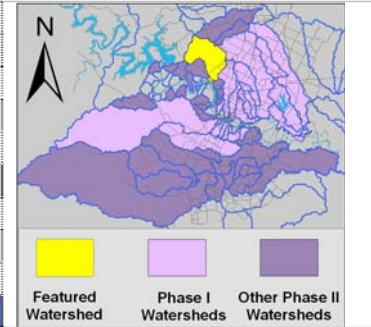


Bull Creek Watershed

Summary Sheet

Catchment	Total area	24.7 sq. miles			
	Area in recharge	16.3 sq. miles			
	Creek length	11 miles			
Demographics	Receiving water	Lake Austin			
	2000 population	43,709			
	2030 projected population	69,716			
	30 year projected % increase	60 %			
Land Use	Impervious cover (2003 estimate)	13.58 %			
Overall EII Scores	2001	2004	2007	2010	
	76	81	85	82	



Flow Regime* for Sample Sites on Bull Creek

Site # upstream to downstream	Site Name	2001				2004					2007					2010			
		Mar WQ	Jun WQ	Sep WQ	Dec WQ	Mar WQ	May Bio	Jun WQ	Oct WQ	Dec WQ	Feb WQ	May WQ	Jun Bio	Sep WQ	Dec WQ	Mar WQ	May WQ	May Bio	Oct WQ
1164	Tributary 5 below Hanks															B	B	B	B
151	tributary 6 @ Bull Creek	B	B	B	B	B	B	B	B	B					B	B	B	B	
349	above tributary 7 (franklin)										B	B	B	B	B	B	B	B	
920	at St. Eds Park above dam	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
350	at Loop 360 1st Crossing	B	B	B	B	B	B	B	B	B					B	B	B	B	
347	above West Bull Creek	B	B	B	B	B	B	B	B	B	B	B	B	B					

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

Summary of 2010 Data for Bull Creek

2010 summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	D.O. mg/l	9.4	12.2	5.5	Generally within normal range or above average
	pH st.units	7.8	8.3	7.3	Generally within normal range at all sites except high at site 151 (Trib 6)
	Cond uS/cm	686	1110	335	Generally within normal range, increasing trend from headwater to mouth
Nutrients	NH ₃ mg/l	0.01	0.01	0.01	Consistently low
	NO ₃ mg/l	0.52	1.28	0.00	Generally within normal range with a few above average values
	Ortho P mg/l	0.01	0.03	0.00	Consistently low
Sediment Load	TSS mg/l	1.1	4.6	0.5	Generally within normal range with a few above average values
	Turbidity ntu	0.7	1.3	0.1	Consistently low
Biology	E.Coli /100ml	32	238	2	Low with some elevated values in the downstream reach
	Benthic Macs	Good diversity and community composition, indicative of above average water quality and quantity			
	Diatoms	Above average diversity and similarity to reference conditions			

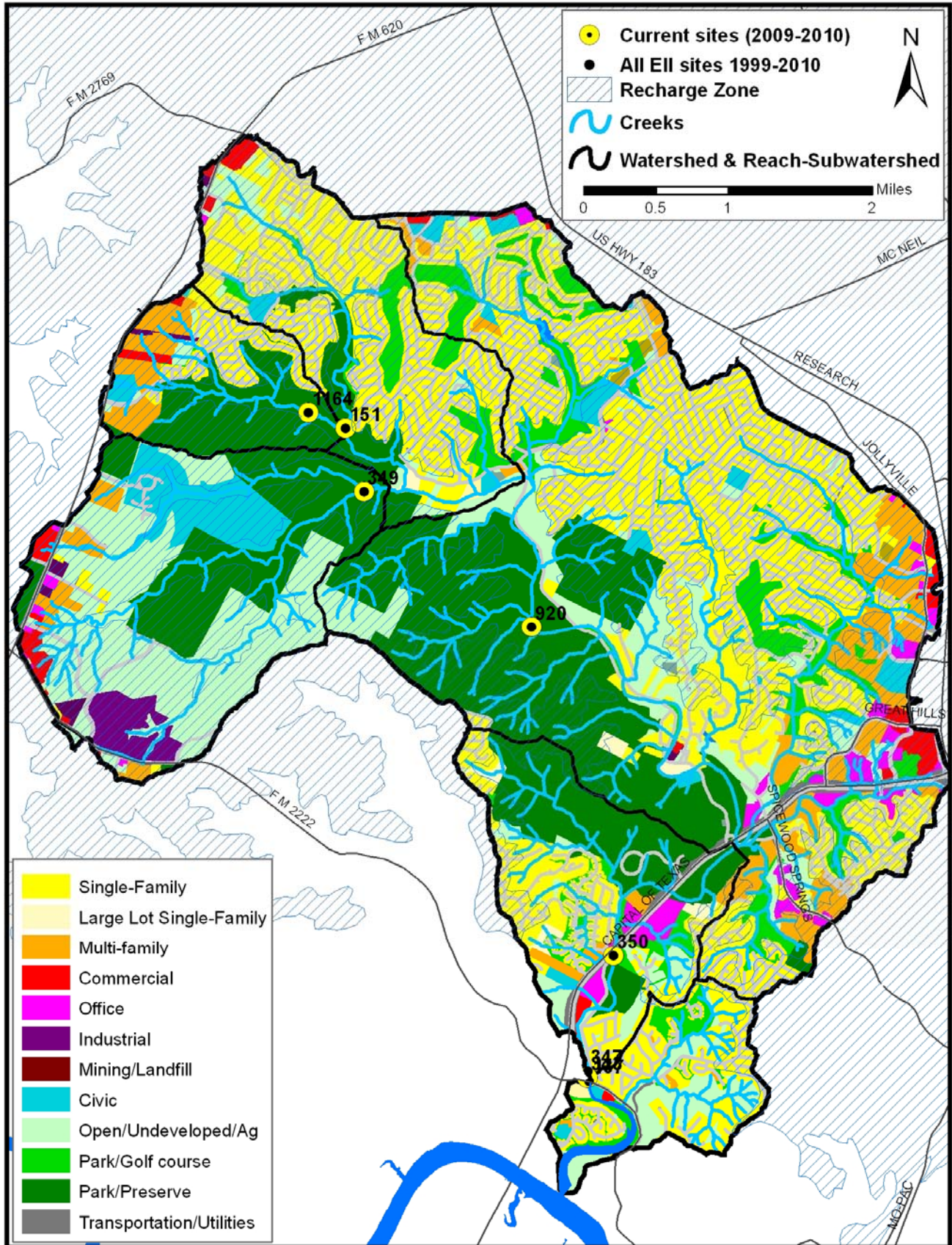
Index scores* for Bull Creek Sites by Year

