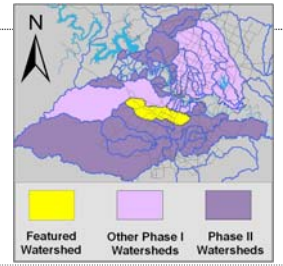


Williamson Creek Watershed

Summary Sheet

Catchment	Total area	30 square miles			
	Area in recharge	8 square miles			
	Creek length	19 miles			
Demographics	Receiving water	Onion Creek			
	2000 population	92,922			
	2030 projected population	129,514			
	30 year projected % increase	39 %			
Land Use	Impervious cover (2003 estimate)	17.89 %			
Overall EII Scores	2000	2003	2006	2009	2011
	70	69	67	62	55



Flow Regime* for Sample Sites on Williamson Creek Upstream to Downstream

Site #	Site Name	2003						2006					2009				2010	2011					
		Feb	Mar	Mar	May	Sep	Dec	Feb	May	Jul	Aug	Nov	Feb	May	May	Jun	Oct	Dec	Dec	Mar	Jun	Jun	Sep
		WQ	WQ	Bio	WQ	WQ	WQ	WQ	WQ	Bio	WQ	WQ	WQ	WQ	Bio	Bio	WQ	WQ	WQ	WQ	WQ	Bio	WQ
490	Hwy71	B	B	B	n	n	n	n	B	n	n	n	n	n	n	n	B	B	n	n	n	n	n
491	IH35	B	B	B	n	B	n	n	n	B	n	B	n	B	n	n	B	B	n	n	n	n	n
223	McKinney Falls	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
492	Pleasant Valley	B	B	B	B	B	B																

* 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 Williamson Creek

Summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	D.O. mg/l	12.9	16.4	10.4	Consistently high values.
	pH st.units	8.05	8.32	7.83	Some high values, mostly within normal range.
	Cond uS/cm	800	949	636	Some above average values, but within normal range.
Nutrients	NH ₃ mg/l	0.014	0.026	0.008	Within normal range.
	NO ₃ mg/l	0.281	0.553	0.163	Within normal range.
	Ortho P mg/l	0.050	0.07	0.02	Within normal range.
Sediment Load	TSS mg/l	1.2	1.5	0.8	Within normal range.
	Turbidity ntu	1.58	2.55	0.71	Within normal range.
Biology	E.Coli /100ml	178	488	17	Within normal range.
Benthic Macroinvertebrates and Diatoms: evaluations are provided in the introduction of this report					

Index scores* for Williamson 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 EII Score
WMS1	223	Williamson Creek @ McKinney Falls (Will1)	1996	61	82	90	66	55	66	54	77	70
WMS1	492	Williamson Creek @ Pleasant Valley (W2)	1996	71	82	47	86	48	77	73	81	69
WMS2	344	Williamson Creek DS Joe Tanner (USGS)	1996		82		53	73				52
WMS2	491	Williamson Creek @ IH35 (EII)	1996		82		60	45				47
WMS3	300	Williamson Creek @ Mowinkle Dr (MOW)	1996		82		63	66				53
WMS3	490	Williamson Creek @ Hwy 71 (EII)	1996		82		60	64				52
WMS1	223	Williamson Creek @ McKinney Falls (Will1)	2000	69	92	95	84	47	50	44	55	73
WMS1	492	Williamson Creek @ Pleasant Valley (W2)	2000	75	92	88	73	46	51	75	27	71
WMS2	344	Williamson Creek DS Joe Tanner (USGS)	2000	64	92	94	53	60	62	85	39	71
WMS2	491	Williamson Creek @ IH35 (EII)	2000	76	92	88	73	43	42	29	55	69
WMS3	300	Williamson Creek @ Mowinkle Dr (MOW)	2000	68	92	93	88	49	62	65	59	75
WMS3	490	Williamson Creek @ Hwy 71 (EII)	2000	62	92	96	38	35	54	40	68	63
WMS1	223	Williamson Creek @ McKinney Falls (Will1)	2003	60	80	89	88	69	33	20	46	70
WMS1	492	Williamson Creek @ Pleasant Valley (W2)	2003	63	80	84	70	57	46	42	49	67
WMS2	491	Williamson Creek @ IH35 (EII)	2003	66	80	99	65	61	35	26	44	68
WMS3	490	Williamson Creek @ Hwy 71 (EII)	2003	61	80	85	69	76	56	46	66	71
WMS1	223	Williamson Creek @ McKinney Falls (Will1)	2006	66	76	53	85	76	77	74	80	72
WMS2	491	Williamson Creek @ IH35 (EII)	2006	86	76	80	63	57	43	33	53	68
WMS3	490	Williamson Creek @ Hwy 71 (EII)	2006	67	76	76	71	43	25	25		60
WMS1	223	Williamson Creek @ McKinney Falls (Will1)	2009	67	79	43	82	69	79	64	94	70
WMS2	491	Williamson Creek @ IH35 (EII)	2009	77	79	46	58	55	58	58		62
WMS3	490	Williamson Creek @ Hwy 71 (EII)	2009	64	79	48	35	65	23	23		53
WMS1	223	Williamson Creek @ McKinney Falls (Will1)	2011	60	82	62	50	61	75	70	79	65
WMS2	491	Williamson Creek @ IH35 (EII)	2011		82		47	53				46
WMS3	490	Williamson Creek @ Hwy 71 (EII)	2011		82		35	55				43

