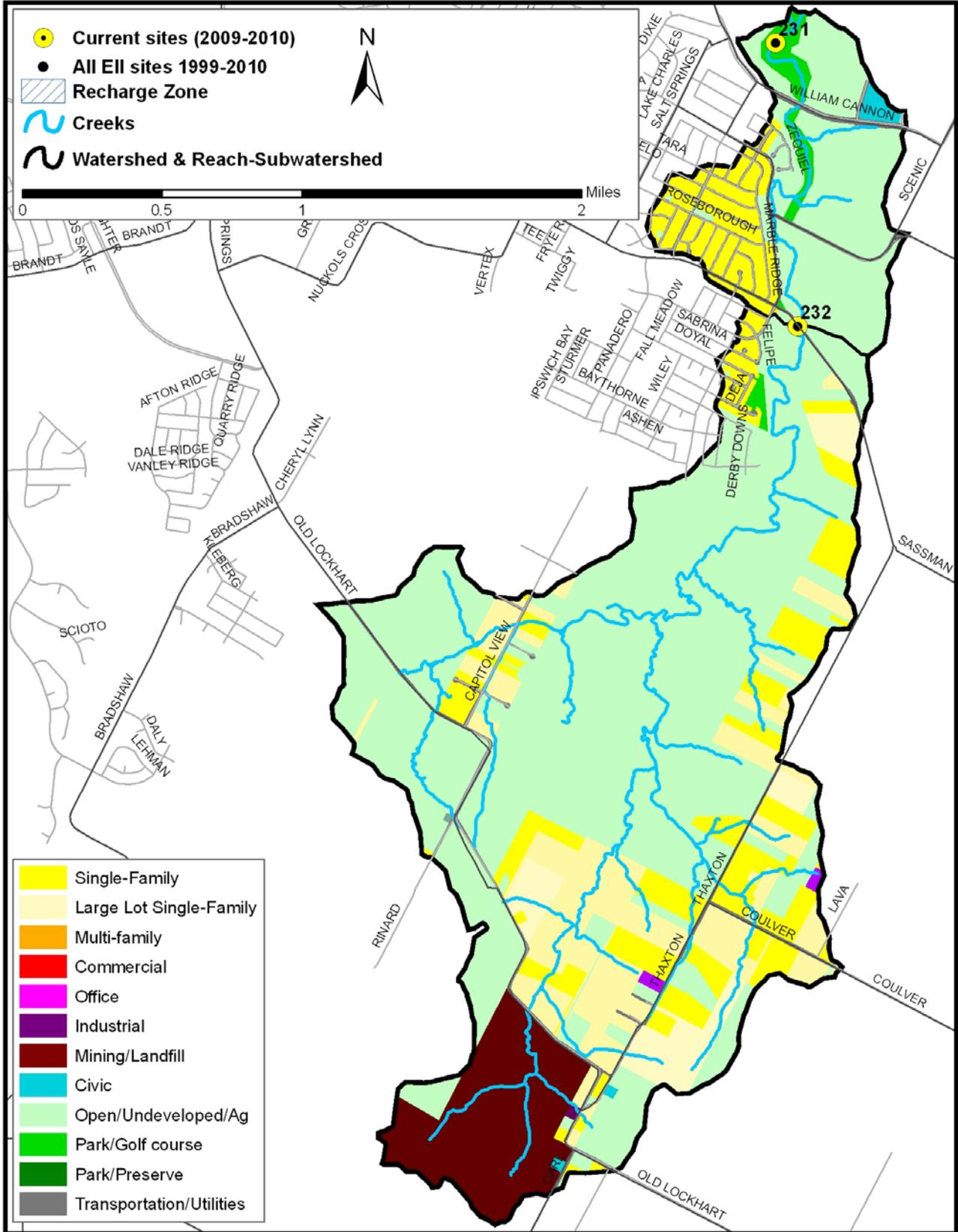
Reach	Site	Site Name	Year	Water Quality	Sediment**	Contact Recreation	Non-Contact Recreation	Physical Integrity	Aquatic Life	Benthic subindex	Diatom subindex	Total Site Score
Mar1	231	Marble Creek Above Onion Cr	1999	47	84	93	53	65	32	36	28	62
Mar2	232	Marble Creek @ Thaxton Road	1999	62	84	92	58	43				57
Mar1	231	Marble Creek Above Onion Cr	2002	43	83	82	58	72	60	44	75	66
Mar2	232	Marble Creek @ Thaxton	2002	58	83	97	58	33				55
Mar1	231	Marble Creek Above Onion Cr	2005	46	84	54	58	74	57	41	72	62
Mar2	232	Marble Creek @ Thaxton	2005	65	84	92	41	48				55
Mar1	231	Marble Creek Above Onion Cr	2008	47	61	50	73	72	71	57	85	62
Mar2	232	Marble Creek @ Thaxton	2008		61		53	56	55	55		56
Mar1	231	Marble Creek Above Onion Cr	2010	49	68	55	67	60	83	76	89	64
Mar2	232	Marble Creek @ Thaxton	2010	69	68	76	63	67	73	55	91	69

