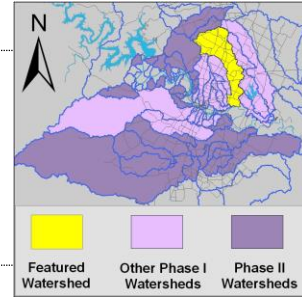


Walnut Creek Watershed

Summary Sheet

Catchment	Total area	43.5 square miles				
	Area in recharge	11.9 square miles				
	Creek length	22.3 miles				
Demographics	Receiving water	Colorado River				
	2000 population	93,934				
	2030 projected population	133,387				
Land Use	30 year projected % increase	42 %				
	Impervious cover (2003 estimate)	17.91 %				
Overall EII Scores	2000	76	71	72	68	69
	2003					
	2006					
	2009					
	2011					



Flow Regime* for Sample Sites on Walnut Creek

Site #	Site Name	2003					2004		2006					2009					2010		2011				
		Feb WQ	Mar WQ	Mar Bio	May WQ	Sep WQ	Dec WQ	May WQ	May Bio	Feb WQ	May WQ	Jul Bio	Aug WQ	Nov WQ	Feb WQ	May WQ	May Bio	Jun Bio	Oct WQ	Dec WQ	Dec WQ	Mar WQ	Jun WQ	Jun Bio	Sep WQ
463	at Metro Pk								B	B	B	B	B	B	B	B	B		B	B	B	B	B	B	n
895	ds Metric	B	B	B	B	B	B			B	B	B	B	B	B	B	B		B	B	B	B	B	B	B
464	ds IH35	B	B	B	B	B	B			B	B	B	B	B	B	B	B		B	B	B	B	n	n	n
465	Loyola	B	B	B	B	B	B																		
502	Old Manor	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B		B	B	B	B	B	B	n
503	us Freescale	B	B	B	B	B	B			B	B	B	n	B	B	B		B	B	B	n	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 Walnut Creek

Summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	D.O. mg/l	7.6	11.1	2.6	Wide range of values, some low and some elevated.
	pH st.units	7.74	8.19	7.03	Within normal range, some low values throughout.
	Cond uS/cm	572	674	460	Within normal range.
Nutrients	NH ₃ mg/l	0.015	0.059	0.008	Within normal range, generally higher at upstream sites.
	NO ₃ mg/l	0.295	1.070	0.008	Within normal range.
	Ortho P mg/l	0.015	0.090	0.004	Mostly very low, higher values at upstream site 463.
Sediment Load	TSS mg/l	2.4	8.1	0.2	Some above average values, but within normal range.
	Turbidity ntu	1.85	7.32	0.42	Some above average readings but within normal range.
Biology	E.Coli /100ml	312	2420	1	Wide range of values, most within normal range, some high readings at site 895.
	Benthic Macroinvertebrates and Diatoms: evaluations are provided in the introduction of this report				

Index Scores* for Walnut 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
WLN1	503	Walnut Creek US of Freescale	1996	50	84	73	78	41	74	86	62	63
WLN2	465	Walnut Creek @ Loyola Lane	1996	55	84	79	60	33	72	88	55	64
WLN2	500	Walnut Creek @ Springdale Rd	1996	63	84	23	86	44	81	100	61	64
WLN3	464	Walnut Creek DS of IH35	1996	52	84	53	80	54	75	79	70	66
WLN3	659	Walnut Creek @ Lamar Blvd	1996	58	84	93	73	65	86	85	86	77
WLN1	503	Walnut Creek US of Freescale	2000	51	95	91	68	35	67	75	58	68
WLN2	465	Walnut Creek @ Loyola Lane	2000	62	95	97	92	49	88	100	75	81
WLN2	500	Walnut Creek @ Springdale Rd	2000	73	95	97	96	40	79	100	57	80
WLN3	464	Walnut Creek DS of IH35	2000	67	95	90	72	50	72	87	57	74
WLN3	659	Walnut Creek @ Lamar Blvd	2000	66	95	87	80	52	72	71	72	75
WLN1	503	Walnut Creek US of Freescale	2003	64	75	86	78	48	56	69	42	68
WLN2	465	Walnut Creek @ Loyola Lane	2003	56	75	88	71	63	69	87	51	70
WLN2	502	Walnut Creek @ Old Manor Road	2003	61	75	88	73	64	66	84	47	71
WLN3	464	Walnut Creek DS of IH35	2003	59	75	72	82	75	79	97	60	74
WLN4	895	Walnut Creek DS of Metric Blvd	2003	64	75	51	78	74	76	88	63	70
WLN1	503	Walnut Creek US of Freescale	2006	58	82	54	70	63	100	100	99	71
WLN2	502	Walnut Creek @ Old Manor Road	2006	72	82	59	58	69	97	100	93	73
WLN3	464	Walnut Creek DS of IH35	2006	67	82	56	78	69	95	93	97	75
WLN4	895	Walnut Creek DS of Metric Blvd	2006	60	82	28	81	73	94	95	92	70
WLN5	463	Wells Branch Creek @ Walnut Metro Pk	2006	66	82	43	87	71	80	78	81	72
WLN1	503	Walnut Creek US of Freescale	2009	66	72	45	69	64	83	73	92	67
WLN2	502	Walnut Creek @ Old Manor Road	2009	65	72	34	82	57	96	97	95	68
WLN3	464	Walnut Creek DS of IH35	2009	67	72	37	79	71	96	100	91	70
WLN4	895	Walnut Creek DS of Metric Blvd	2009	61	72	25	74	79	81	83	79	65
WLN5	463	Wells Branch Creek @ Walnut Metro Pk	2009	64	72	40	83	74	92	93	91	71
WLN1	503	Walnut Creek US of Freescale	2011	74	78	72	47	41	65	80	50	63
WLN2	502	Walnut Creek @ Old Manor Road	2011	76	78	91	63	63	74	56	92	74
WLN3	464	Walnut Creek DS of IH35	2011	81	78	65	68	67	77	70	83	73
WLN4	895	Walnut Creek DS of Metric Blvd	2011	52	78	35	72	68	75	78	71	63
WLN5	463	Wells Branch Creek @ Walnut Metro Pk	2011	81	78	59	71	67	86	90	82	74