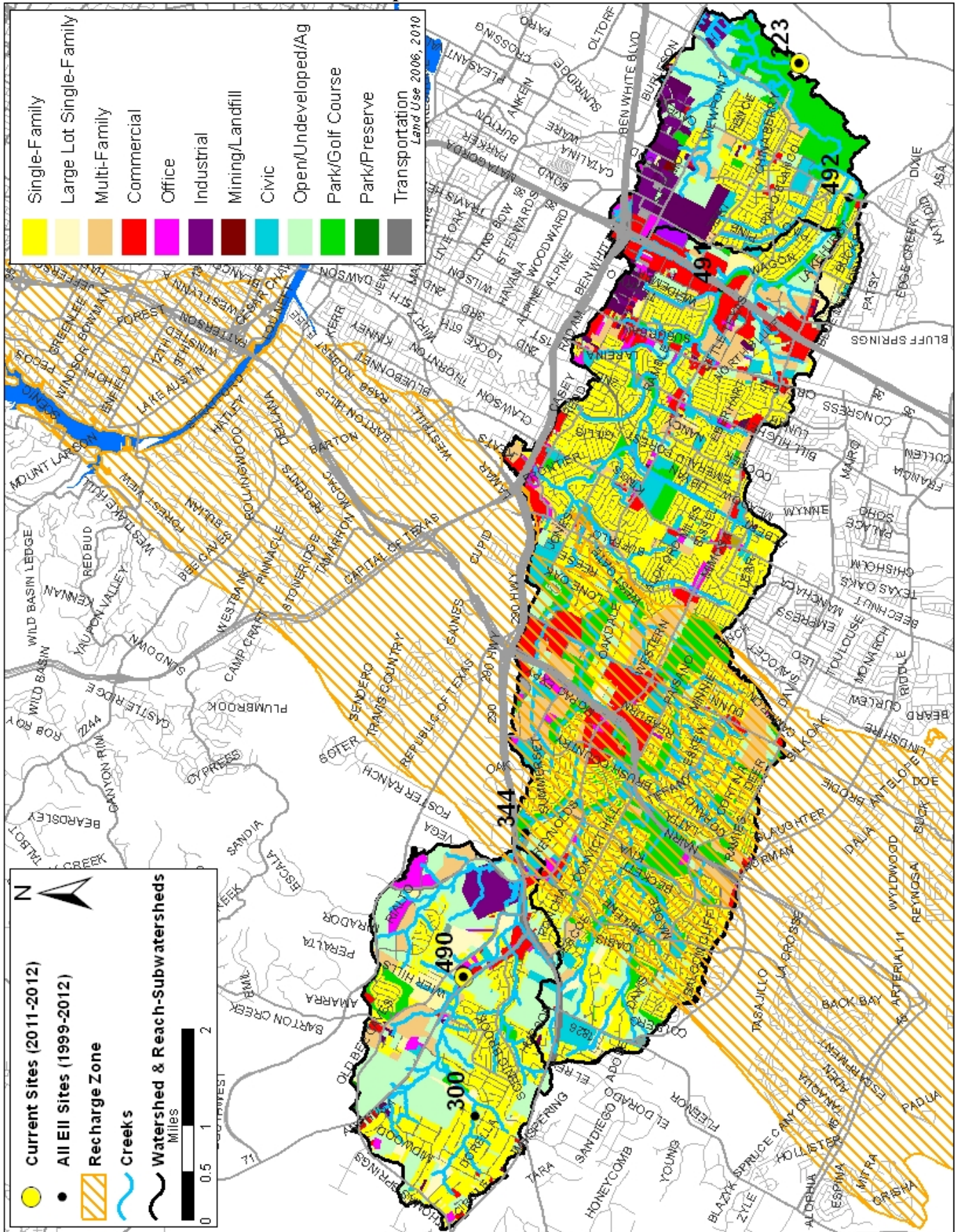
* blank cells indicate parameter was not collected, blank row indicate site was dropped