Reach	Site	Site Name	Year	Water Quality	Sediment**	Contact Rec	Non Contact Rec	Physical Integrity	Aquatic Life	Benthic subindex	Diatom subindex	Total Site Score
COW1	1030	Cow Fork Bull Creek @ Standing Rock Tr	1998	69	85	79	93	76	88	84	92	82
BUL1	347	Bull Creek Above West Bull Creek	2001	63	65	91	92	88	62	64	59	72
BUL1	350	Bull Creek @ Loop 360 First Crossing	2001	59	65	87	83	58	87	91	82	70
BUL2	151	Tributary 6 @ Bull Creek (EG)	2001	44	65	92	93	81	83	99	66	73
BUL2	920	Bull Creek @ St. Edwards Park above dam	2001	60	65	93	81	88	86	88	83	74
COW1	1030	Cow Fork Bull Creek @ Standing Rock Tr	2001	66	91	88	80	47	76	60	92	73
BUL1	347	Bull Creek Above West Bull Creek	2004	62	84	63	93	88	96	94	97	81
BUL1	350	Bull Creek @ Loop 360 First Crossing	2004	73	84	67	89	80	97	94	100	82
BUL2	151	Tributary 6 @ Bull Creek (EG)	2004	60	84	66	99	87	80	83	77	79
BUL2	920	Bull Creek @ St. Edwards Park above dam	2004	70	84	72	91	85	95	95	94	83
COW1	1030	Cow Fork Bull Creek @ Standing Rock Tr	2004	65	84	52	88	86	87	80	93	77
BUL1	347	Bull Creek Above West Bull Creek	2007	69	81	63	91	78	92	84	100	79
BUL2	920	Bull Creek @ St. Edwards Park above dam	2007	74	81	85	92	90	91	95	86	86
BUL3	349	Bull Creek Above Tributary 7 (Franklin)	2007	89	81	93	98	83	98	97	99	90
BUL1	350	Bull Creek @ Loop 360 First Crossing	2010	68	67	71	96	74	93	85	100	78
BUL2	920	Bull Creek @ St. Edwards Park above dam	2010	73	67	96	97	89	92	84	99	86
BUL3	349	Bull Creek Above Tributary 7 (Franklin)	2010	91	67	92	100	93	93	94	92	89
BUL4	1164	Tributary 5 ds Hanks Tract Propertv Line	2010	73	67	87	93	73	82	73	90	79
BUL5	151	Tributary 6 @ Bull Creek (EG)	2010	67	67	86	86	87	91	98	83	81