\* 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

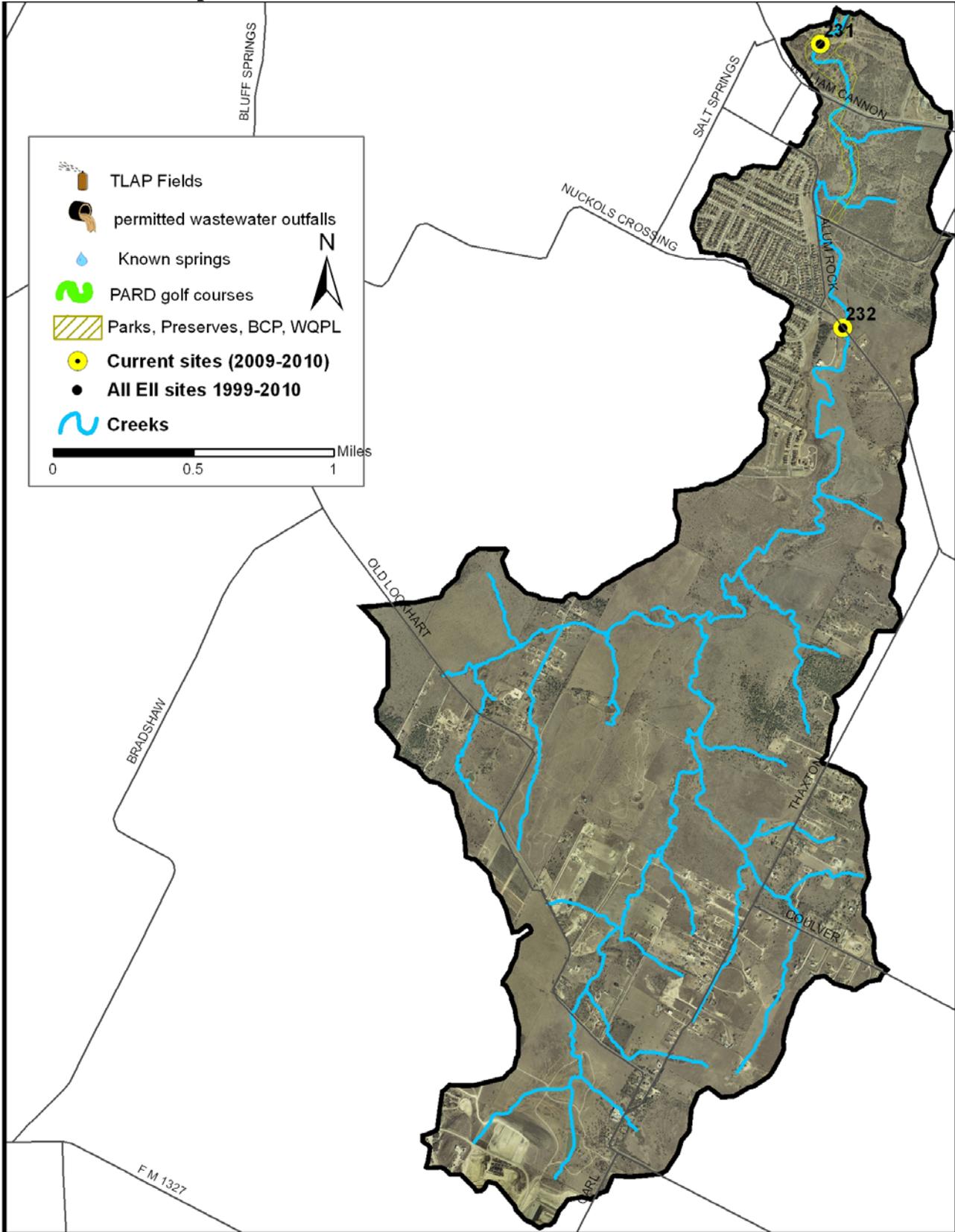
# Marble Creek Watershed