**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

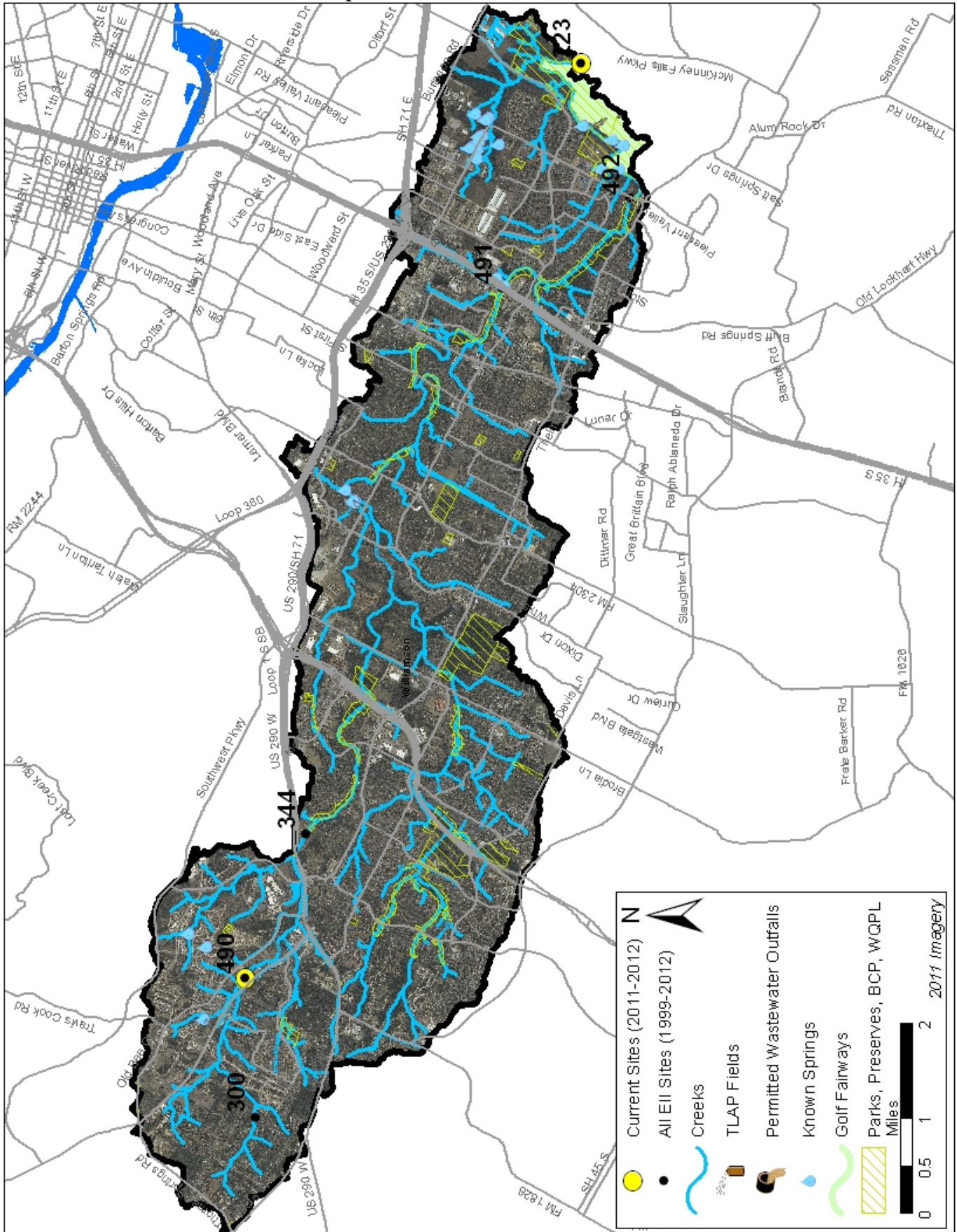
Williamson Creek Watershed

Land Use Map



Williamson Creek Watershed

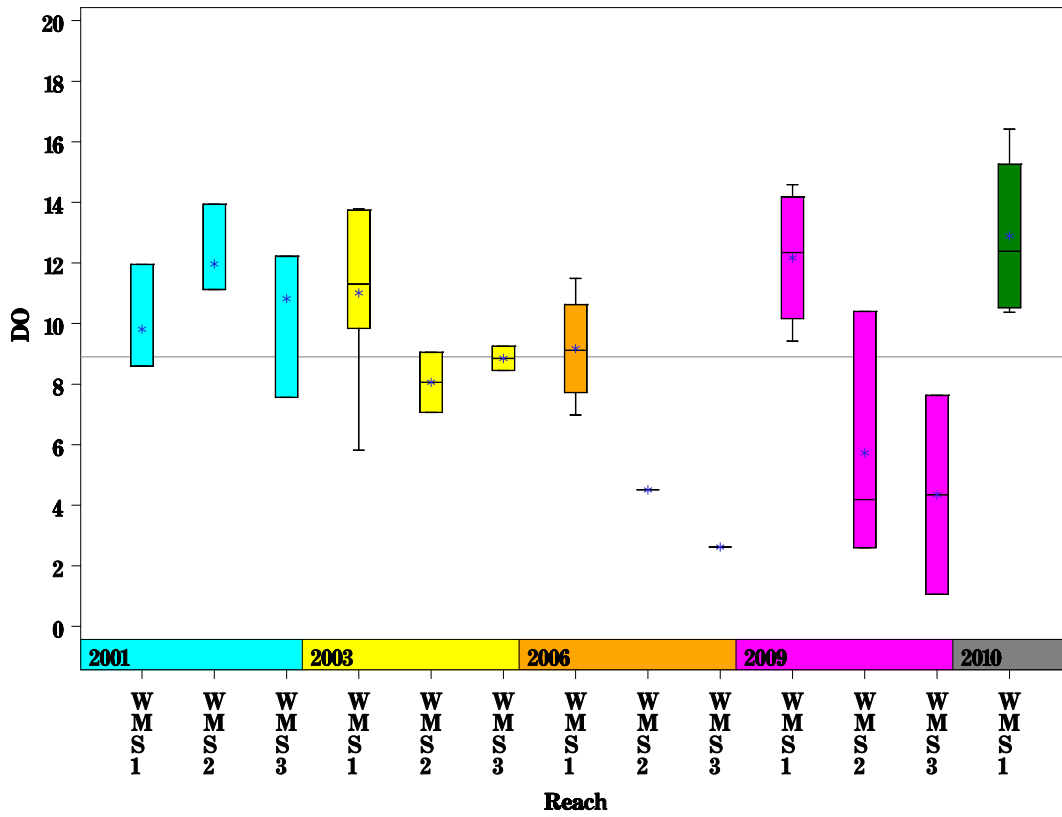
Aerial Map



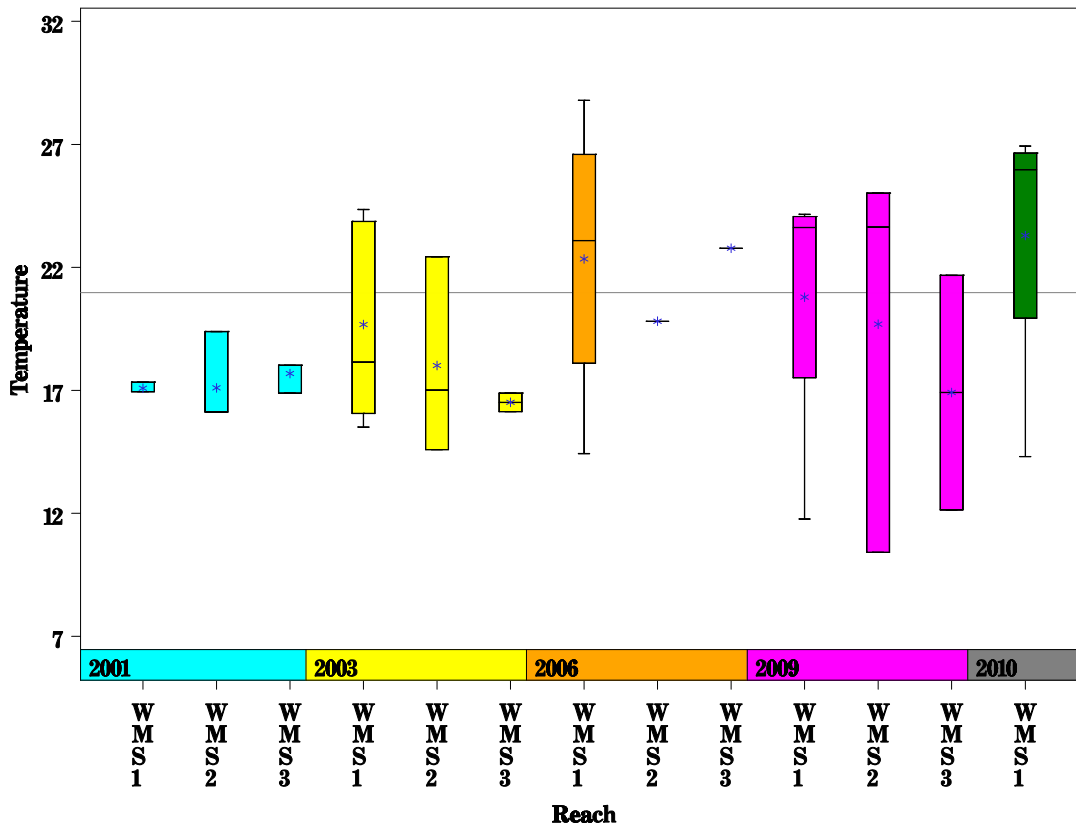