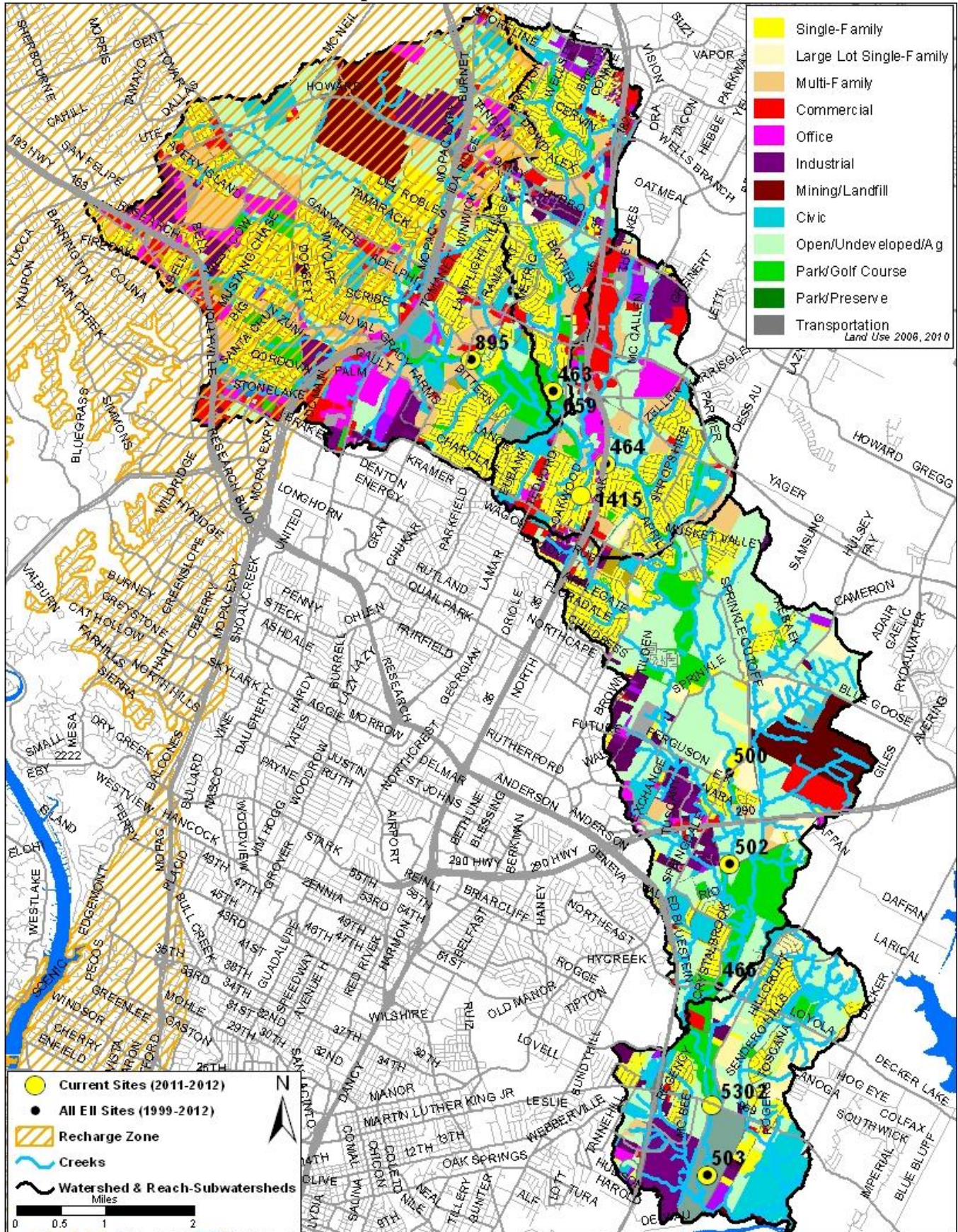
* blank cells indicate parameter was not collected, blank row indicate site was dropped