## Land Use Map



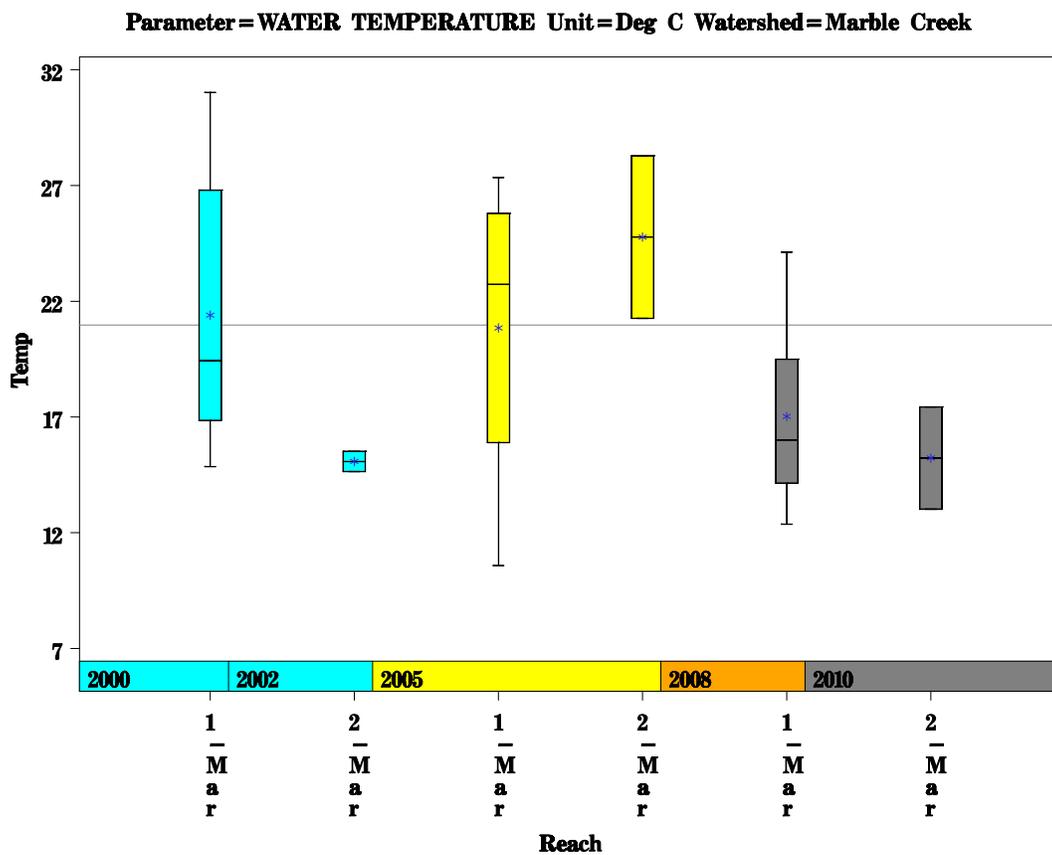
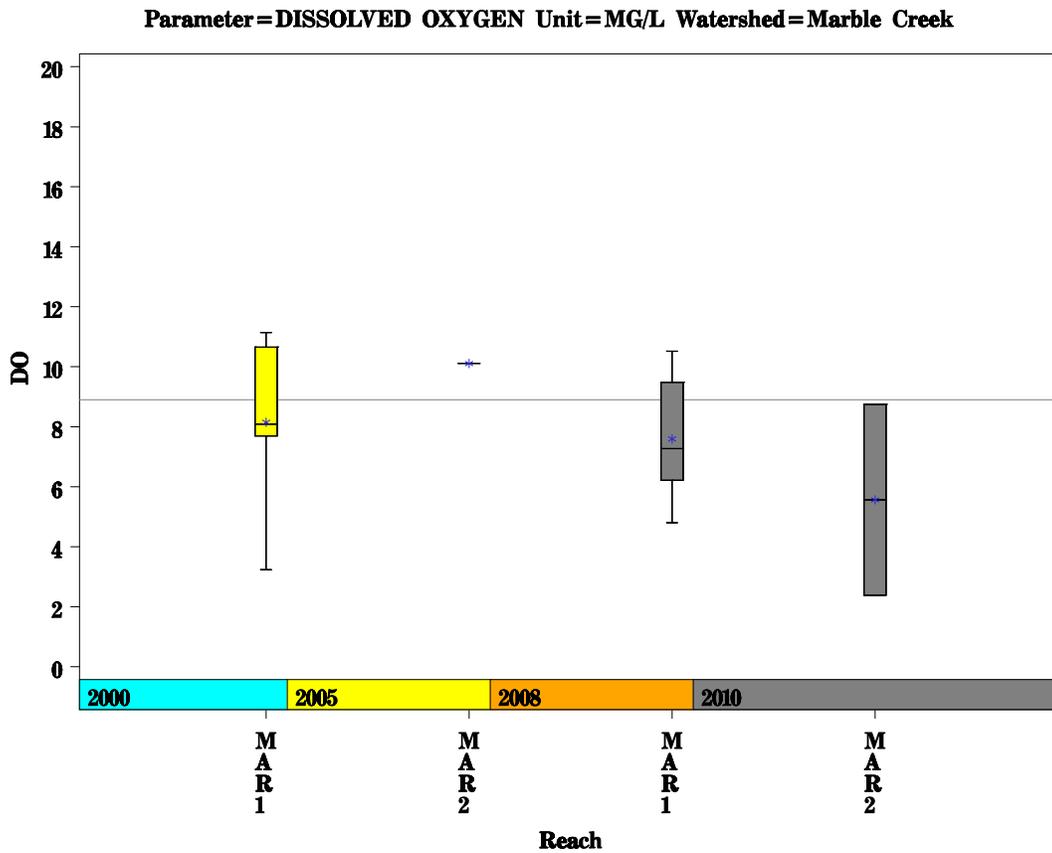
# Marble Creek Watershed