Williamson Creek Watershed

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

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



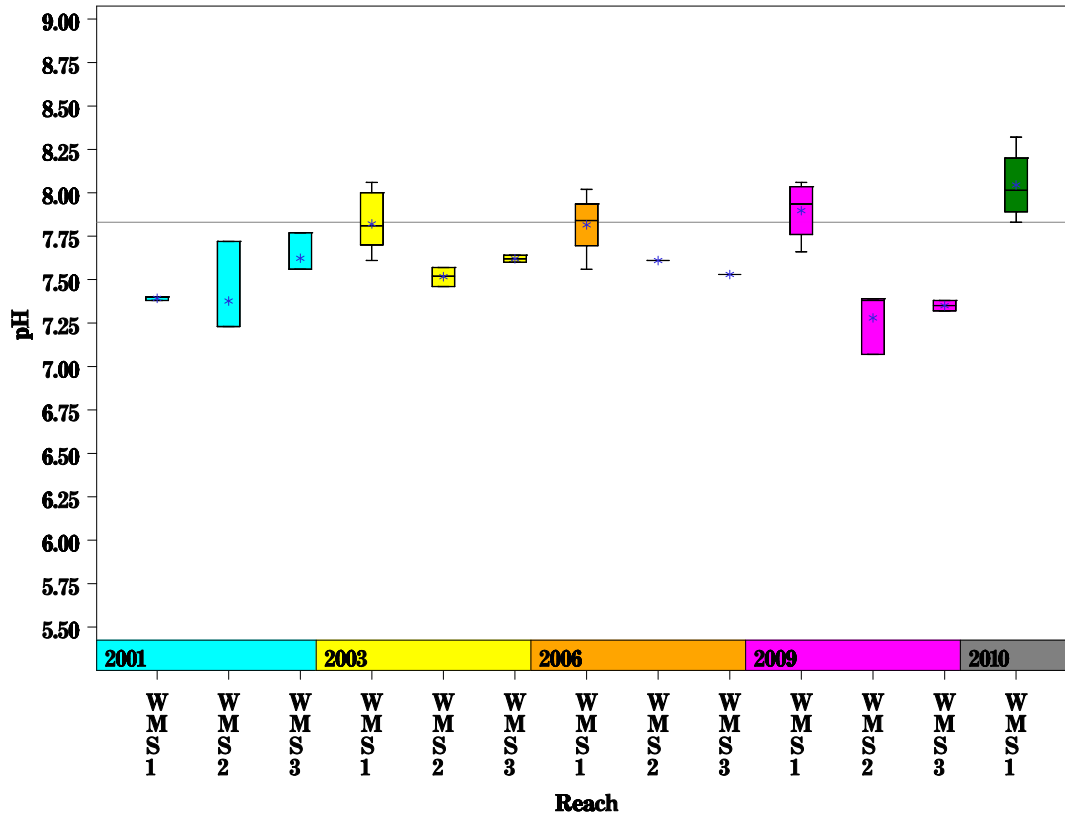
Parameter=WATER TEMPERATURE Unit=Deg. Celsius Watershed=Williamson Creek