* 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

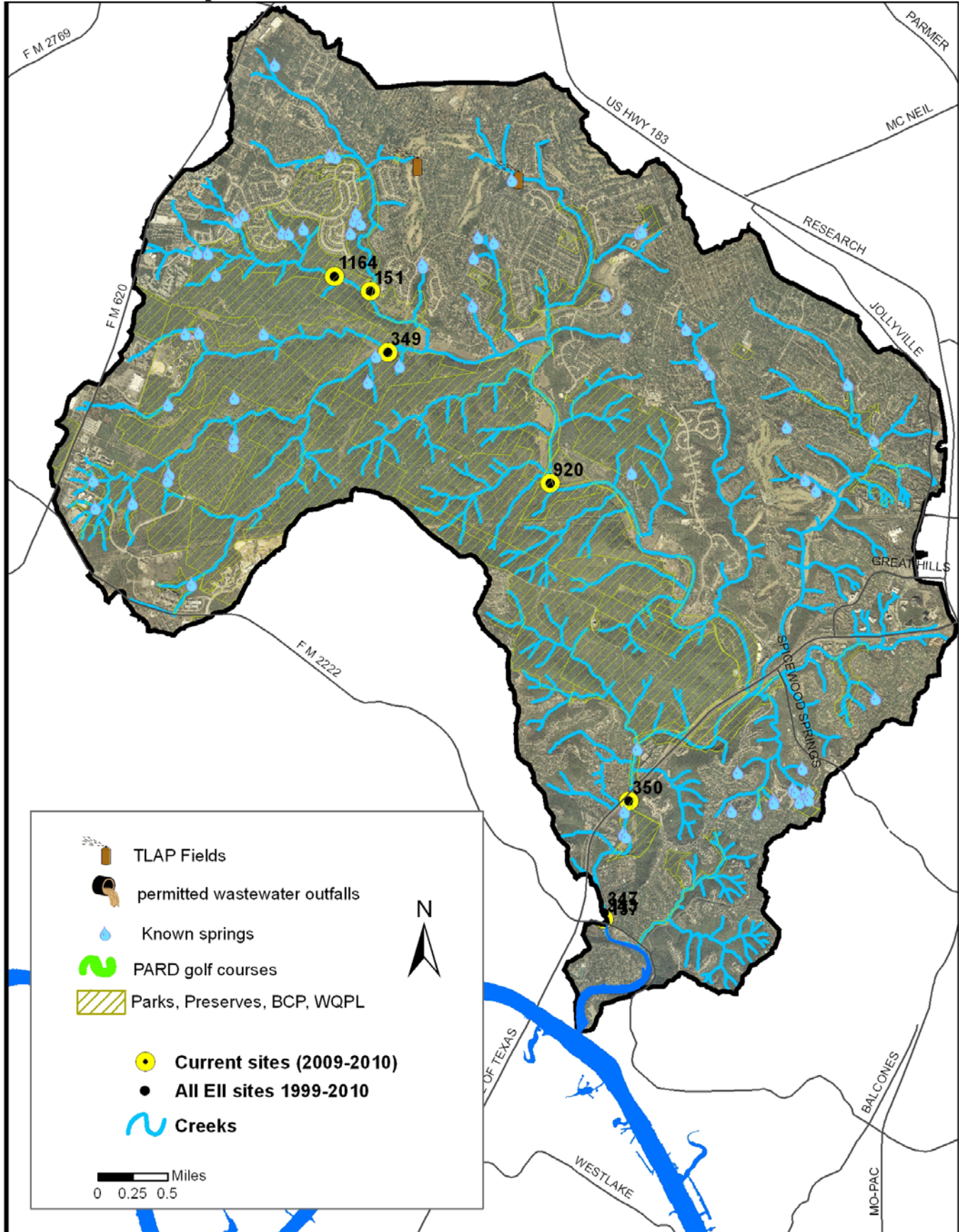
Bull Creek Watershed

Land Use Map



Bull Creek Watershed

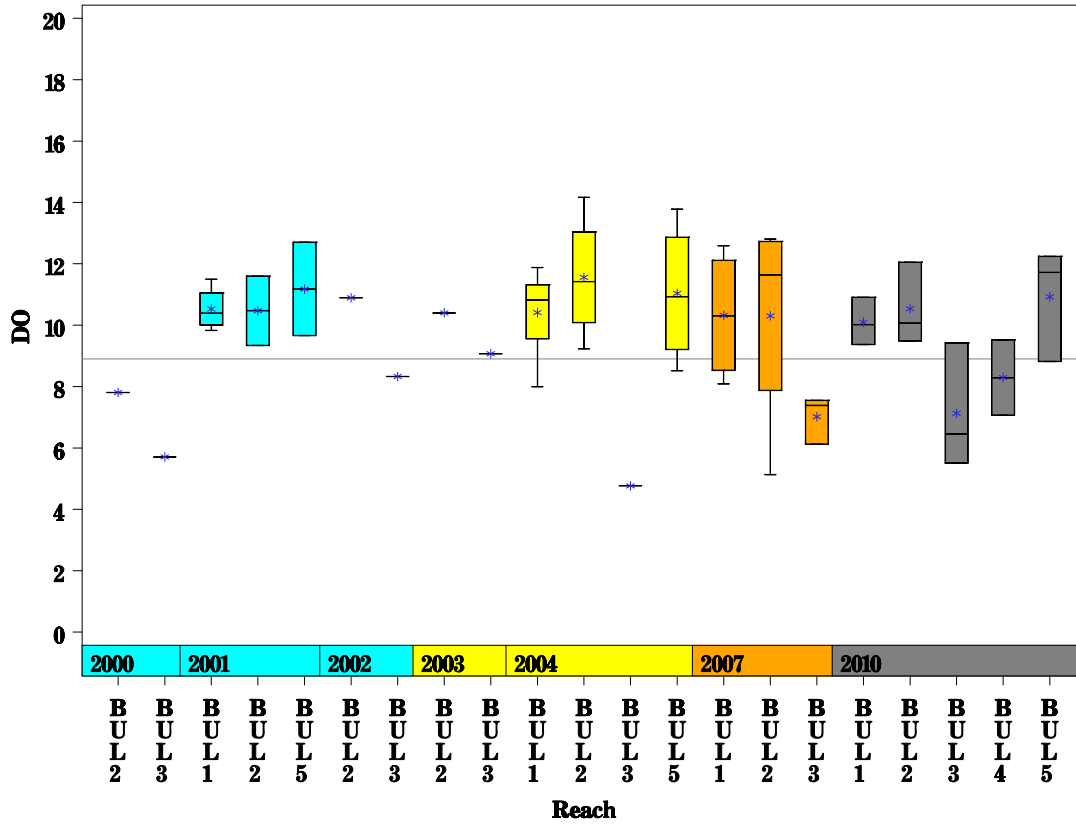
Aerial Map



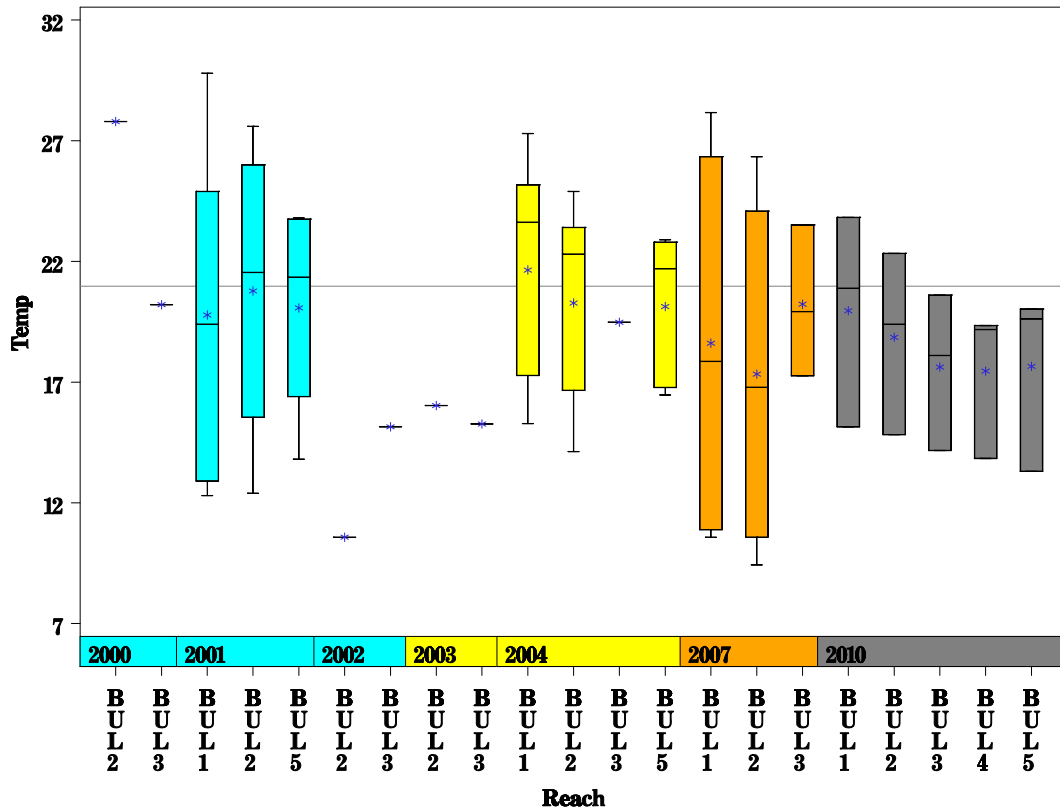