## Aerial Map



# Marble Creek Watershed

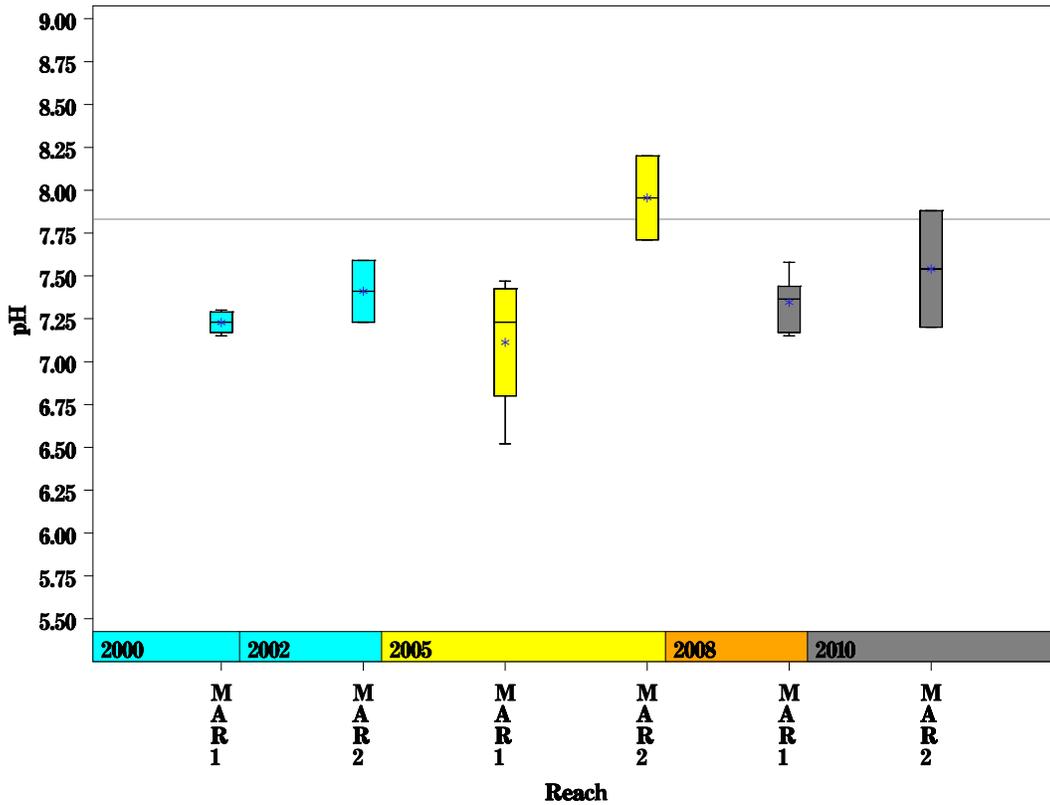
Data Summary Graphs – Dissolved Oxygen and Temperature (Downstream to Upstream by Year)