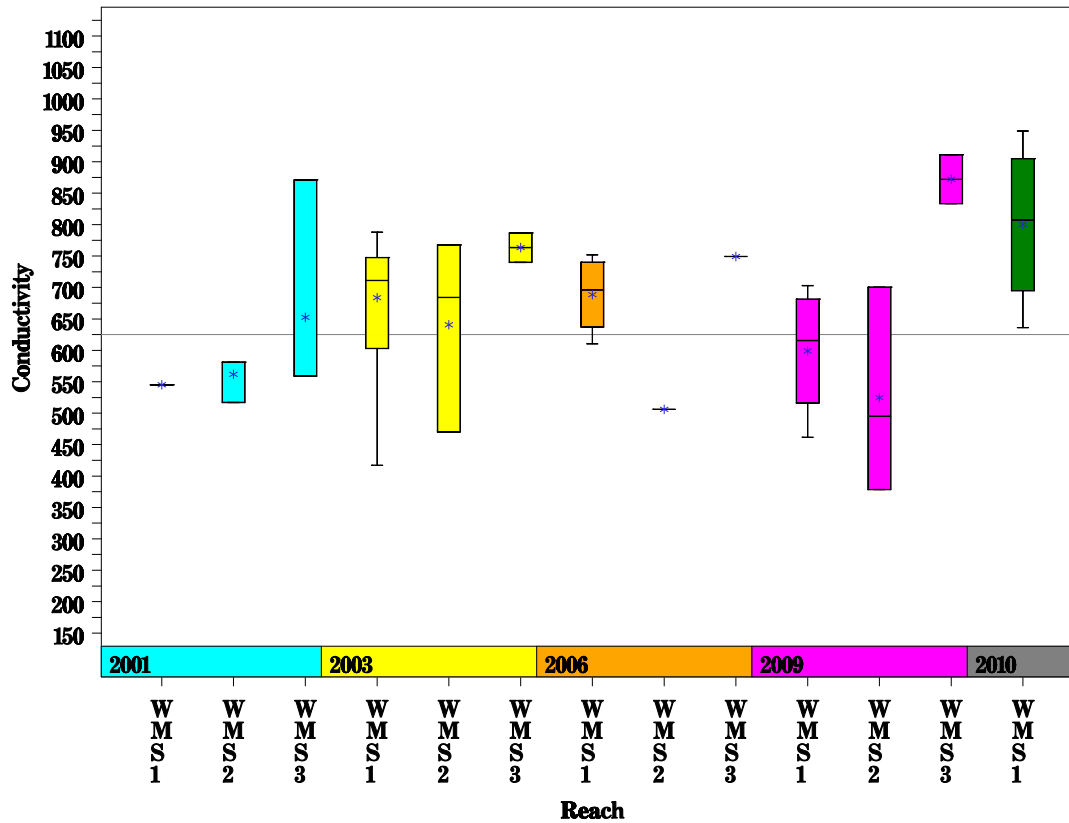
Williamson Creek Watershed

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

Parameter=PH Unit=Standard units Watershed=Williamson Creek



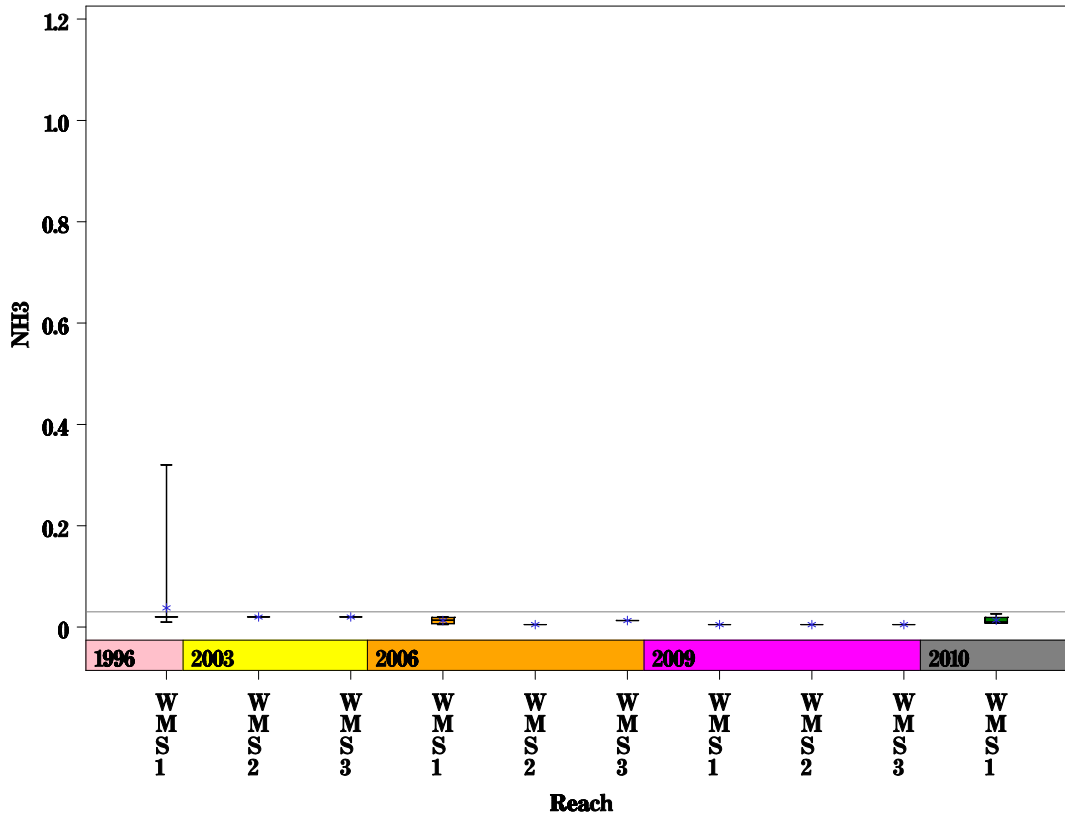
Parameter= CONDUCTIVITY Unit= uS/cm Watershed= Williamson Creek