**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

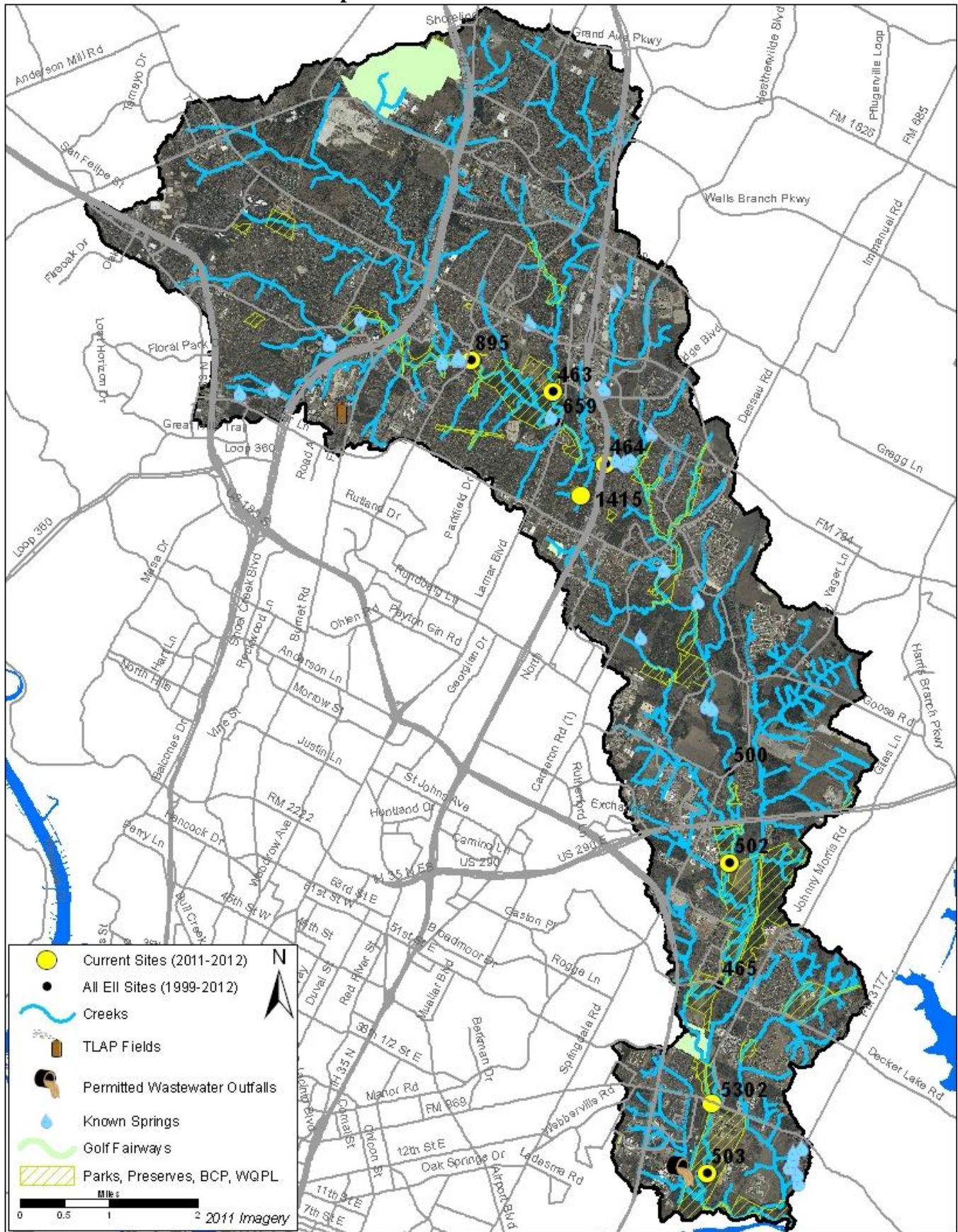
Walnut Creek Watershed