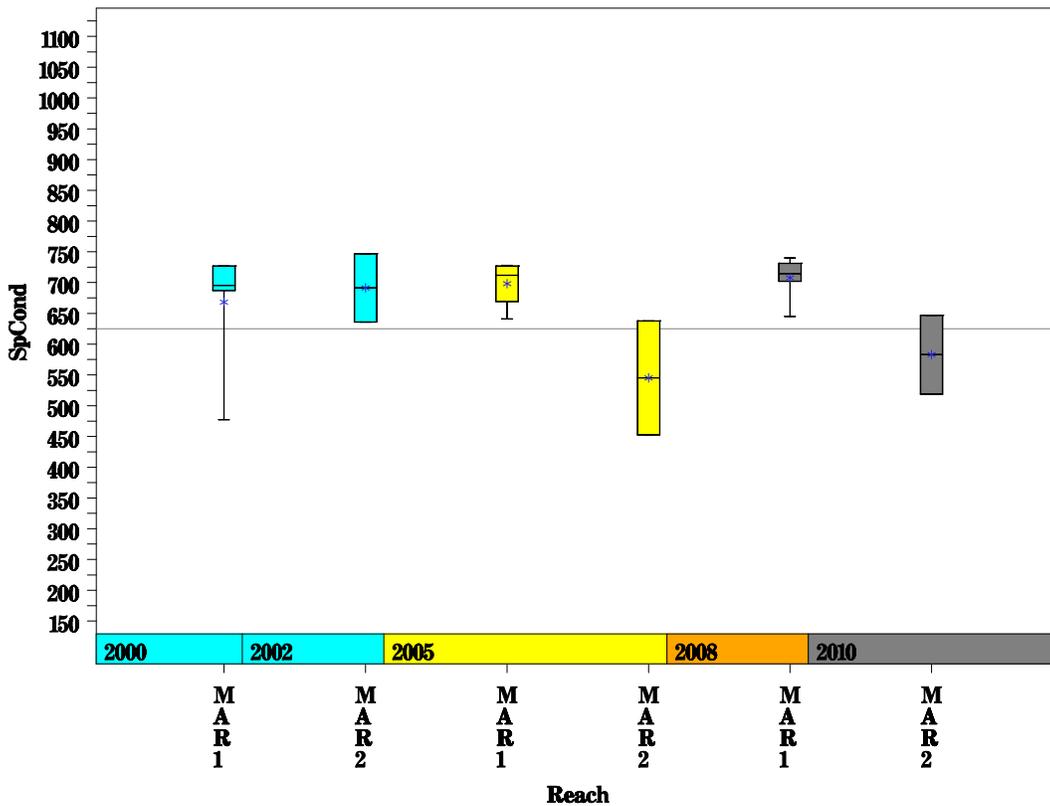
# Marble Creek Watershed

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

Parameter=PH Unit=Standard units Watershed=Marble Creek



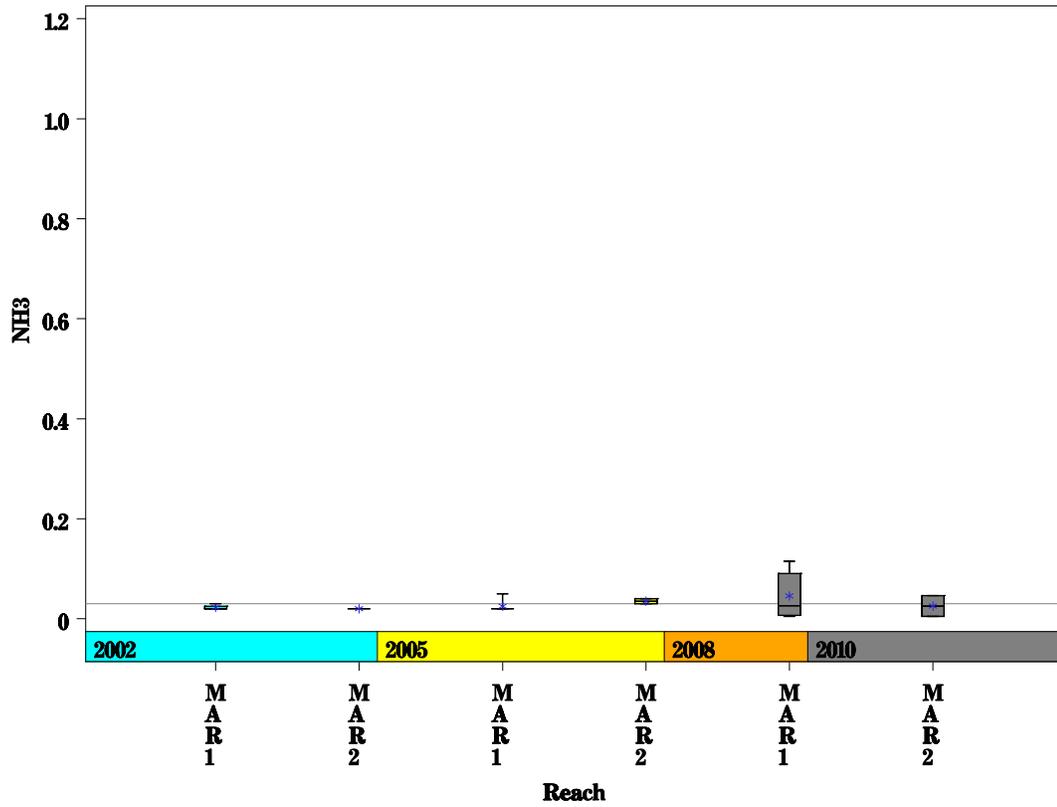
Parameter=CONDUCTIVITY Unit=uS/cm Watershed=Marble Creek