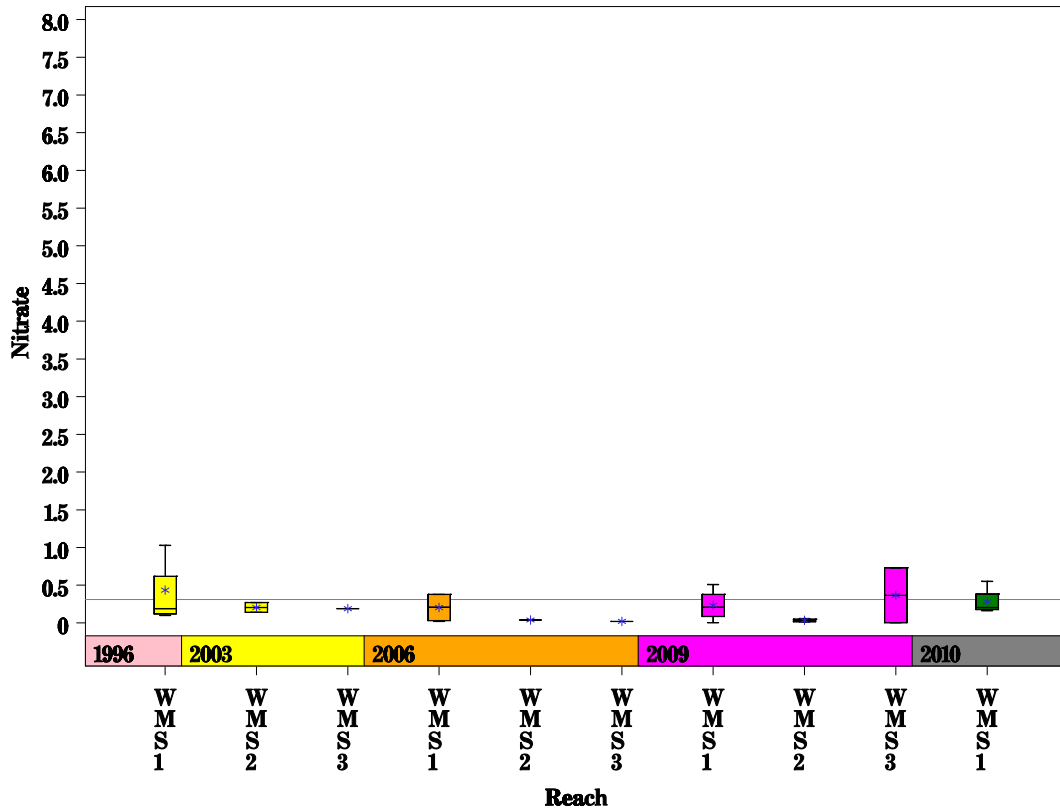
Williamson Creek Watershed

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

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



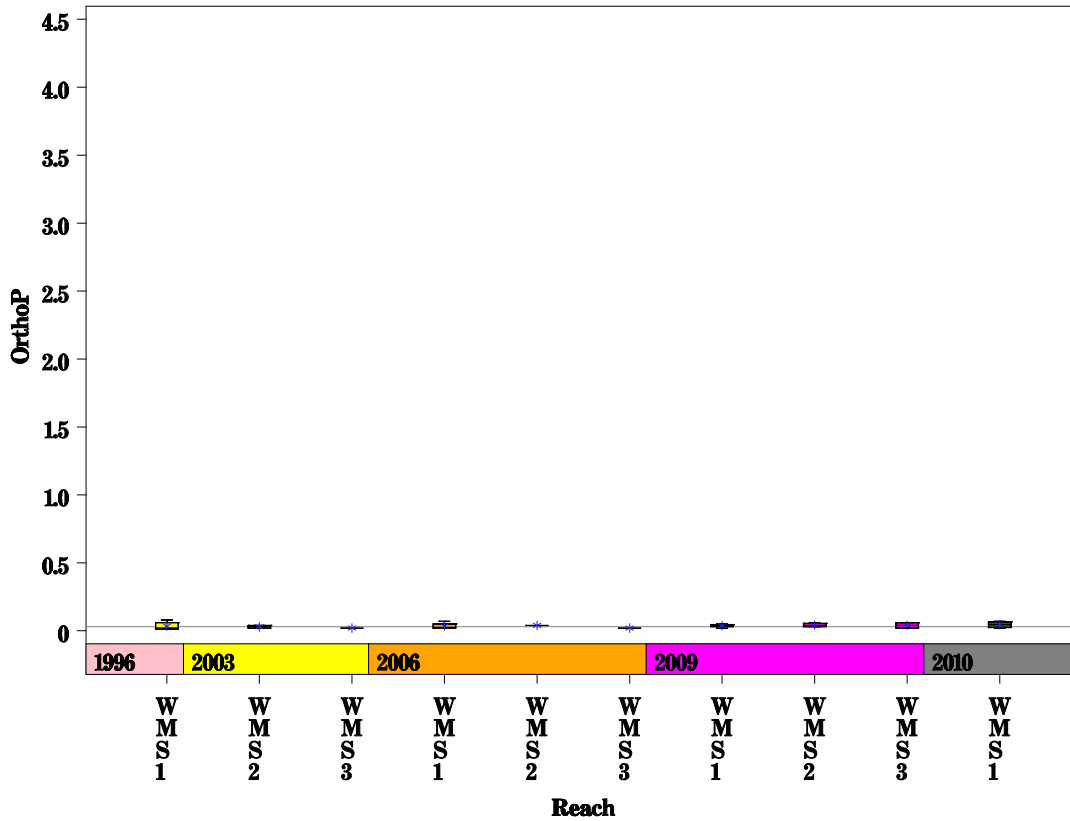
Parameter=NITRATE AS N Unit=MG/L Watershed=Williamson Creek



