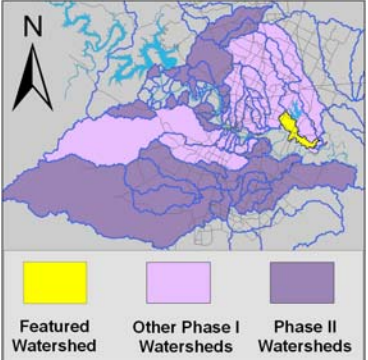


# Elm Creek Watershed

## Summary Sheet

Catchment	Total area	9 sq. miles				
	Area in recharge	0				
	Creek length	10 miles				
	Receiving water	Gilleland Creek				
Demographics	2000 population	3,136				
	2030 projected population	5,643				
	30 year projected % increase	180 %				
Land Use	Impervious cover (2003 estimate)	7.23 %				
Overall EII Scores	1999	2002	2005	2008	2009	2011
	49	65	46	45	62	33



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

Site #	Site Name	2005					2008					2009					2010	2011			
		Mar	Jun	Jun	Sep	Dec	Feb	May	Jun	Sep	Dec	Feb	May	Jun	Oct	Dec	Dec	Mar	Jun	Jun	Sep
		WQ	WQ	Bio	WQ	WQ	WQ	WQ	Bio	WQ	WQ	WQ	WQ	Bio	WQ	WQ	WQ	WQ	WQ	Bio	WQ
1202	Blue Bluff	B	B	n	n	n															
1204	FM 973	B	n	n	n	n	B	n	n	n	n	n	n	n	n	B	n	n	n	n	n
3614	Austins Colony	B	n	n	n	n	n	B	n	n	n	n	n	n	n	n	n	n	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 2009 Data for Elm Creek

Summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	D.O. mg/l				NO SAMPLES COLLECTED IN 2011 (Previous sample collected in 2009)
	pH st.units				
	Cond uS/cm				
Nutrients	NH <sub>3</sub> mg/l				
	NO <sub>3</sub> mg/l				
	Ortho P mg/l				
Sediment Load	TSS mg/l				
	Turbidity ntu				
Biology	E.Coli /100ml				
	Benthic Macs:				
	Diatoms:				

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

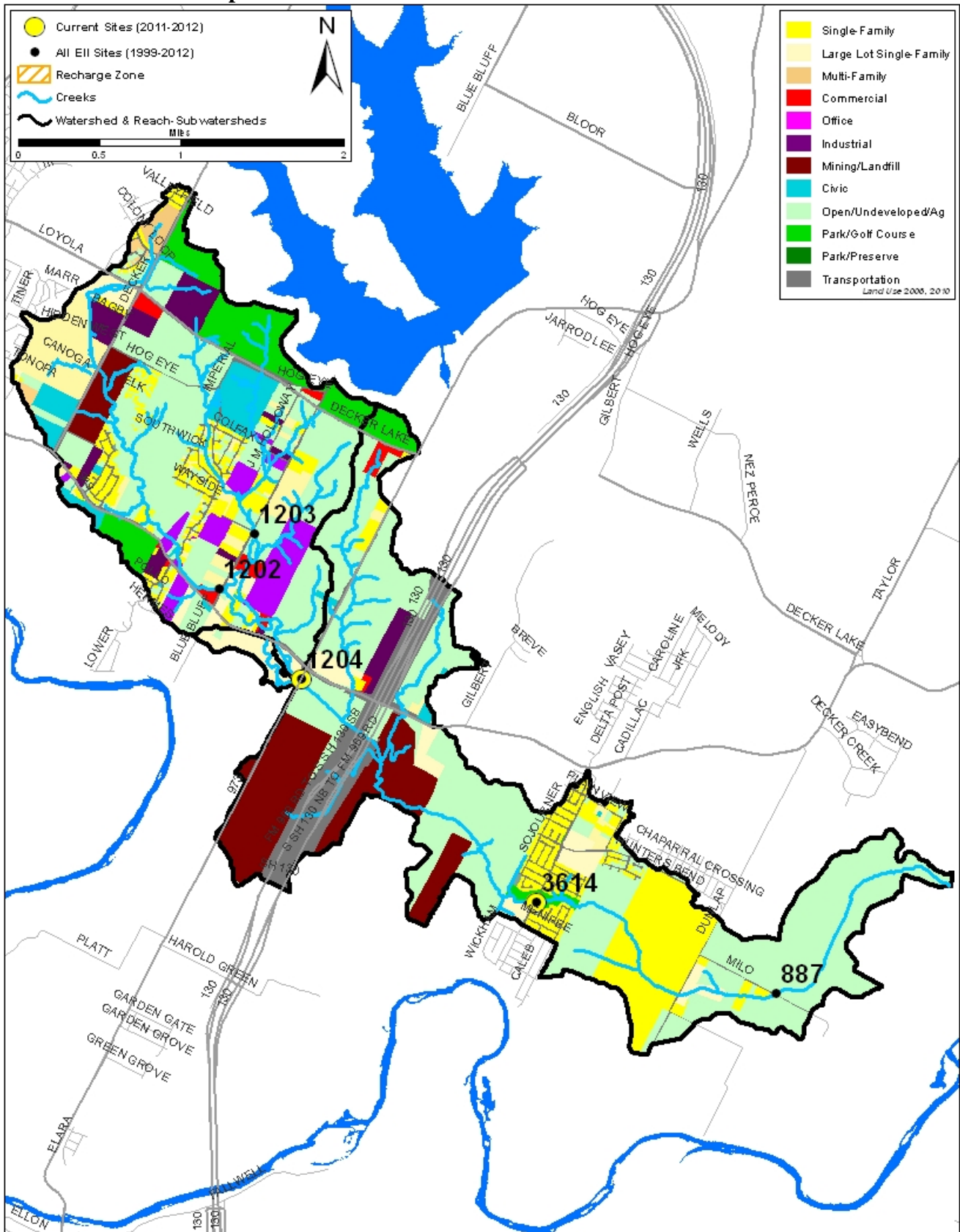
Reach	Site	Site Name	Year	Water Quality	Sediment**	Contact Recreation	Non-Contact Rec.	Physical Integrity	Aquatic Life	Benthic subindex	Diatom subindex	Total EII Score
ELM1	887	Elm Creek @ Milo Road	2002		91		60	44				49
ELM2	1202	West Elm Creek @ Blue Bluff Road	2002	62	91	99	57	58	41	41	40	68
ELM2	1204	Elm Creek @ FM 973	2002	57	91	92	77	51	44	50	37	69
ELM1	3614	Elm Creek @ Austins Colony	2005	46	71		56	50				45
ELM2	1202	West Elm Creek @ Blue Bluff Road	2005	39	71	32	49	56	50		50	50
ELM2	1204	Elm Creek @ FM 973	2005	51	71	47	52	54				46
ELM1	3614	Elm Creek @ Austins Colony	2008	39	67	42	43	37				38
ELM2	1204	Elm Creek @ FM 973	2008	50	67	97	48	47				52
ELM1	3614	Elm Creek @ Austins Colony	2009		66		56	60	68	68		63
ELM2	1204	Elm Creek @ FM 973	2009	69	66	94	47	55				55
ELM1	3614	Elm Creek @ Austins Colony	2011				55	40				32
ELM2	1204	Elm Creek @ FM 973	2011				40	61				34