Land Use Map



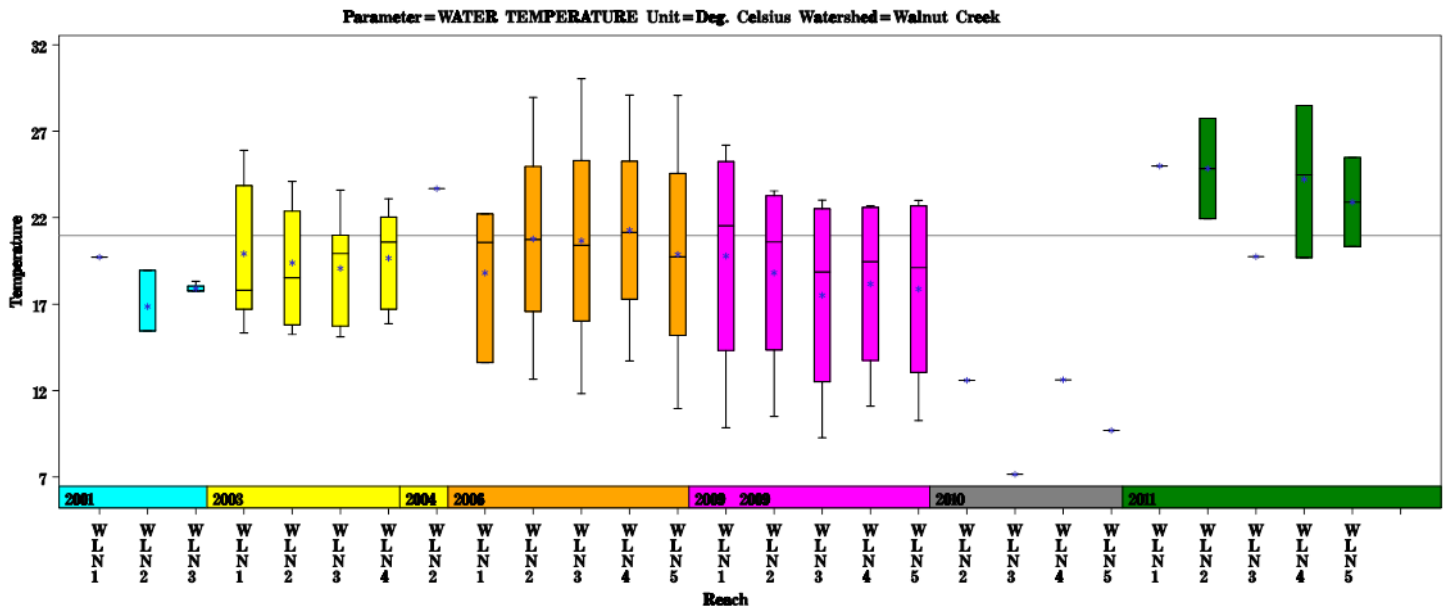
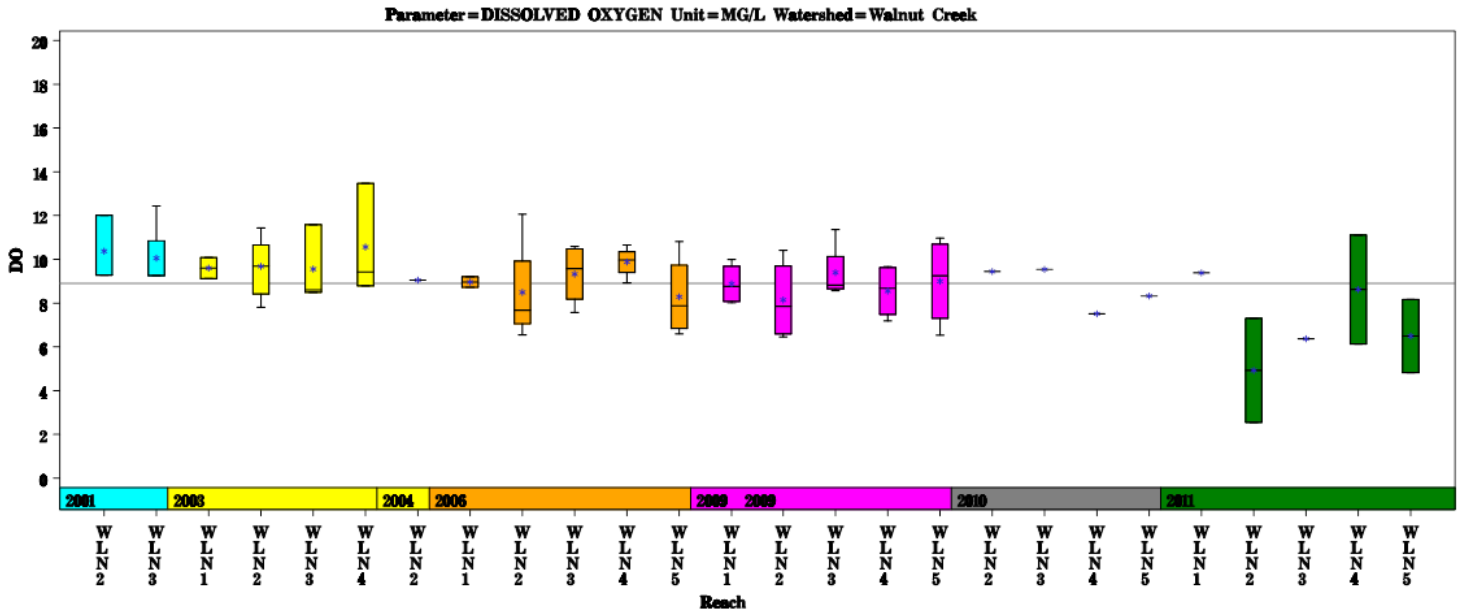
Walnut Creek Watershed