Bull Creek Watershed

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

Parameter=DISSOLVED OXYGEN Unit=MG/L Watershed=Bull Creek



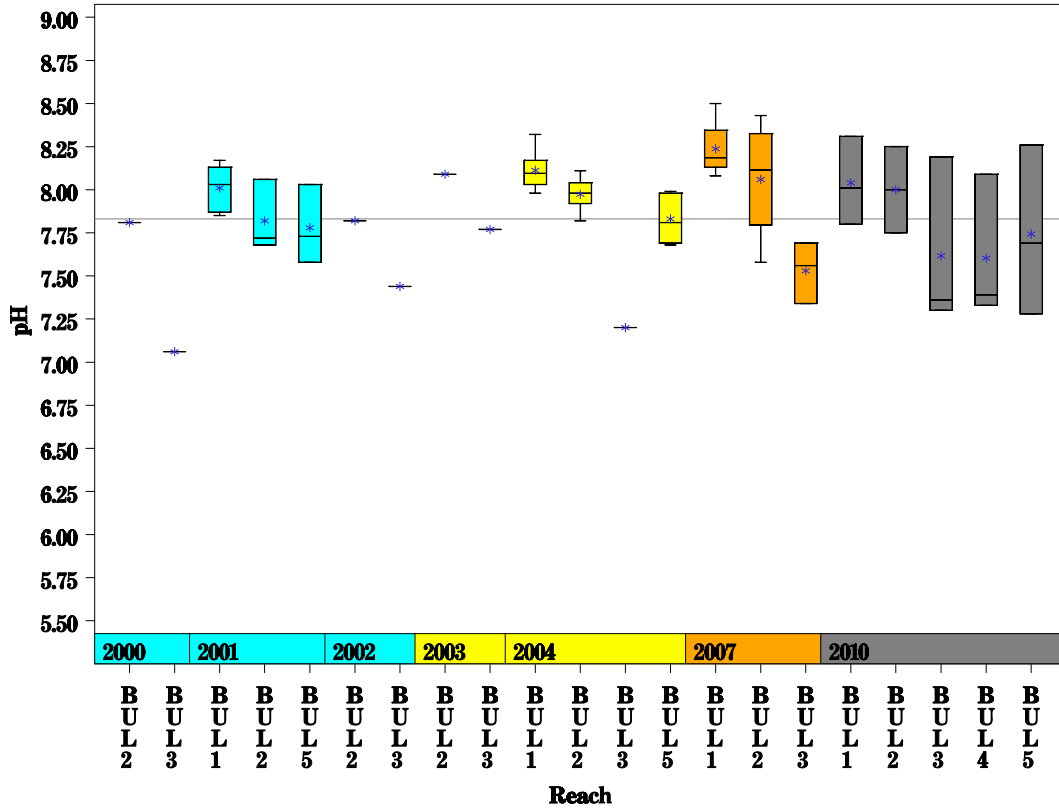
Parameter=WATER TEMPERATURE Unit=Deg C Watershed=Bull Creek