\* 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

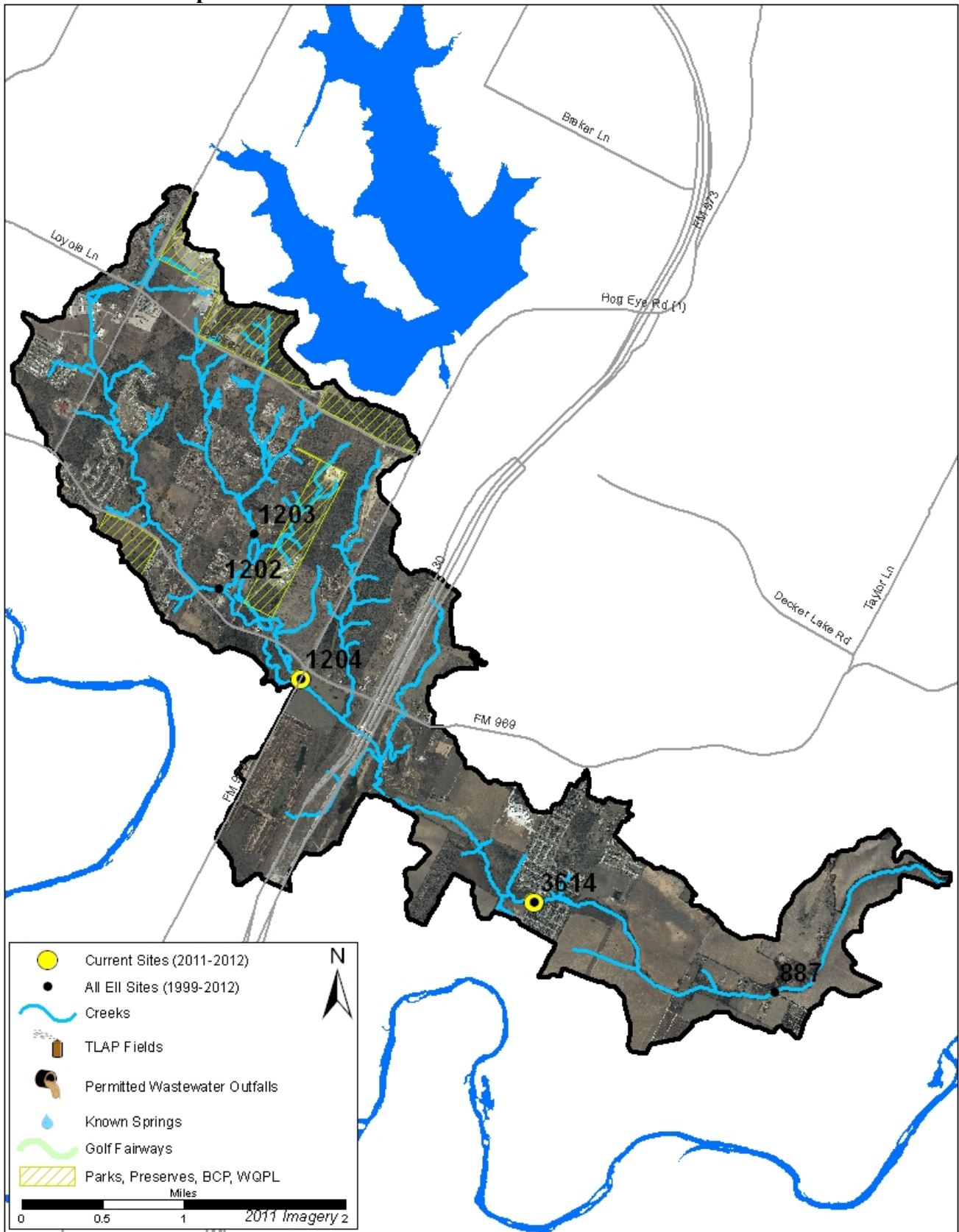
# Elm Creek Watershed