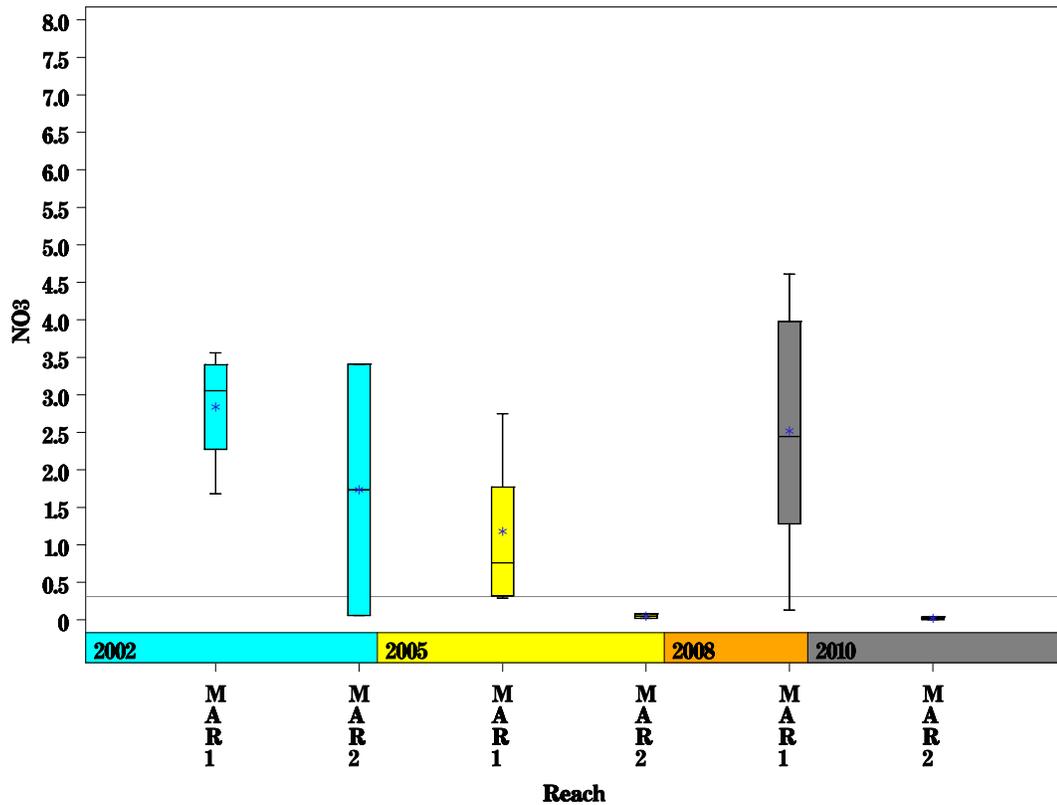
# Marble Creek Watershed

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

Parameter=AMMONIA AS N Unit=MG/L Watershed=Marble Creek



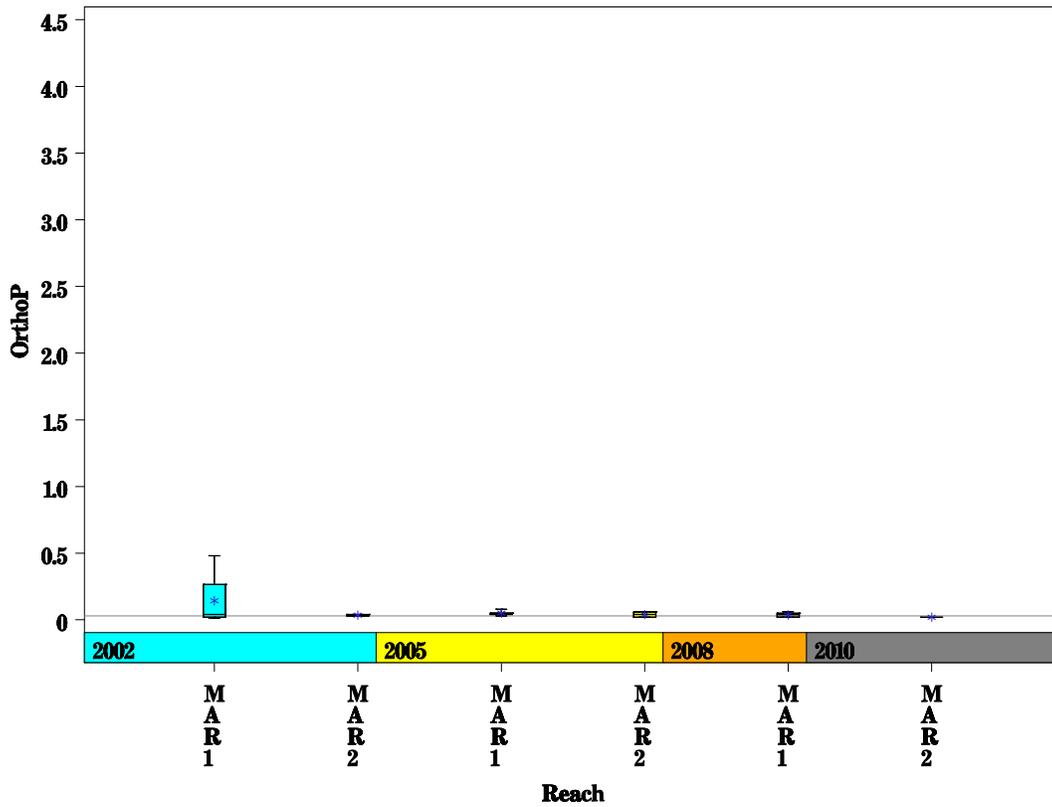
Parameter=NITRATE AS N Unit=MG/L Watershed=Marble Creek