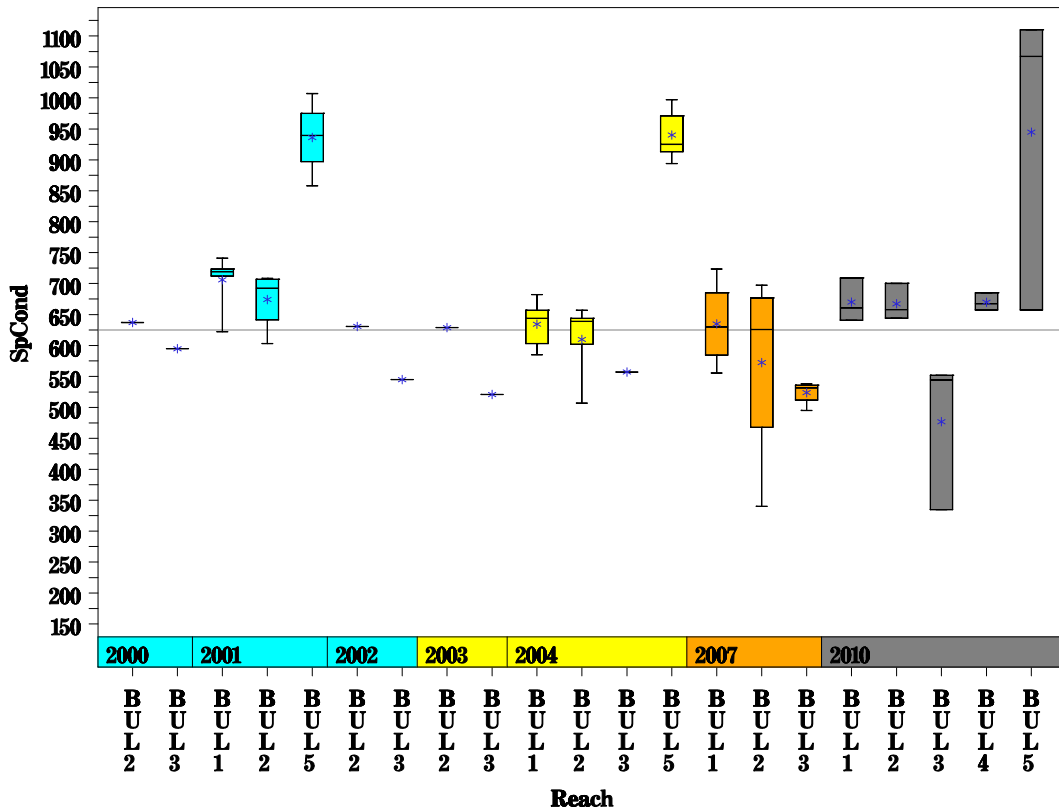
Bull Creek Watershed

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

Parameter=PH Unit=Standard units Watershed=Bull Creek



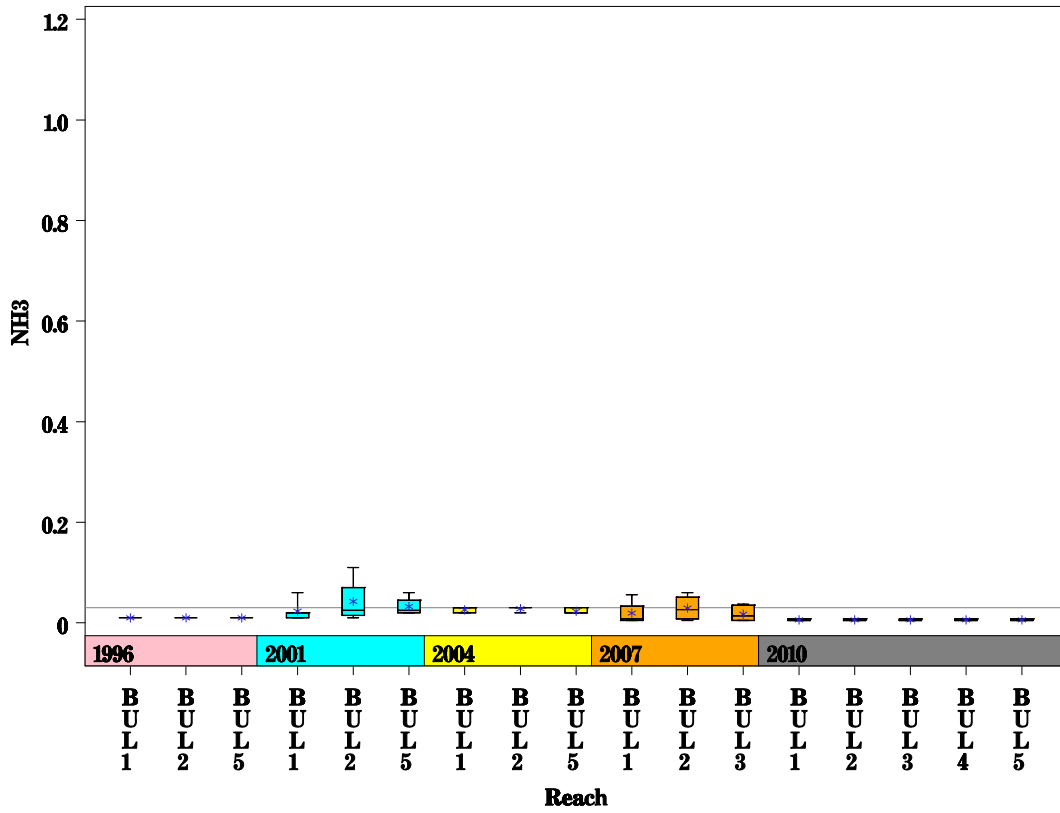
Parameter=CONDUCTIVITY Unit=uS/cm Watershed=Bull Creek