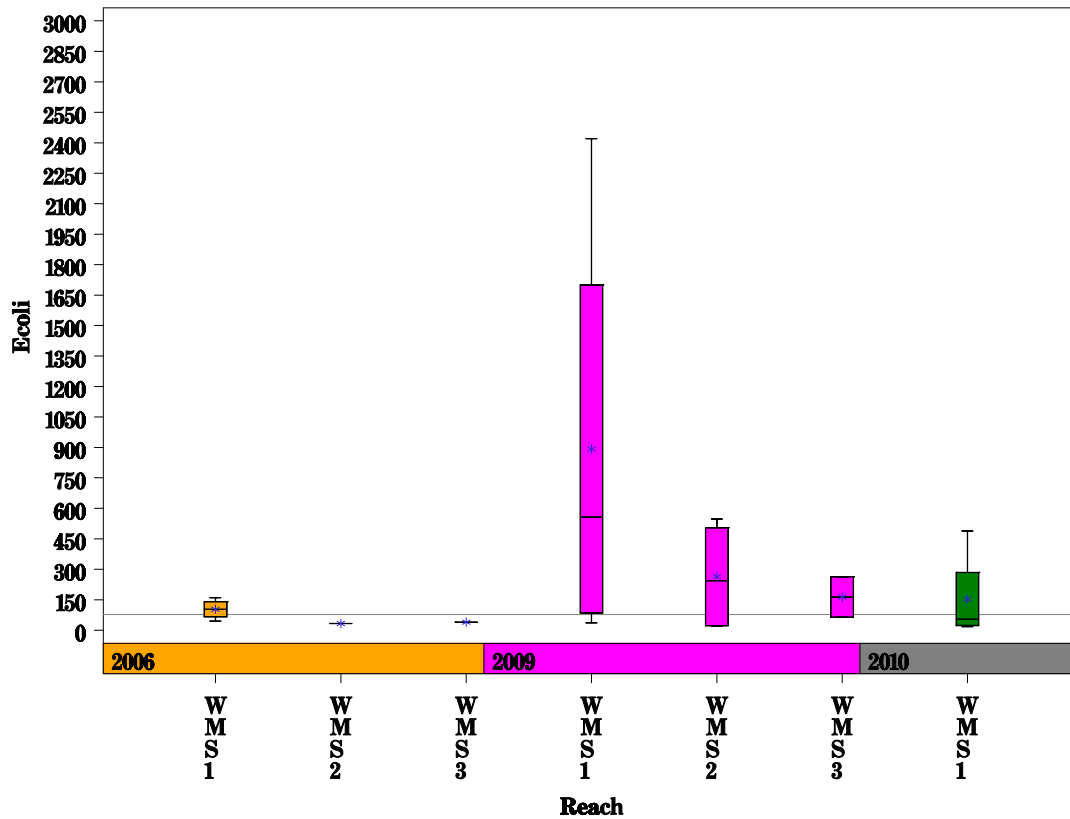
Williamson Creek Watershed

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

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



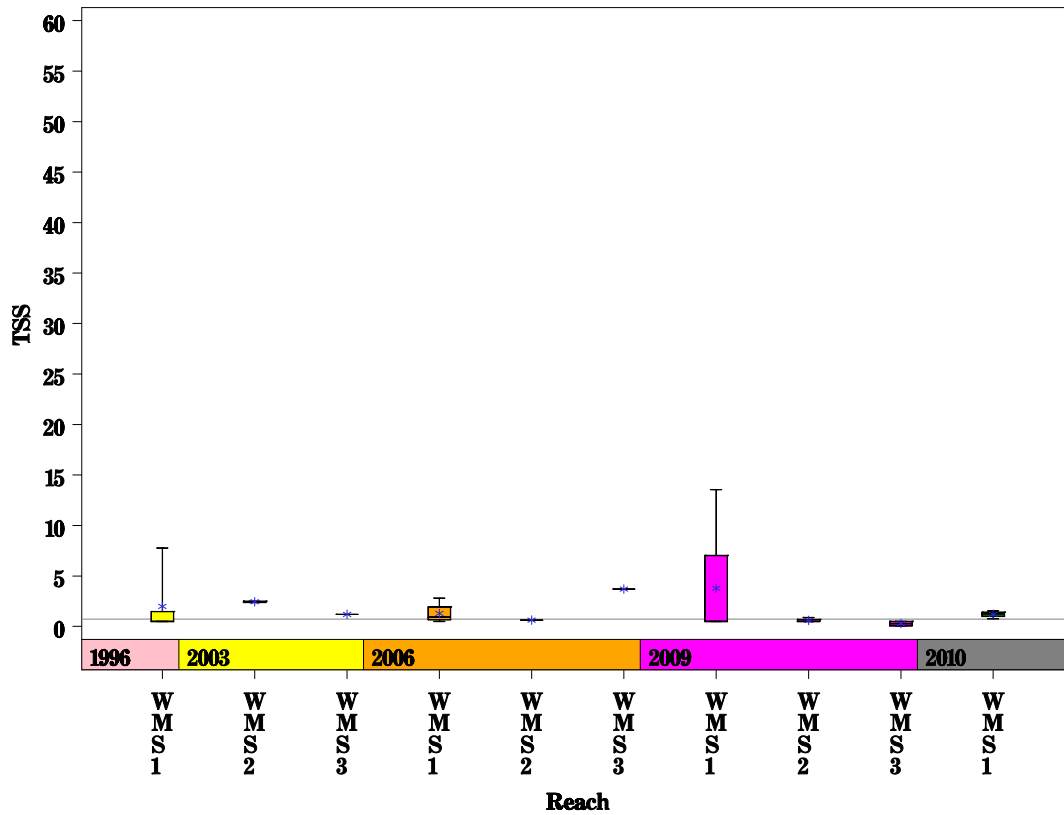
Parameter = E COLI BACTERIA Unit = MPN/100ML Watershed = Williamson Creek