## Land Use Map



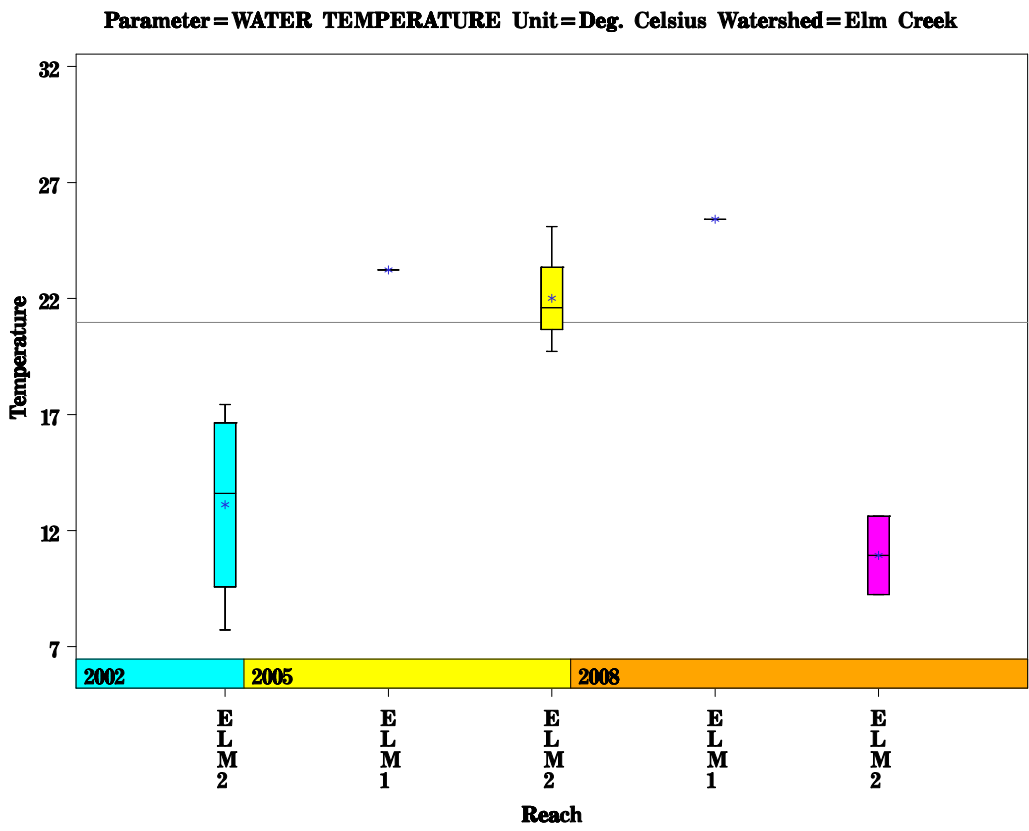
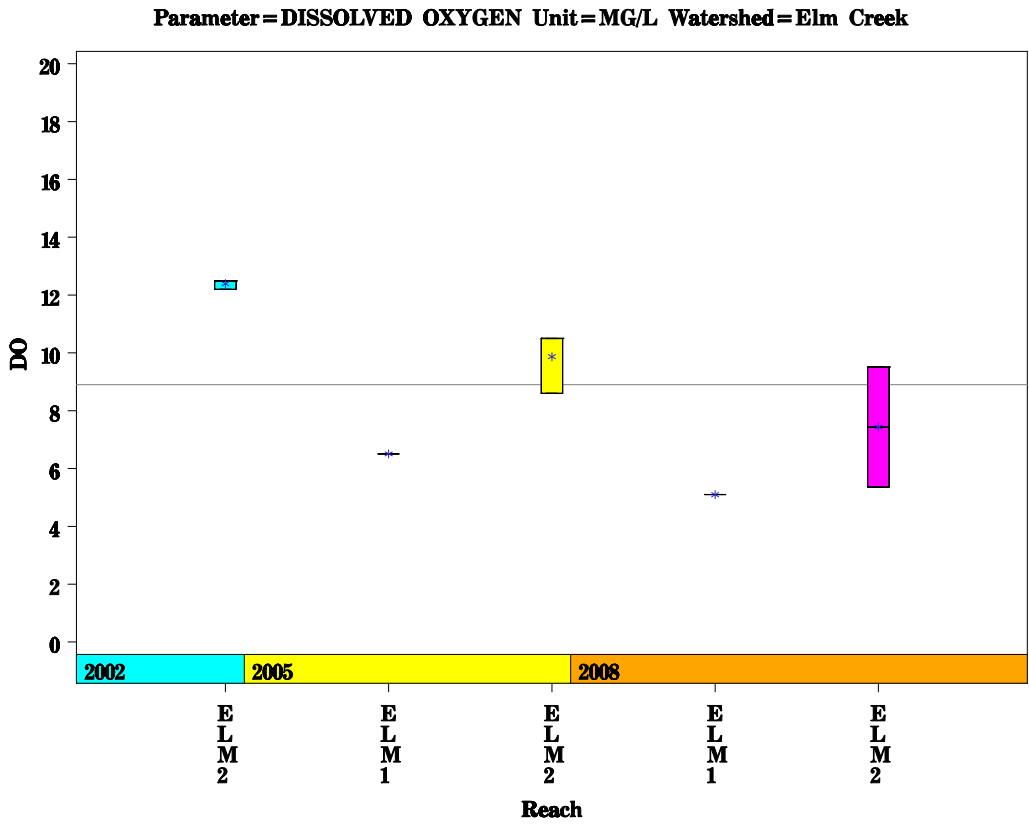
# Elm Creek Watershed