Aerial Map



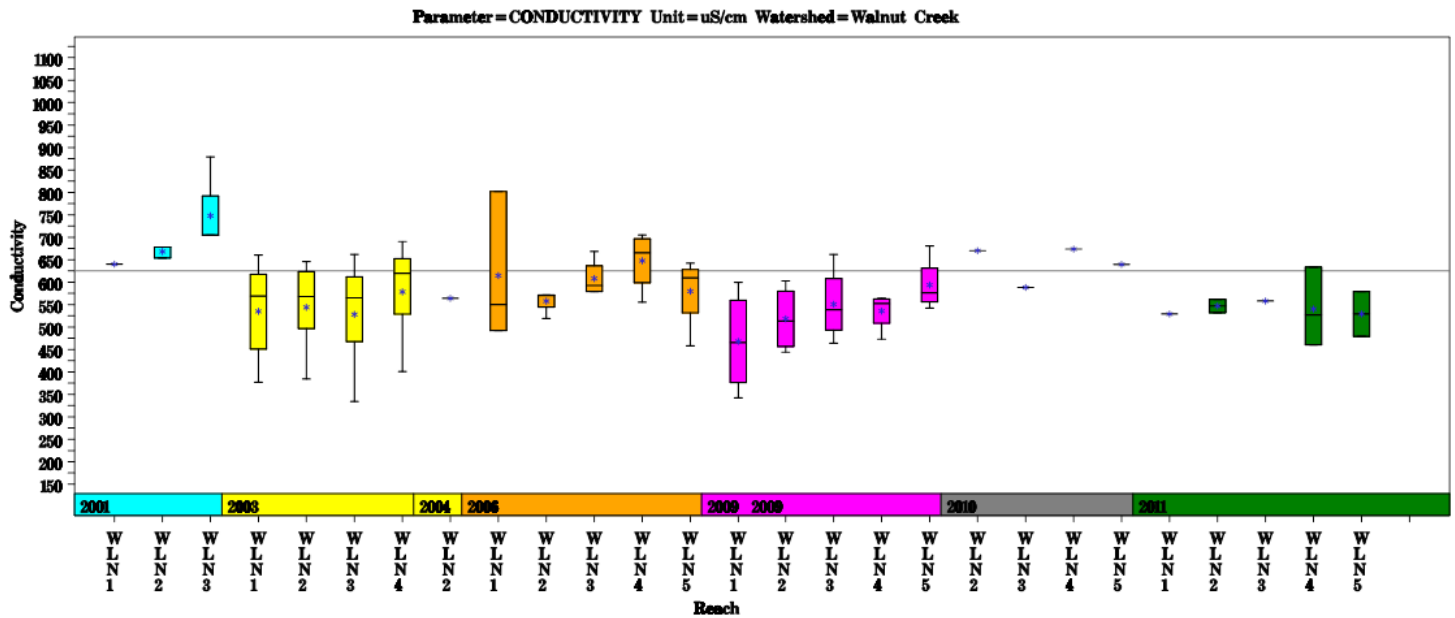
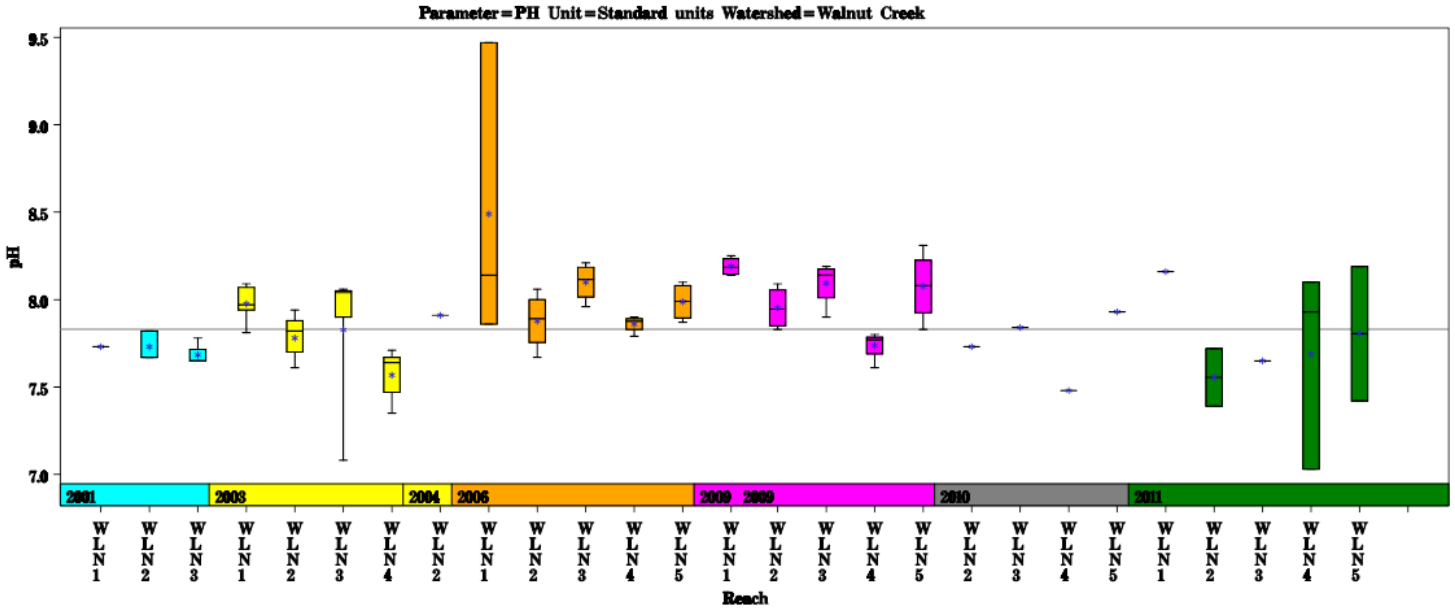
Walnut Creek Watershed