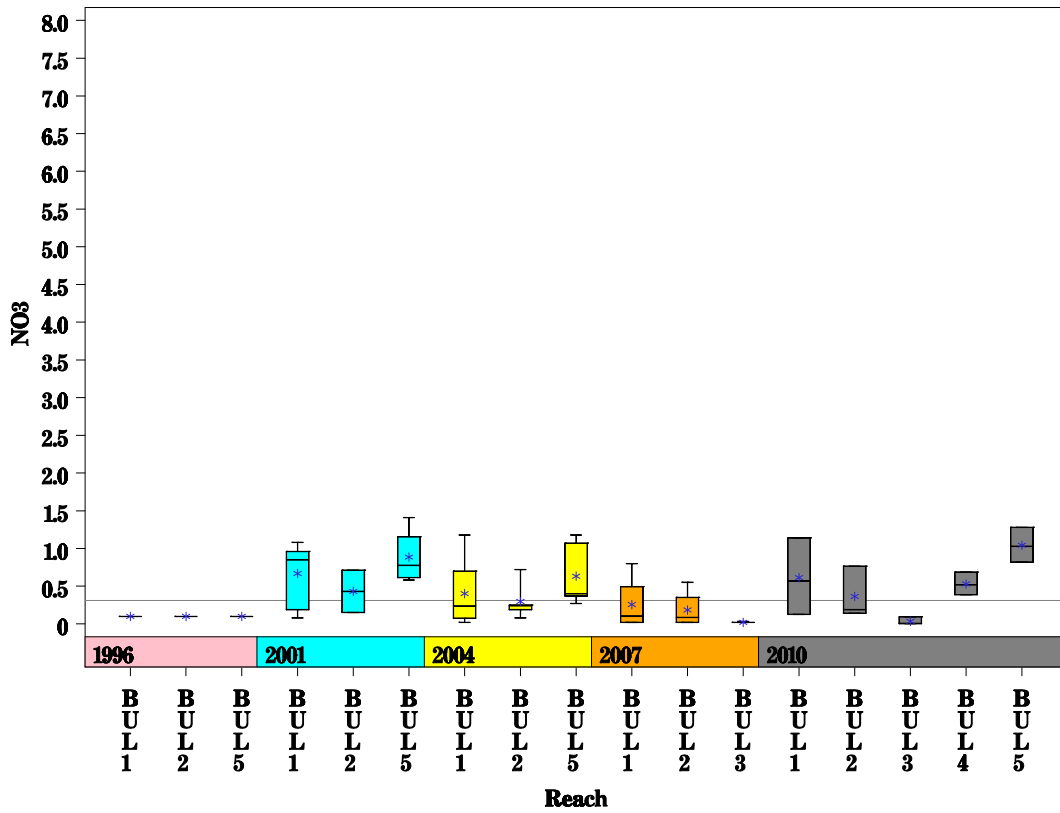
Bull Creek Watershed

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

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



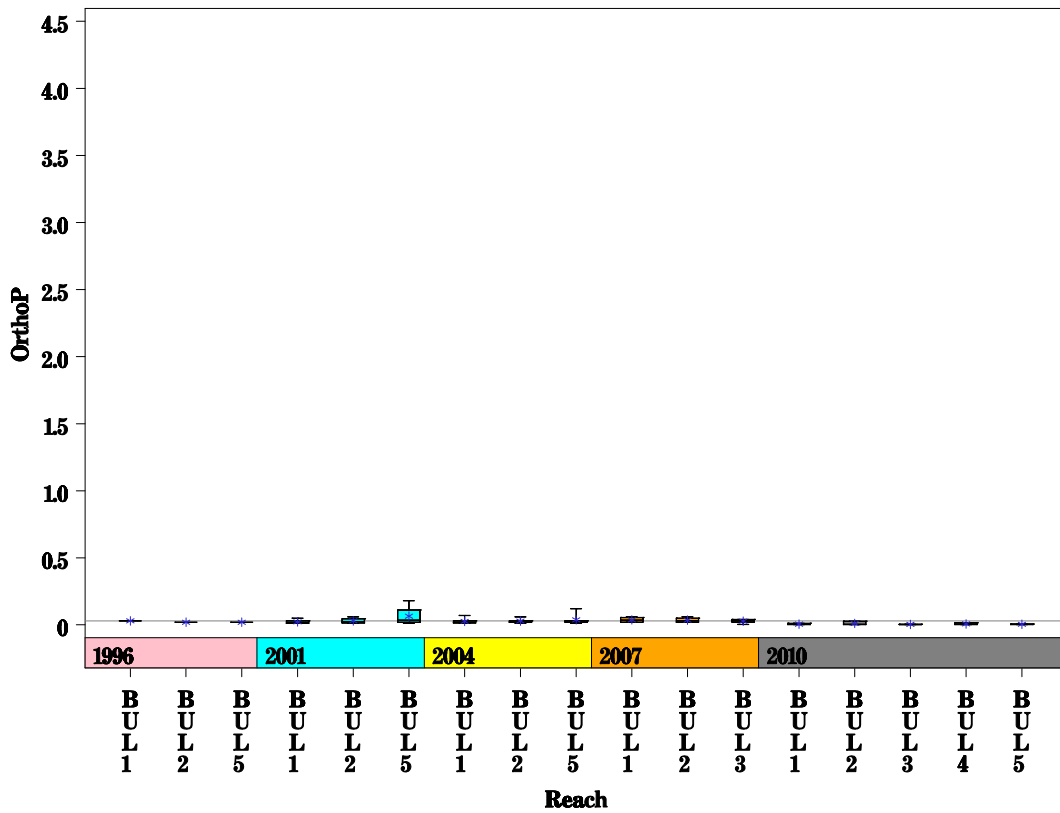
Parameter = NITRATE AS N Unit = MG/L Watershed = Bull Creek