## Aerial Map



# Elm Creek Watershed

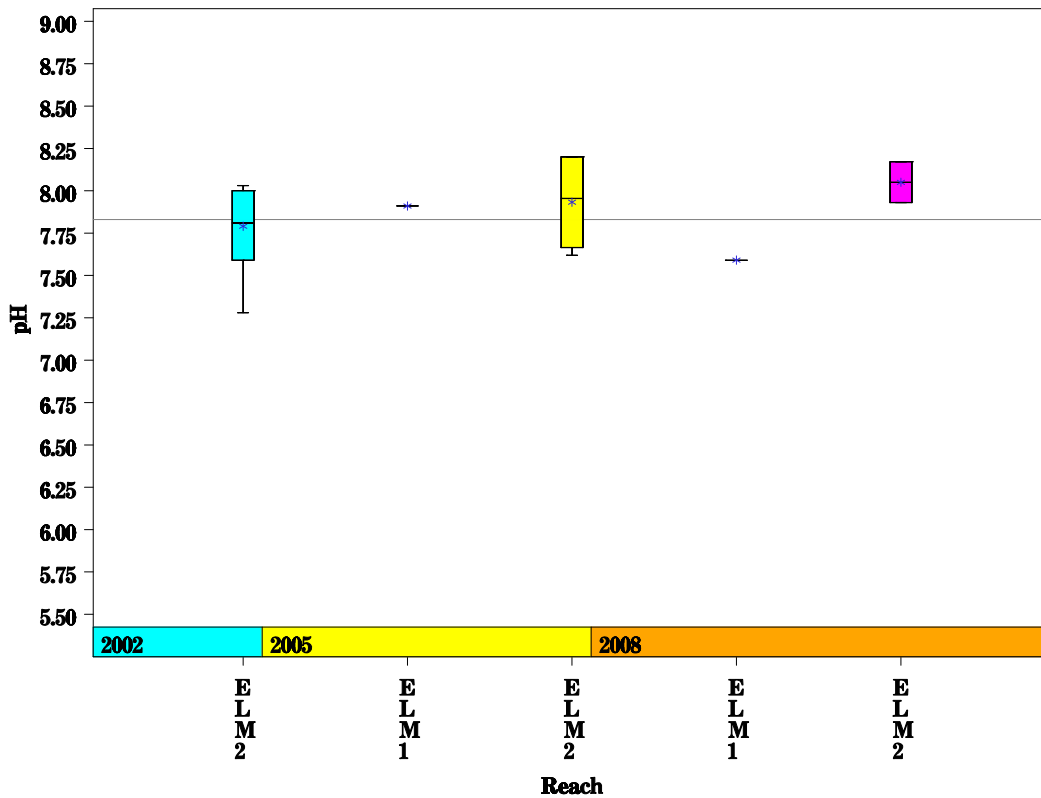
Data Summary Graphs – Dissolved Oxygen and Temperature (Downstream to Upstream by Year)