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



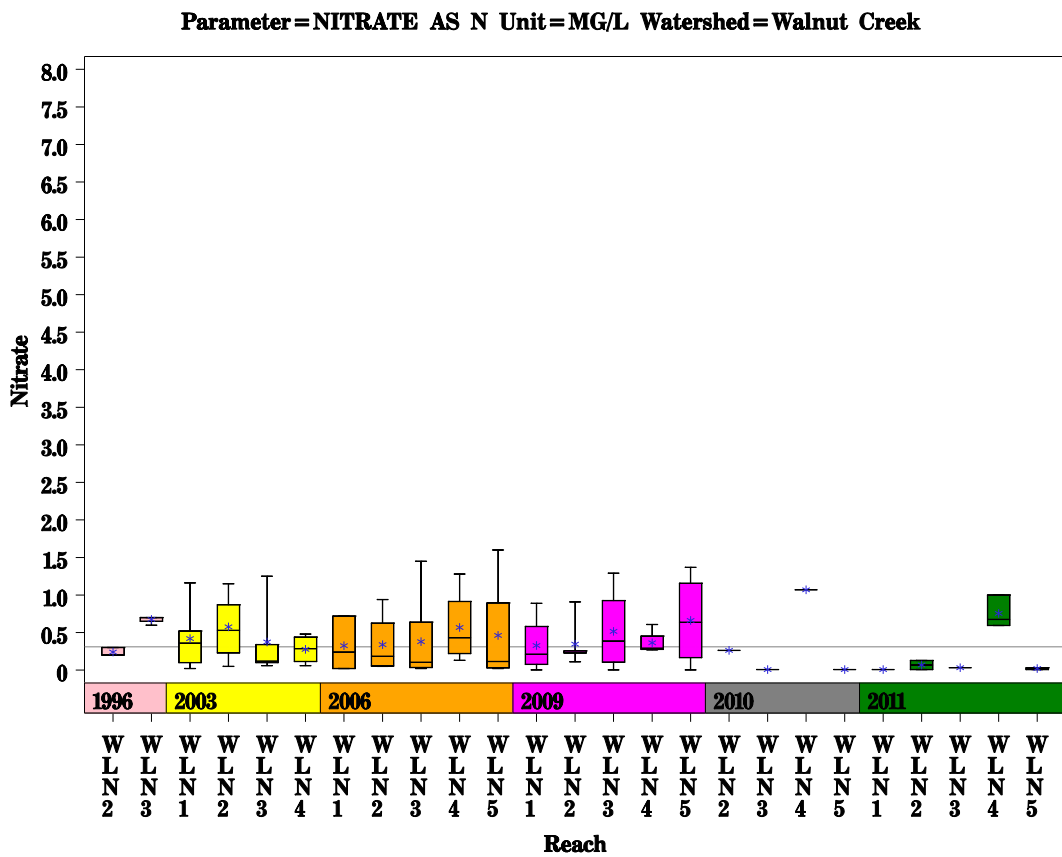
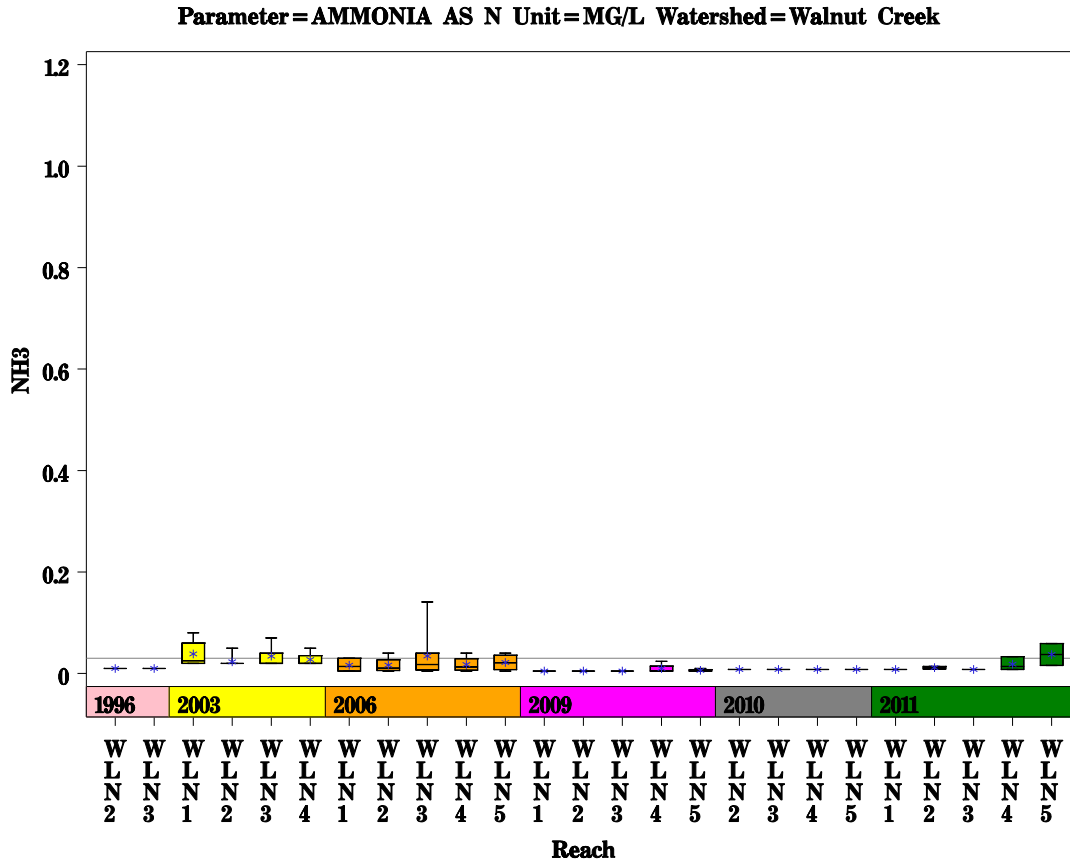
Walnut Creek Watershed