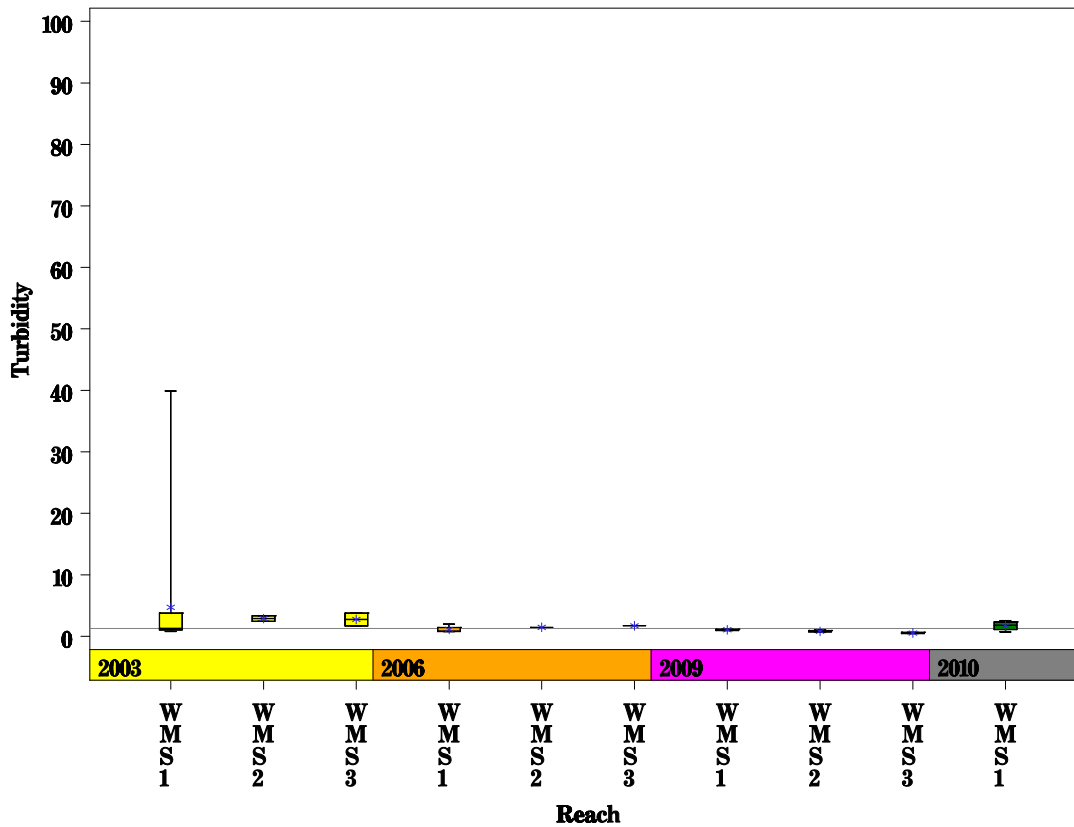
Williamson Creek Watershed

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

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

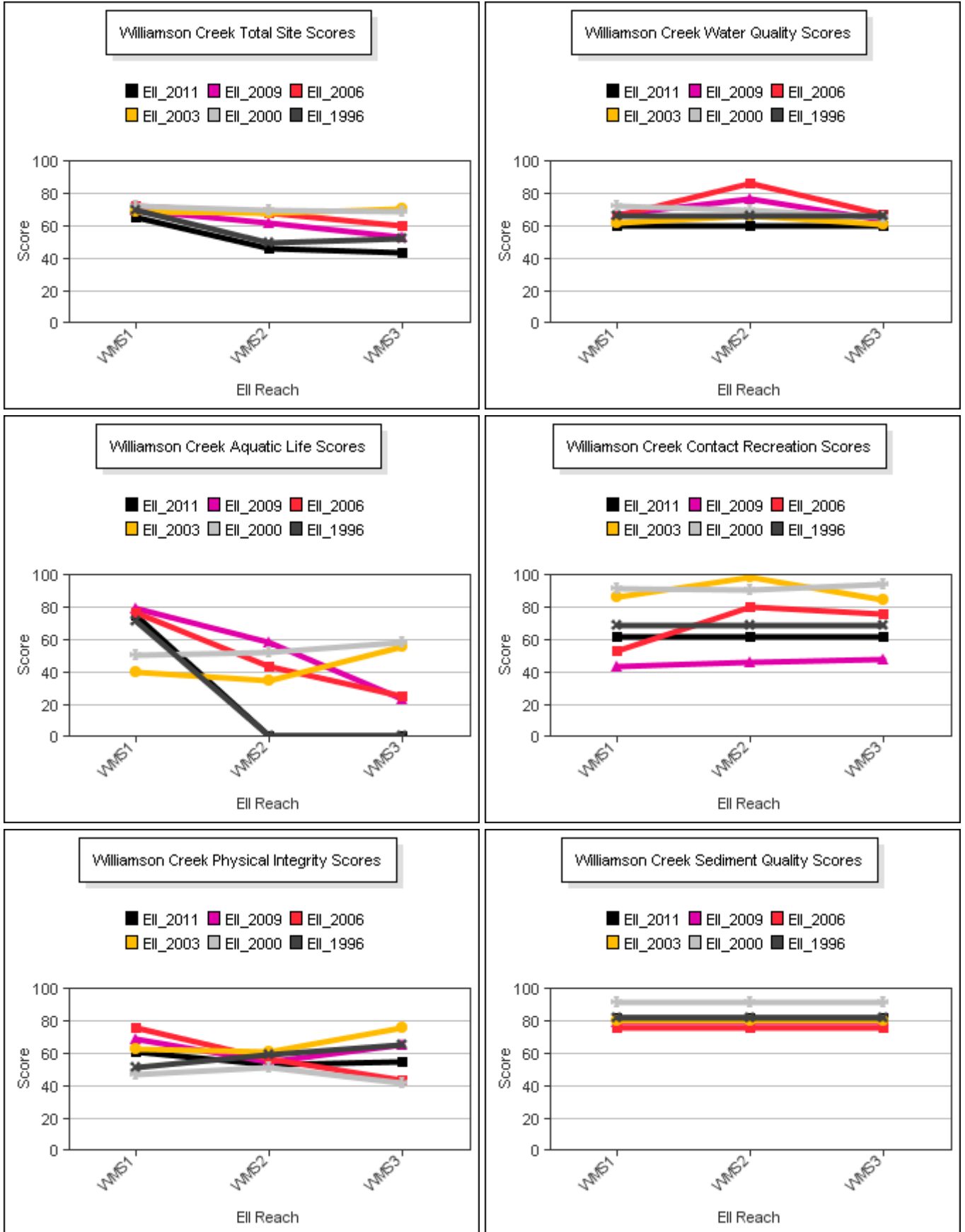


Parameter = TURBIDITY Unit = NTU Watershed = Williamson Creek



Williamson Creek Watershed

Score Summary – Reach scores for each sample year



Williamson Creek Watershed

Site Photographs



490_t00-us-06_02_2009



490_t00-ds-06_02_2009



300_t00-us-12_07_2000



300_t00-ds-02_15_2001



491_t00-ds-03_12_2003



491_t00-ds-06_02_2009

Williamson Creek Watershed

Site Photographs



344_t00-us-02_14_2001



344_t00-ds-12_07_2000



492_t00-us-03_12_2003



492_t00-ds-03_12_2003



223_t00-ur-02_14_2001



223_t00-ds-05_29_2009

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