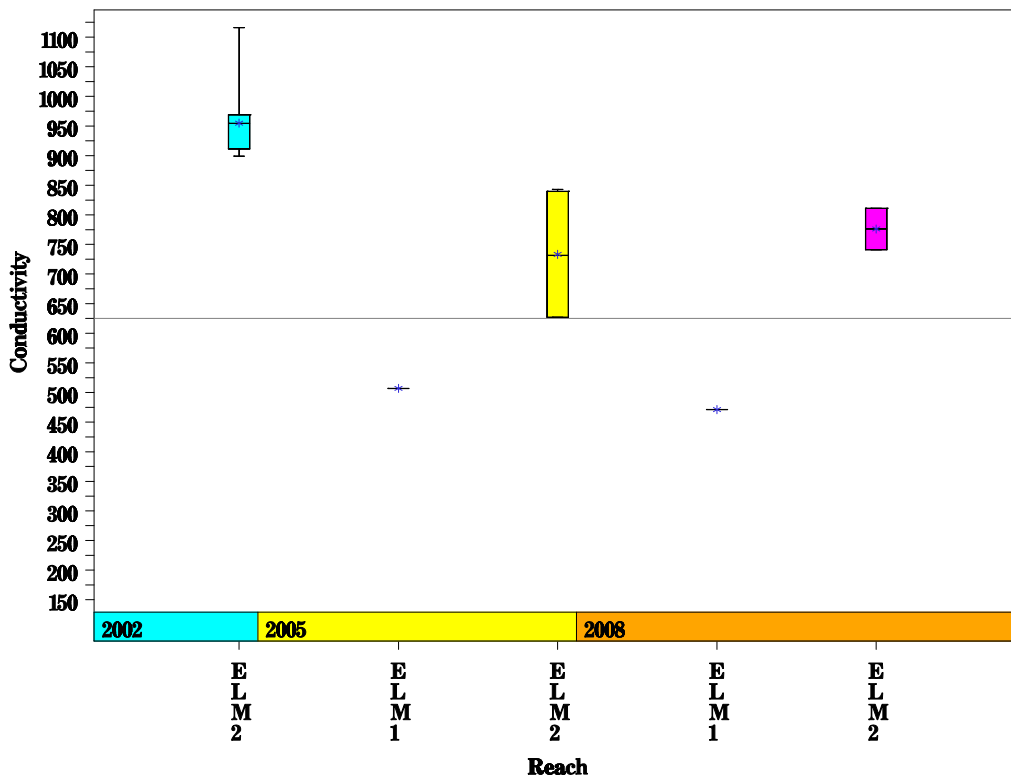
# Elm Creek Watershed

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

Parameter=PH Unit=Standard units Watershed=Elm Creek

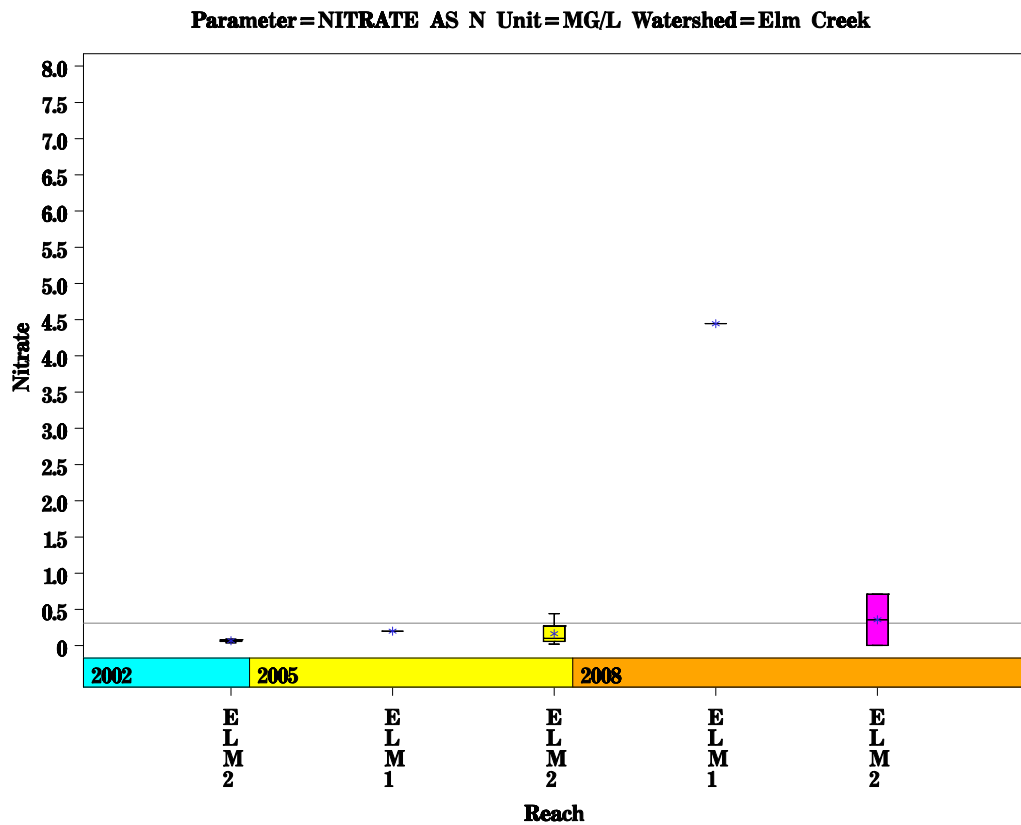