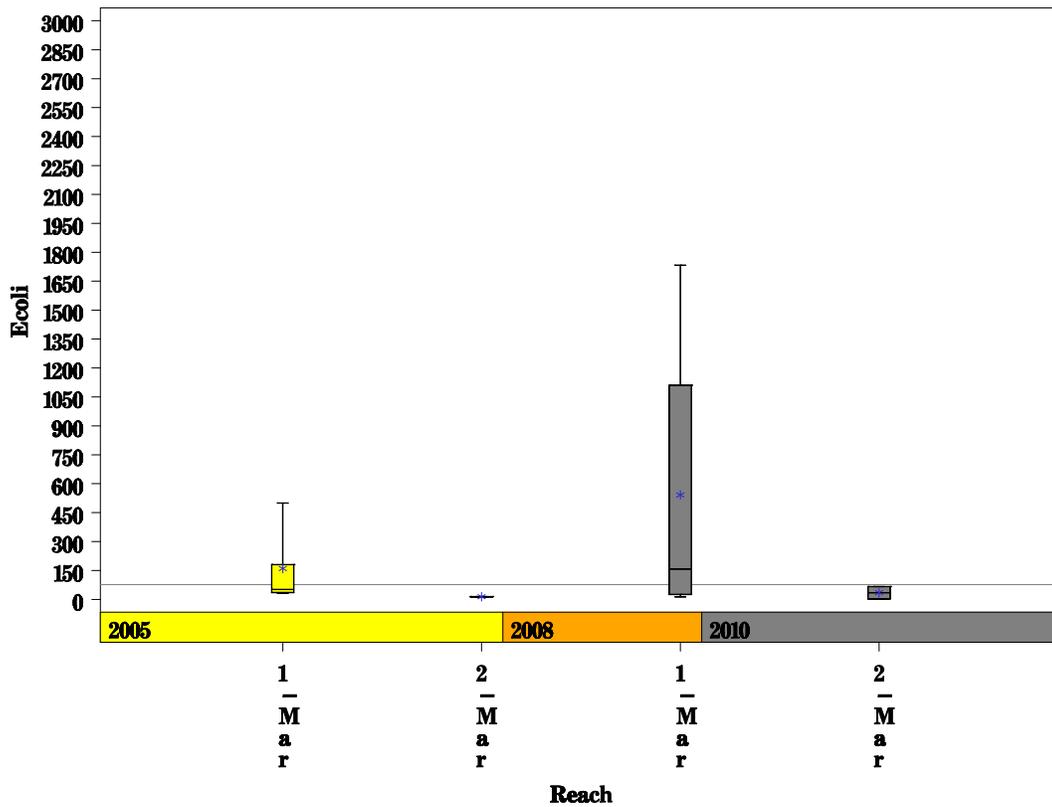
# Marble Creek Watershed

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

Parameter=ORTHOPHOSPHORUS AS P Unit=MG/L Watershed=Marble Creek



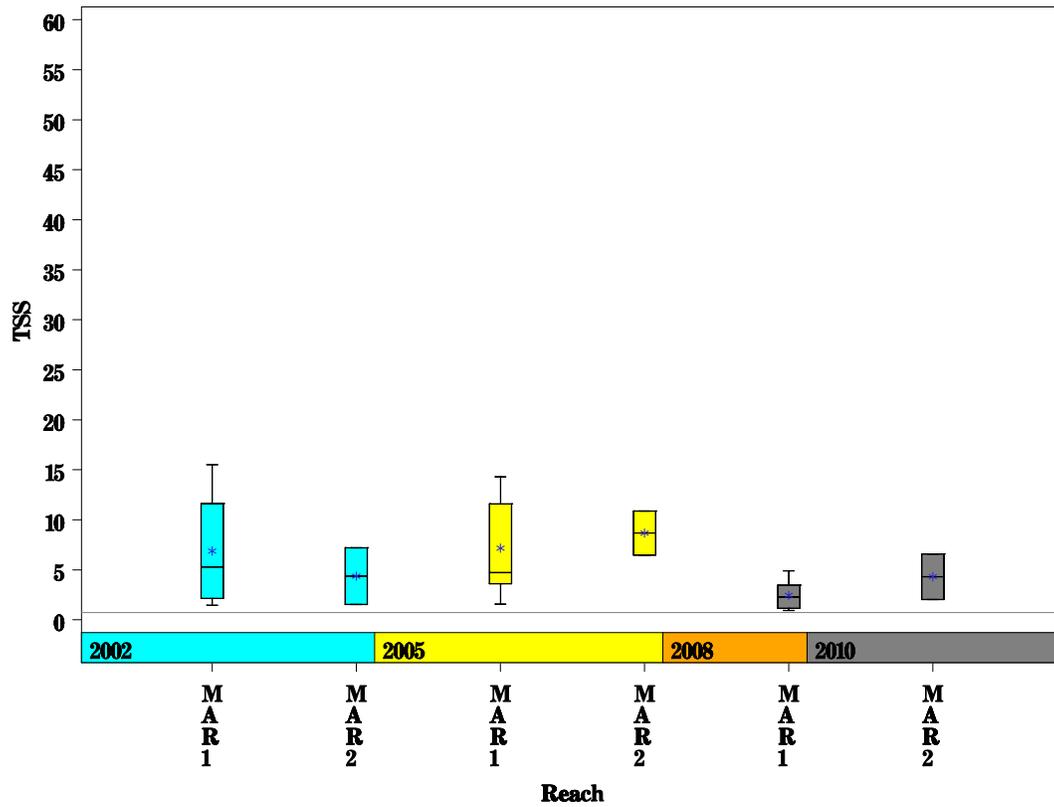
Parameter=E COLI BACTERIA Unit=MPN/dL Watershed=Marble Creek