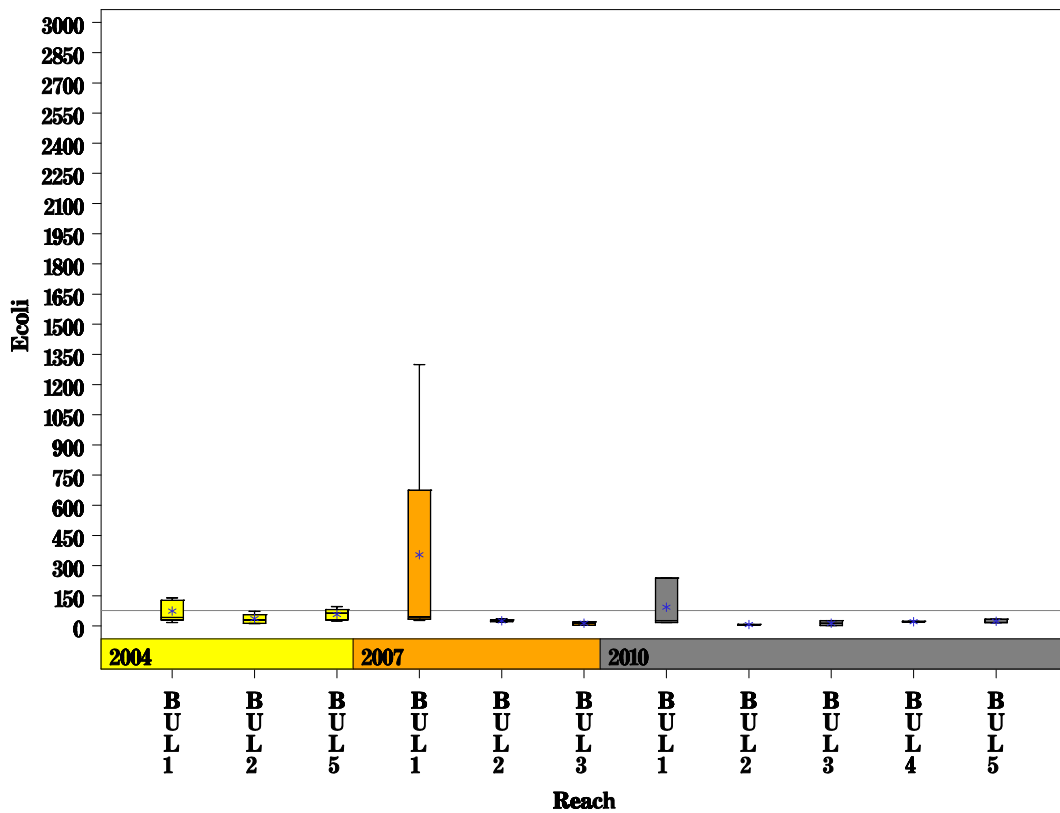
Bull Creek Watershed

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

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



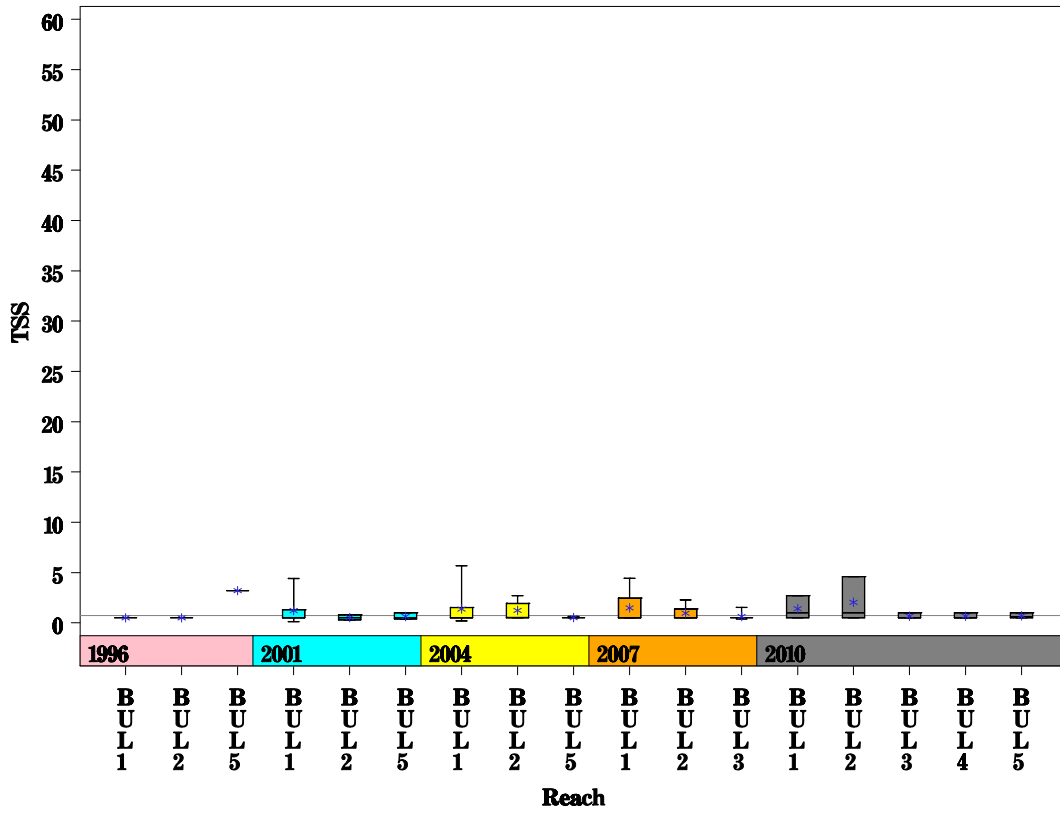
Parameter = E COLI BACTERIA Unit = MPN/dL Watershed = Bull Creek