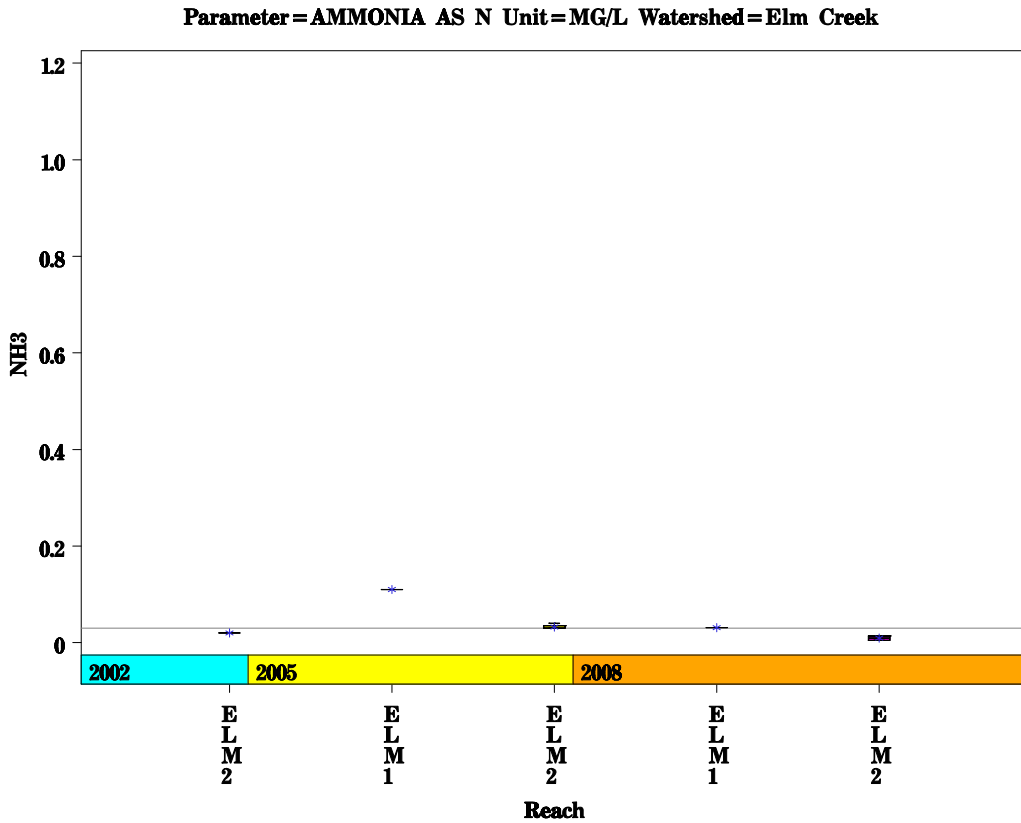


Parameter=CONDUCTIVITY Unit=uS/cm Watershed=Elm Creek



# Elm Creek Watershed

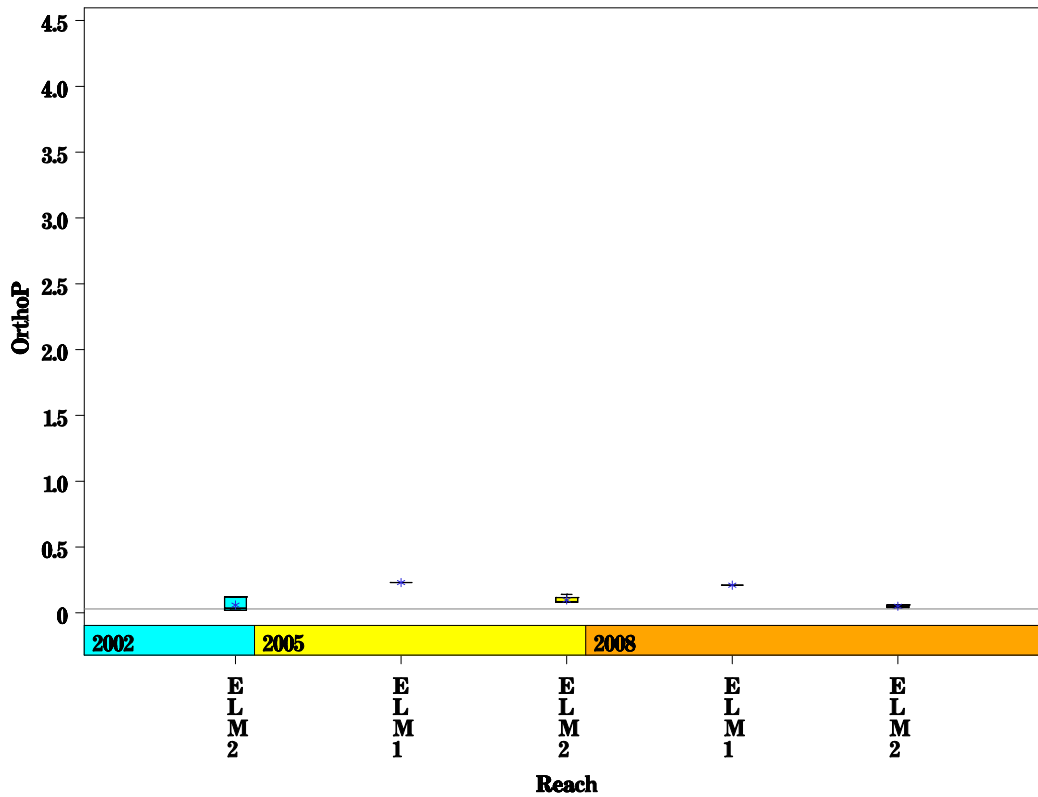
Data Summary Graphs – Ammonia and Nitrate/Nitrite (Downstream to Upstream by Year)