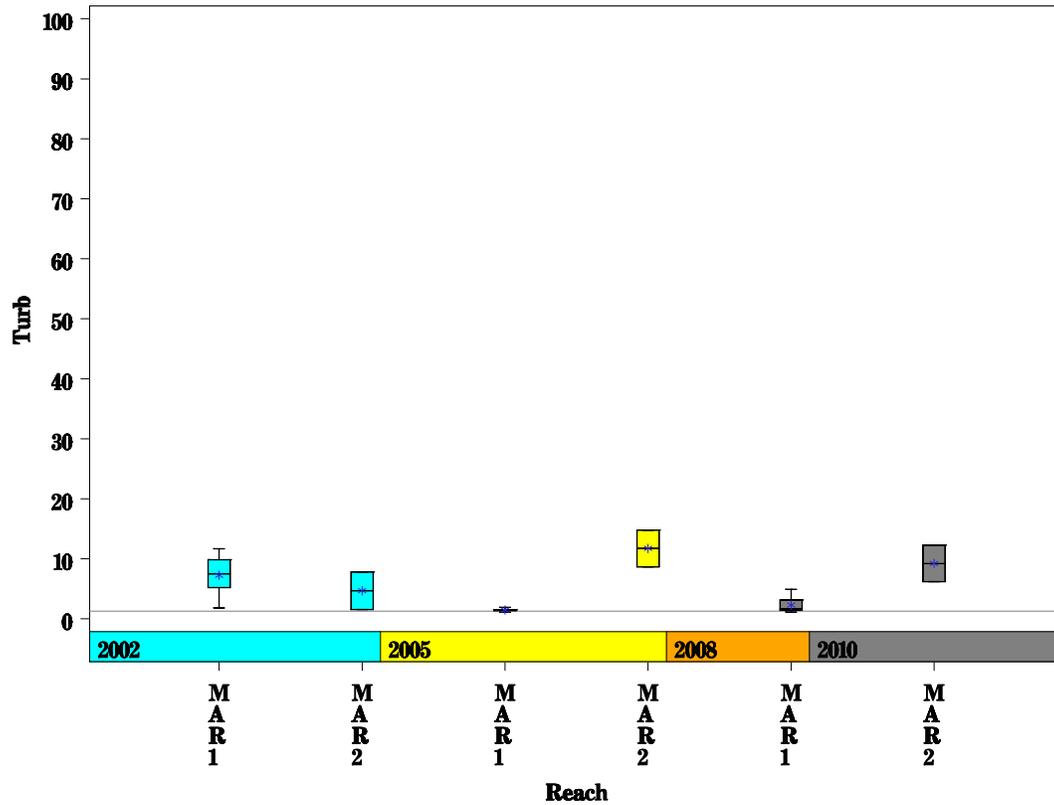
# Marble Creek Watershed

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

Parameter = TOTAL SUSPENDED SOLIDS Unit = MG/L Watershed = Marble Creek

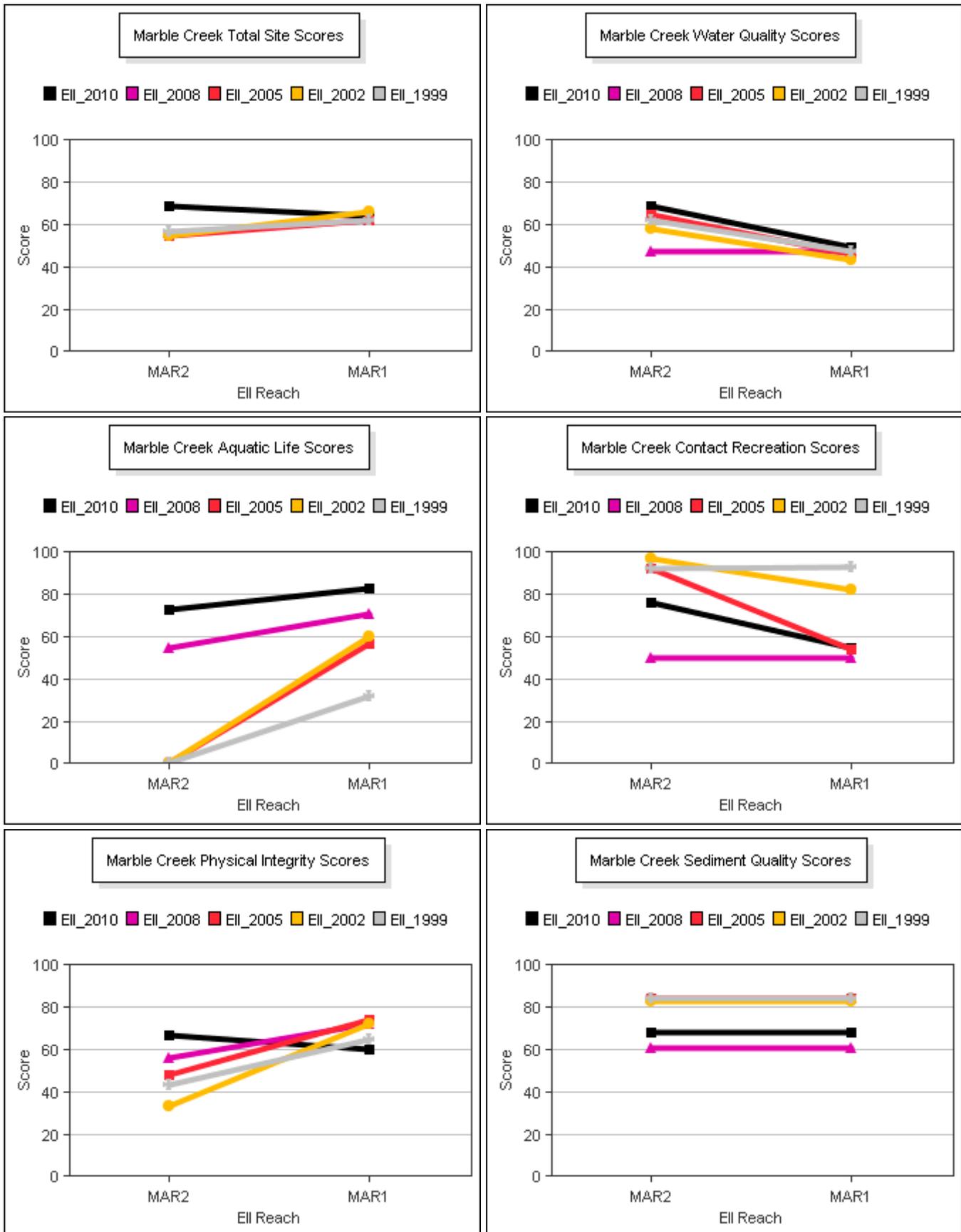


Parameter = TURBIDITY Unit = NTU Watershed = Marble Creek



# Marble Creek Watershed

## Score Summary – Reach scores for each sample year



# Marble Creek Watershed

## Site Photographs



231\_t00-ds-03\_28\_2002



231\_t00-ur-03\_28\_2002



231\_t00-us-06\_16\_2005



231\_t0-us-06\_16\_2008



231\_00-us-05\_18\_2010



231\_00-ds-05\_18\_2010

# Marble Creek Watershed

## Site Photographs



232\_t00-na-03\_28\_2002



232\_t00-us-03\_28\_2002



232\_t00-ds-06\_15\_2005



232\_t0-us-06\_16\_2008



232\_00-us-05\_19\_2010



232\_00-ds-05\_19\_2010

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