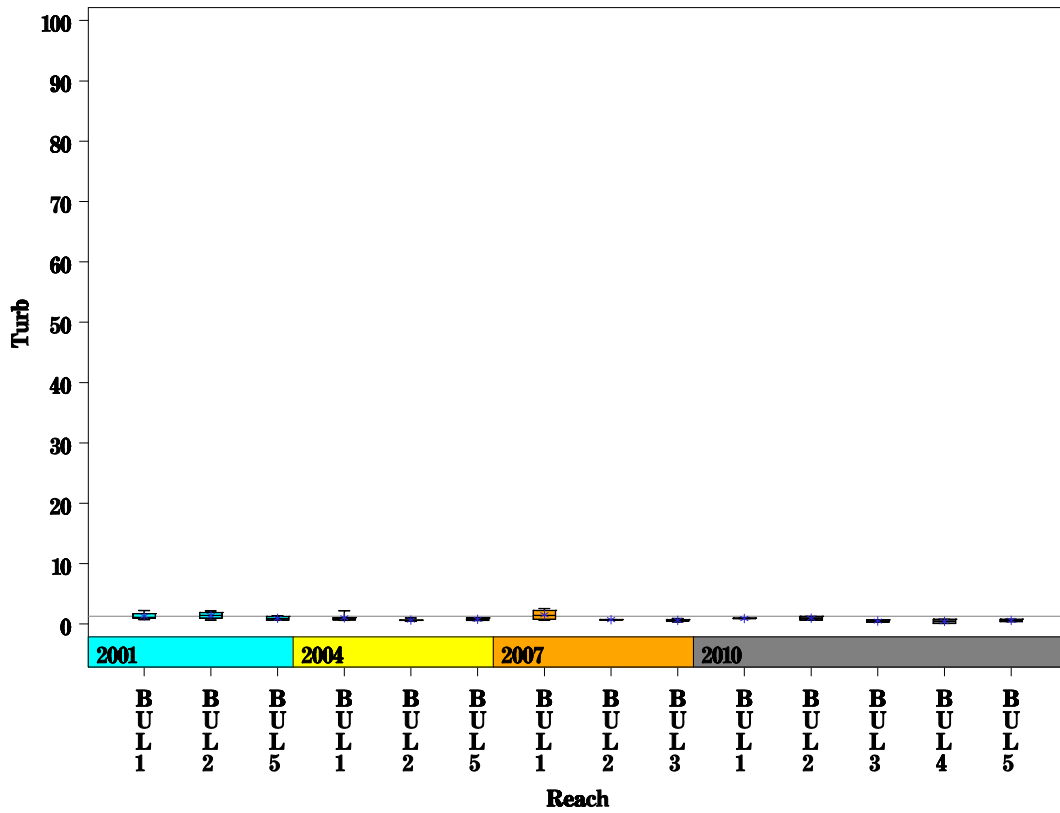
Bull Creek Watershed

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

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

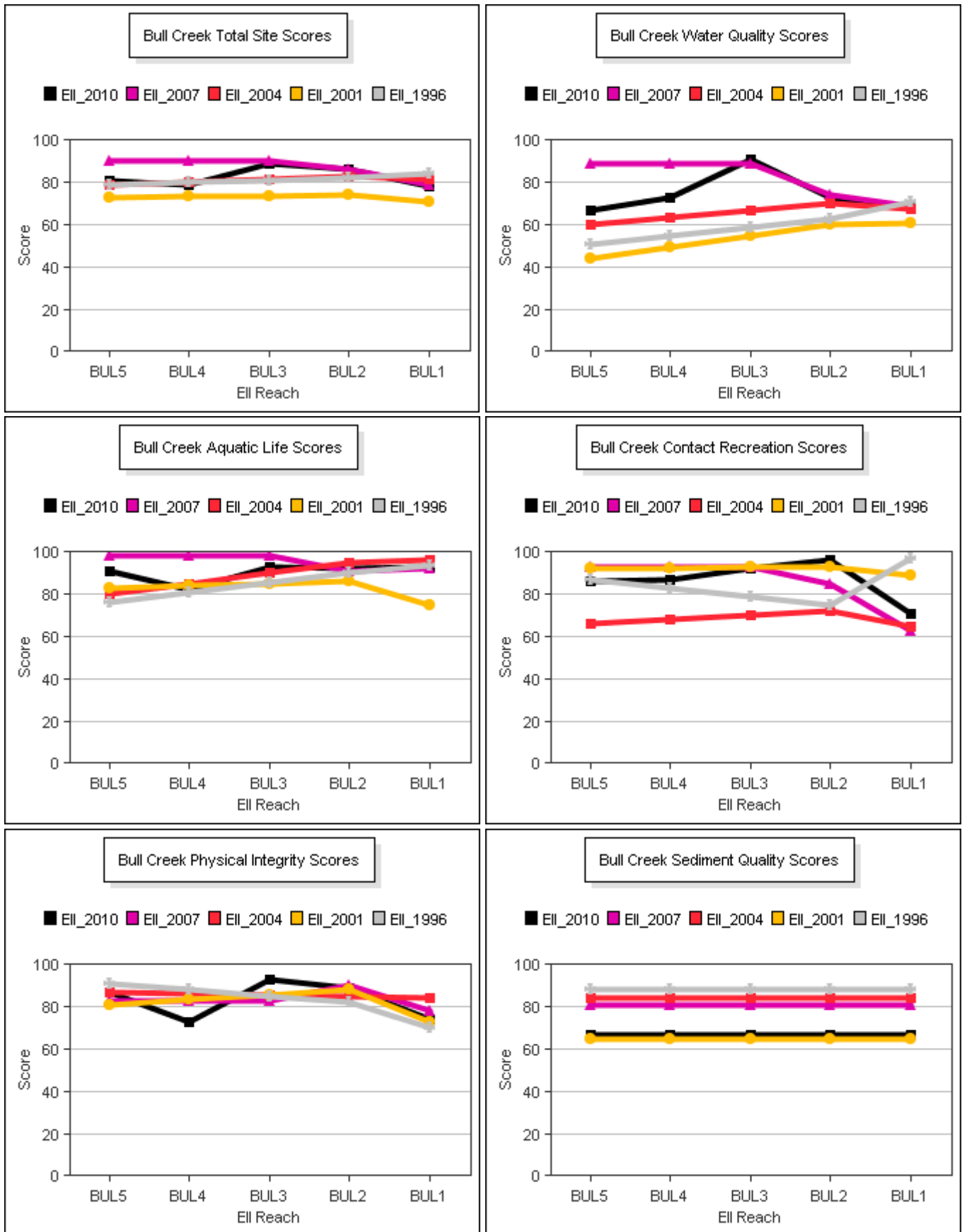


Parameter = TURBIDITY Unit = NTU Watershed = Bull Creek



Bull Creek Watershed

Score Summary – Reach scores for each sample year



Bull Creek Watershed

Site Photographs



1164_00-ur-05_26_2010



1164_00-ds-05_26_2010



151_00-us-05_26_2010



151_00-ds-05_26_2010



349_00-us-05_26_2010



349_00-ds-05_26_2010

Bull Creek Watershed

Site Photographs



920_00-us-05_26_2010



920_00-ds-05_26_2010



350_00-us-05_26_2010



350_00-ds-05_26_2010



347_us_06_18_2007



347_ds_06_18_2007

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