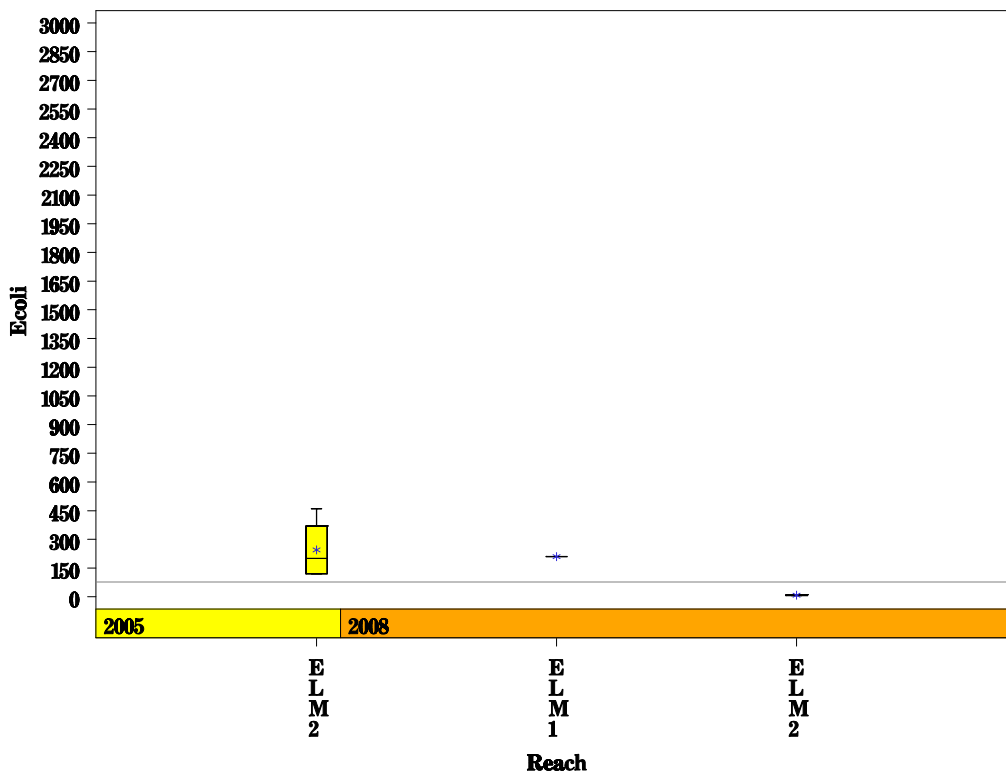
# Elm Creek Watershed

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

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

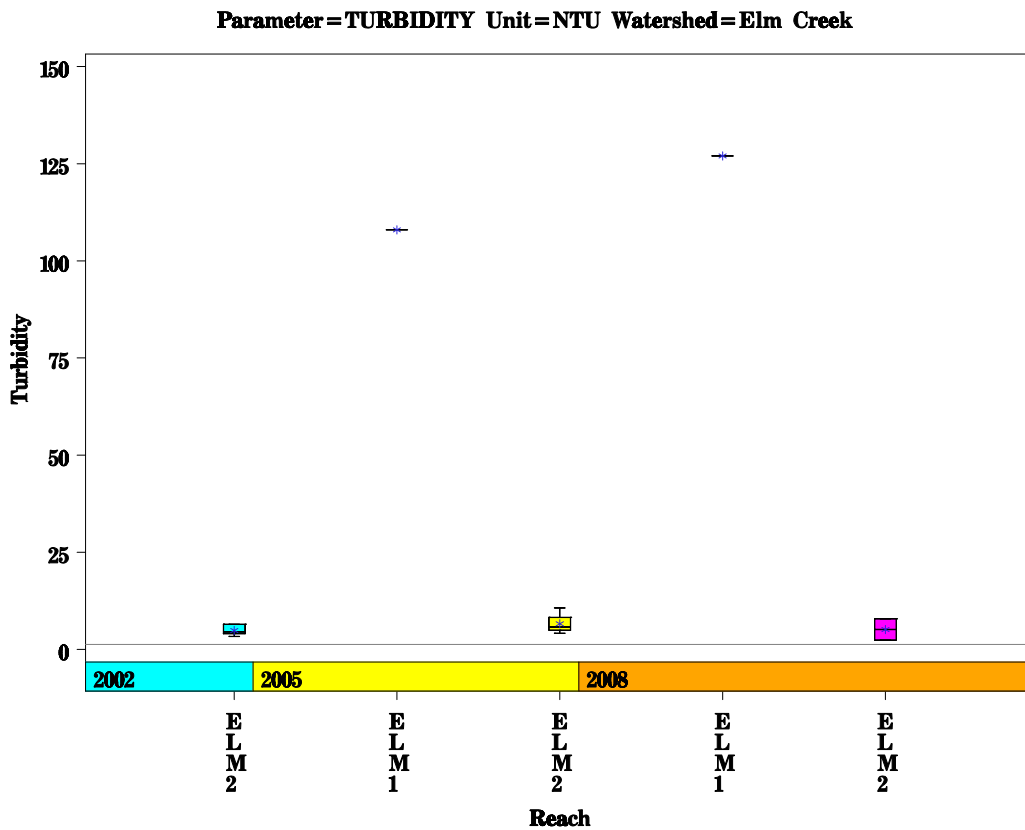
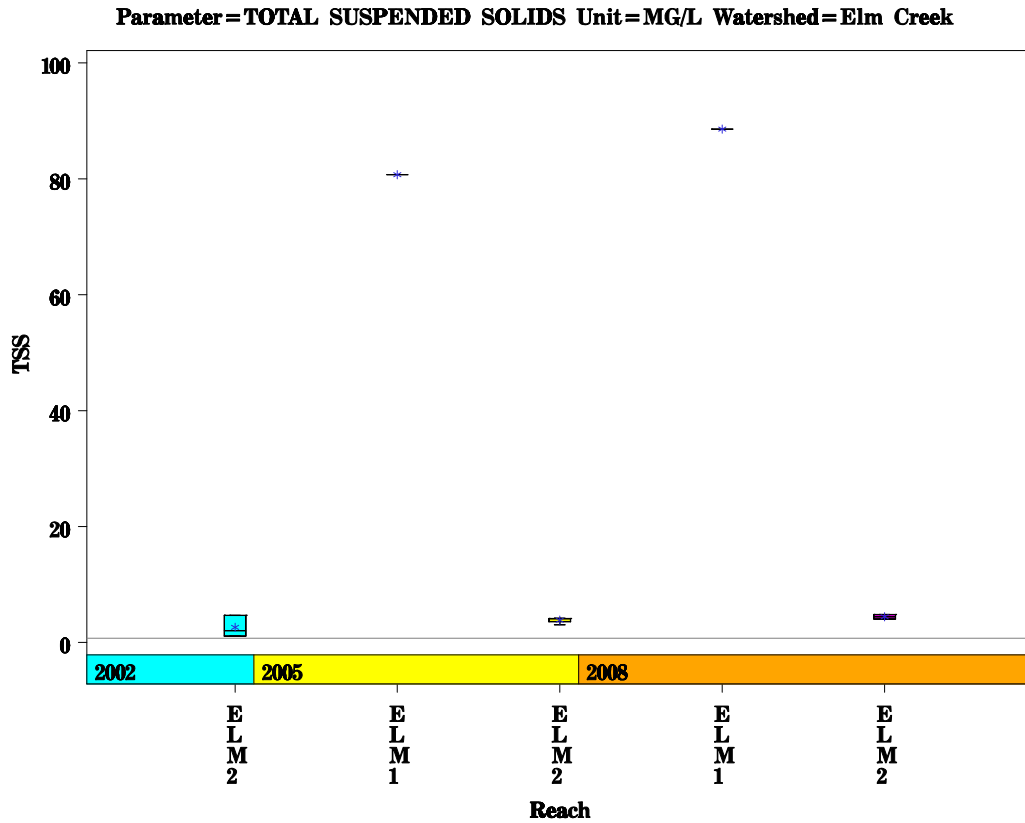