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



Walnut Creek Watershed

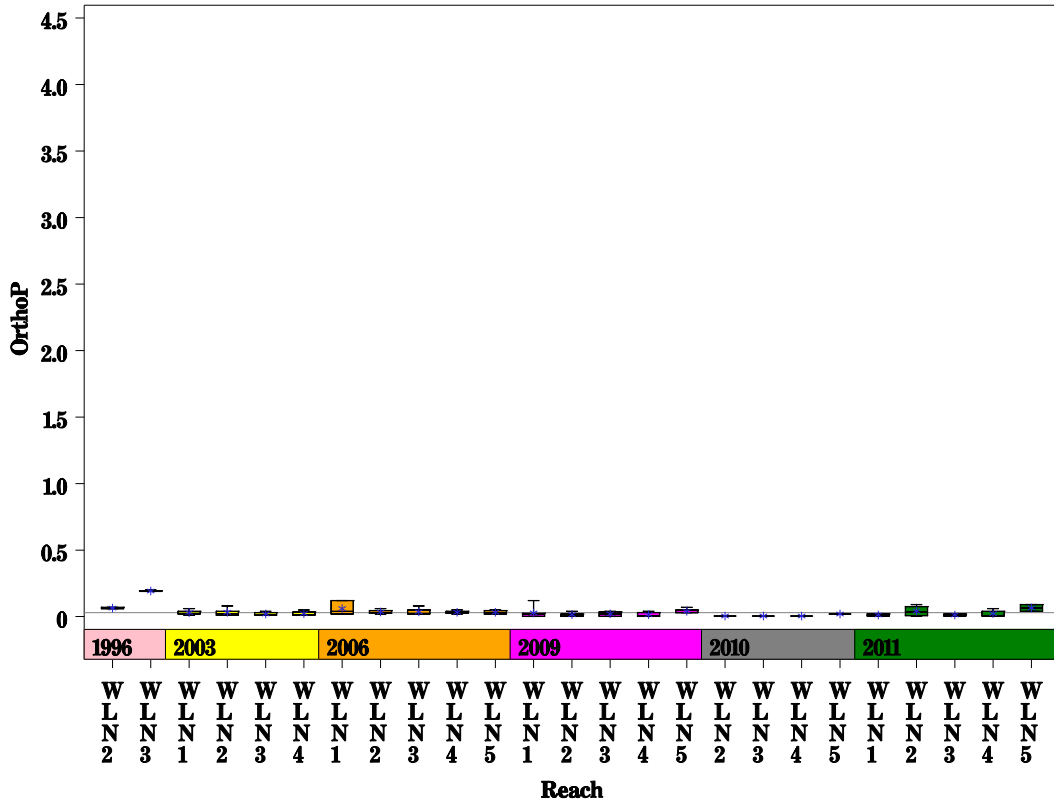
Data Summary Graphs – Ammonia and Nitrate/Nitrite (Downstream to Upstream by Year)