Parameter = E COLI BACTERIA Unit = MPN/100ML Watershed = Elm Creek



# Elm Creek Watershed

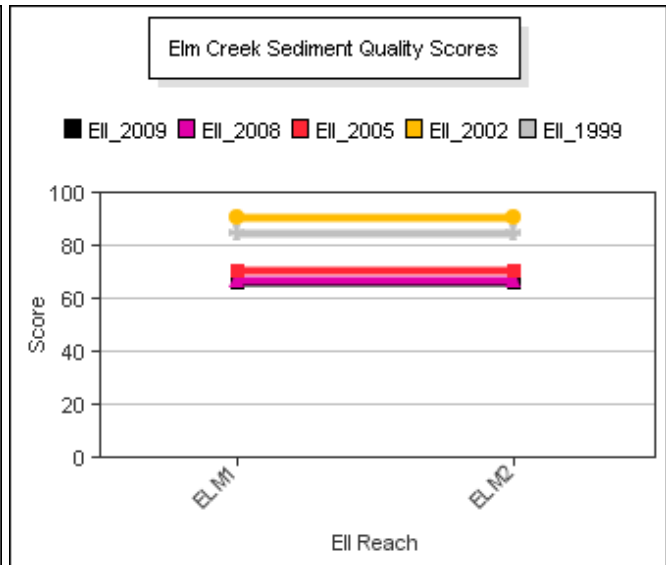
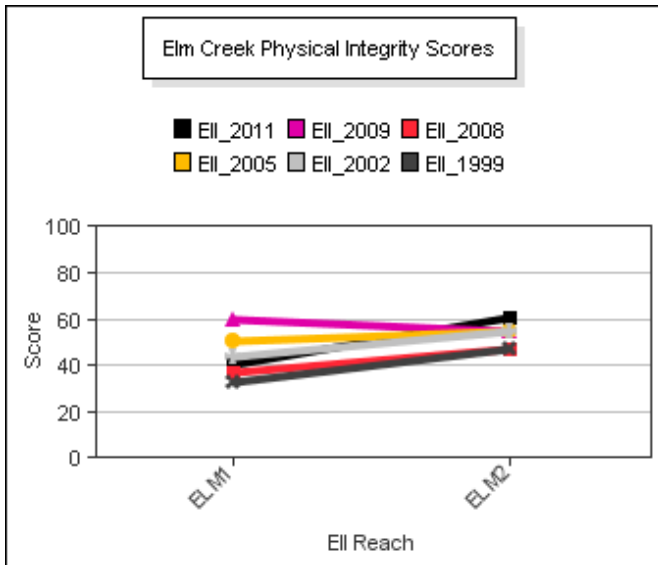
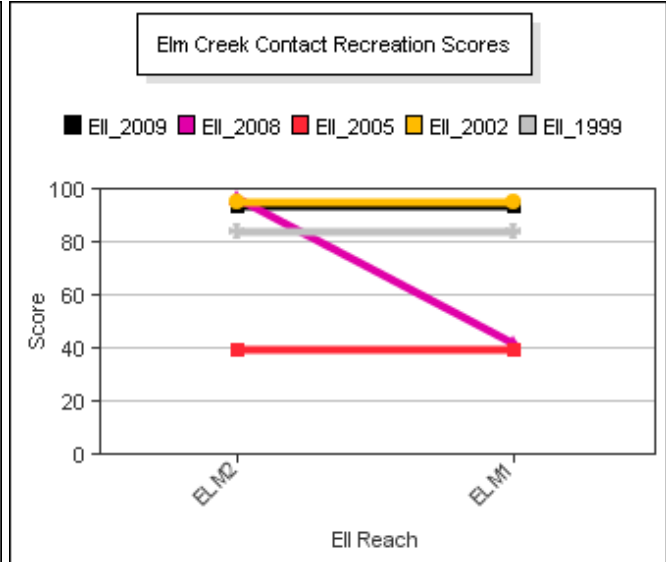
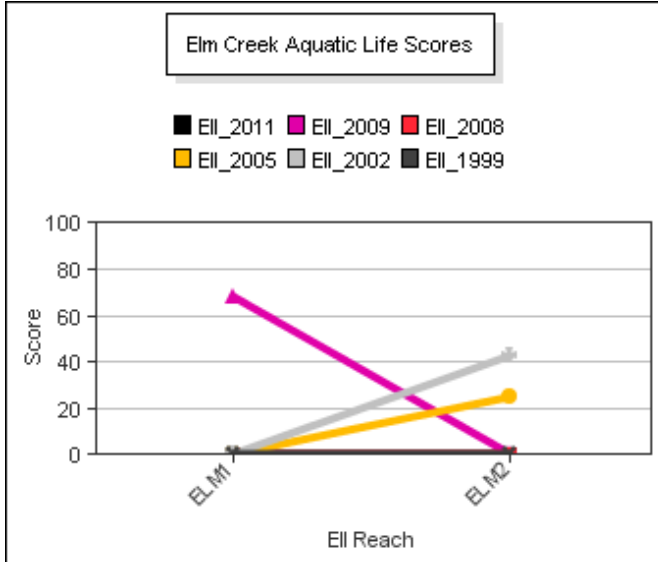
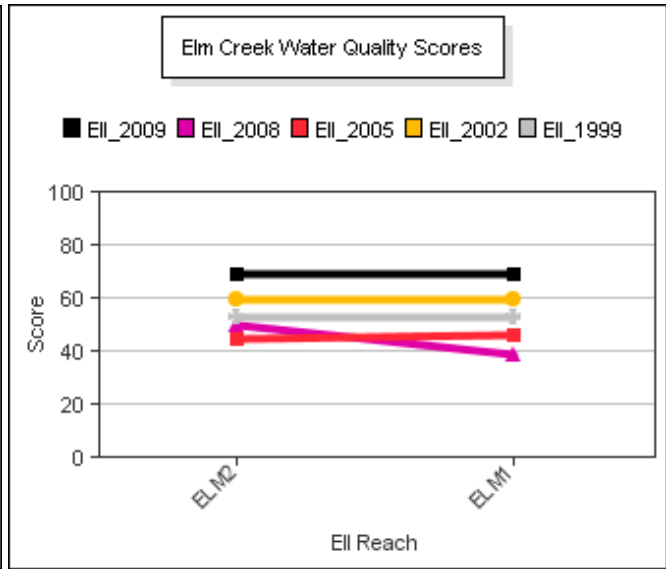
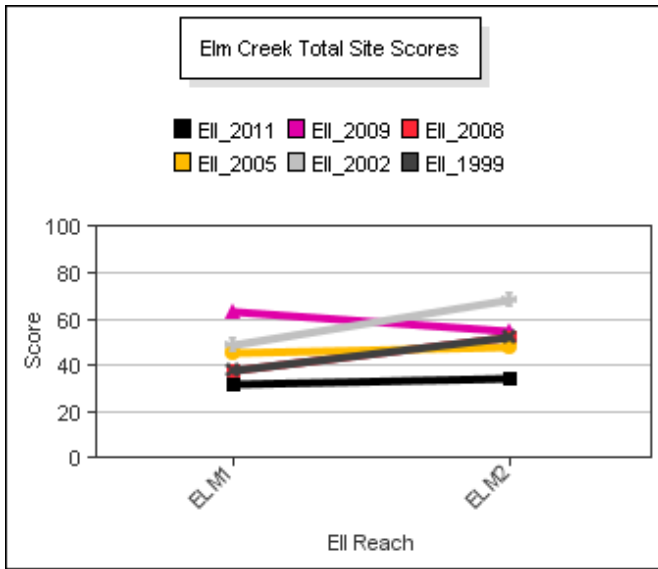
Data Summary Graphs – Total Suspended Solids and Turbidity (Downstream to Upstream by Year)





# Elm Creek Watershed

## Score Summary – Reach scores for each sample year



# Elm Creek Watershed

## Site Photographs



1202\_t00-us-03\_27\_2002



1202\_t00-ds-06\_17\_2005



3614\_t00-us-06\_17\_2005



3614\_t00-ur-06\_17\_2005



3614\_t00-ur-06\_18\_2008



3614\_t00-us-06\_03\_2009

# Elm Creek Watershed

## Site Photographs



1204\_t00-ds-03\_27\_2002



1204\_t00-ur-03\_27\_2002



1204\_t00-us-06\_17\_2005



1204\_t00-ds-06\_17\_2005



1204\_t0-us06\_18\_2008

SR-13-18



1204\_t00-ds-06\_03\_2009

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