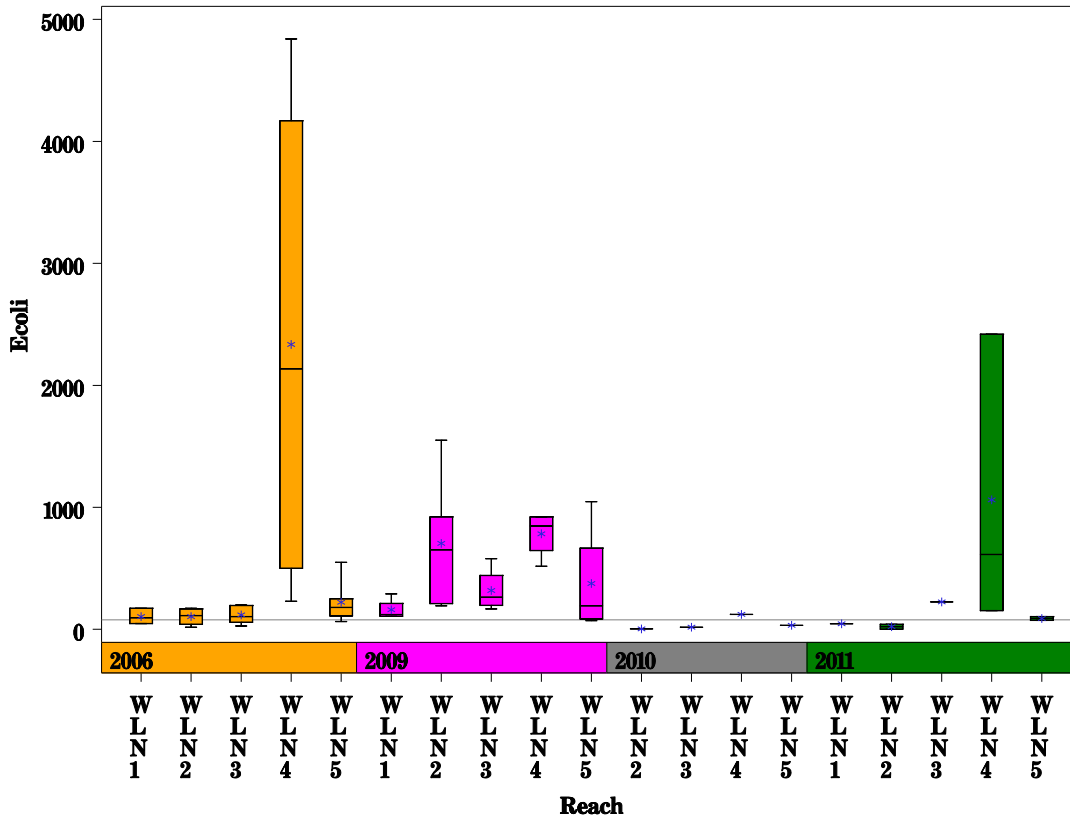
Walnut Creek Watershed

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

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



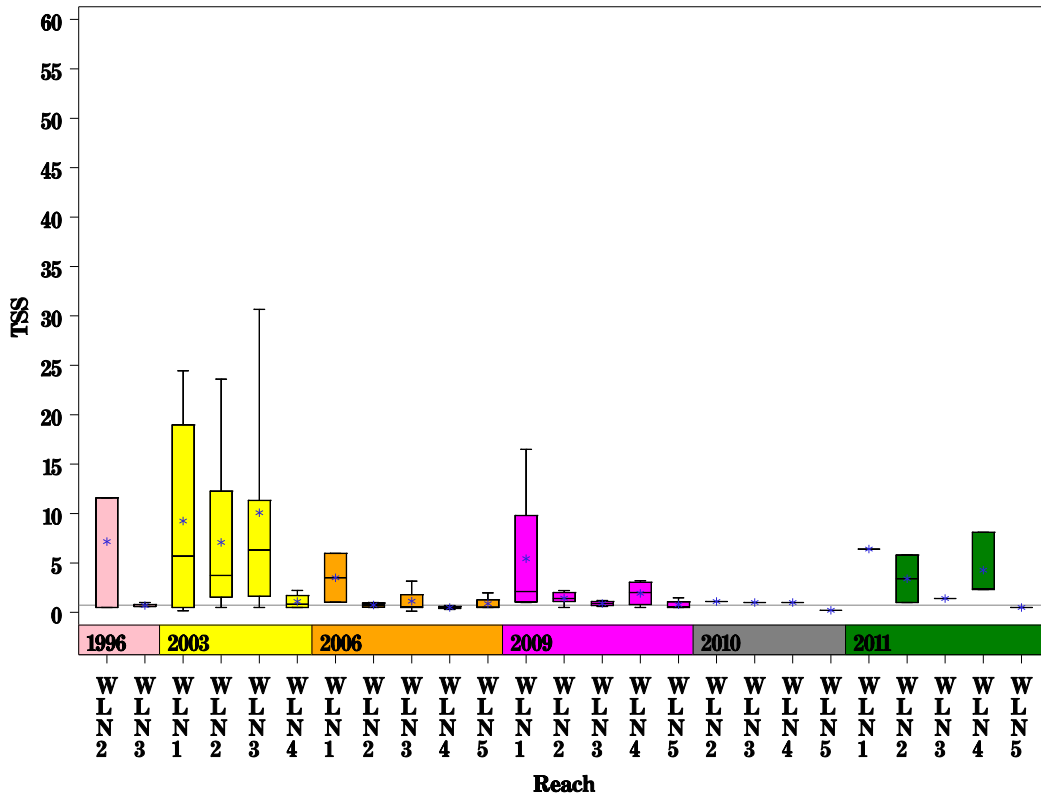
Parameter = E COLI BACTERIA Unit = MPN/100ML Watershed = Walnut Creek



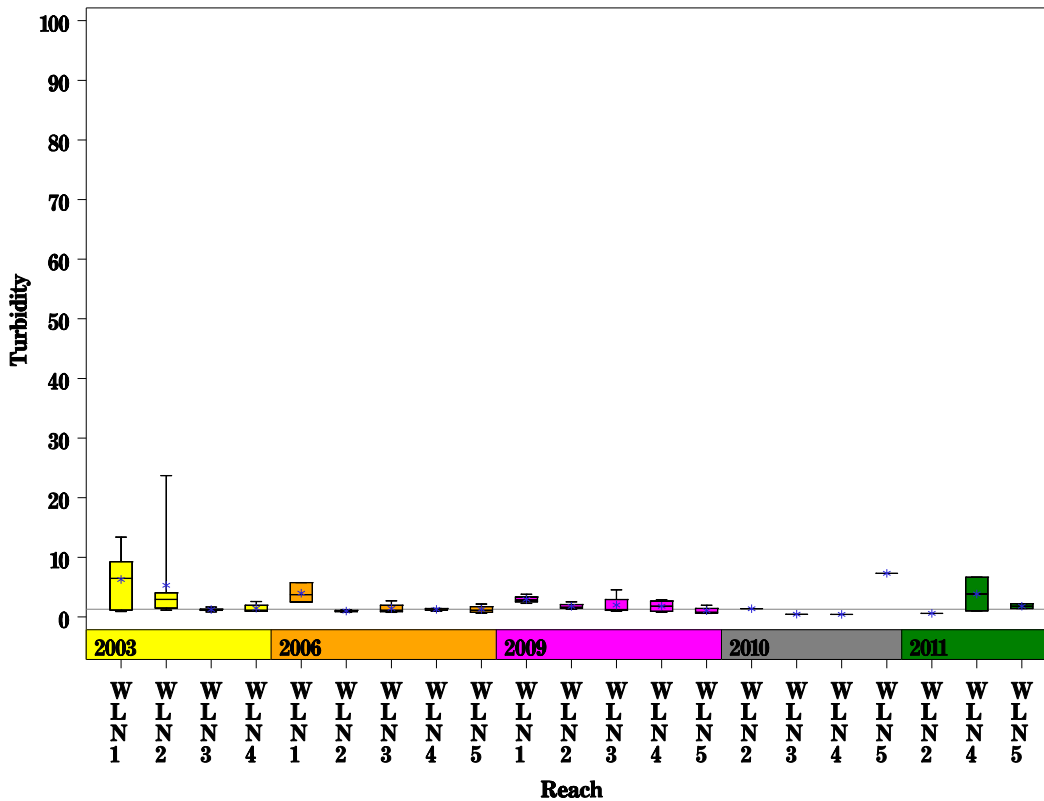
Walnut Creek Watershed

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

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

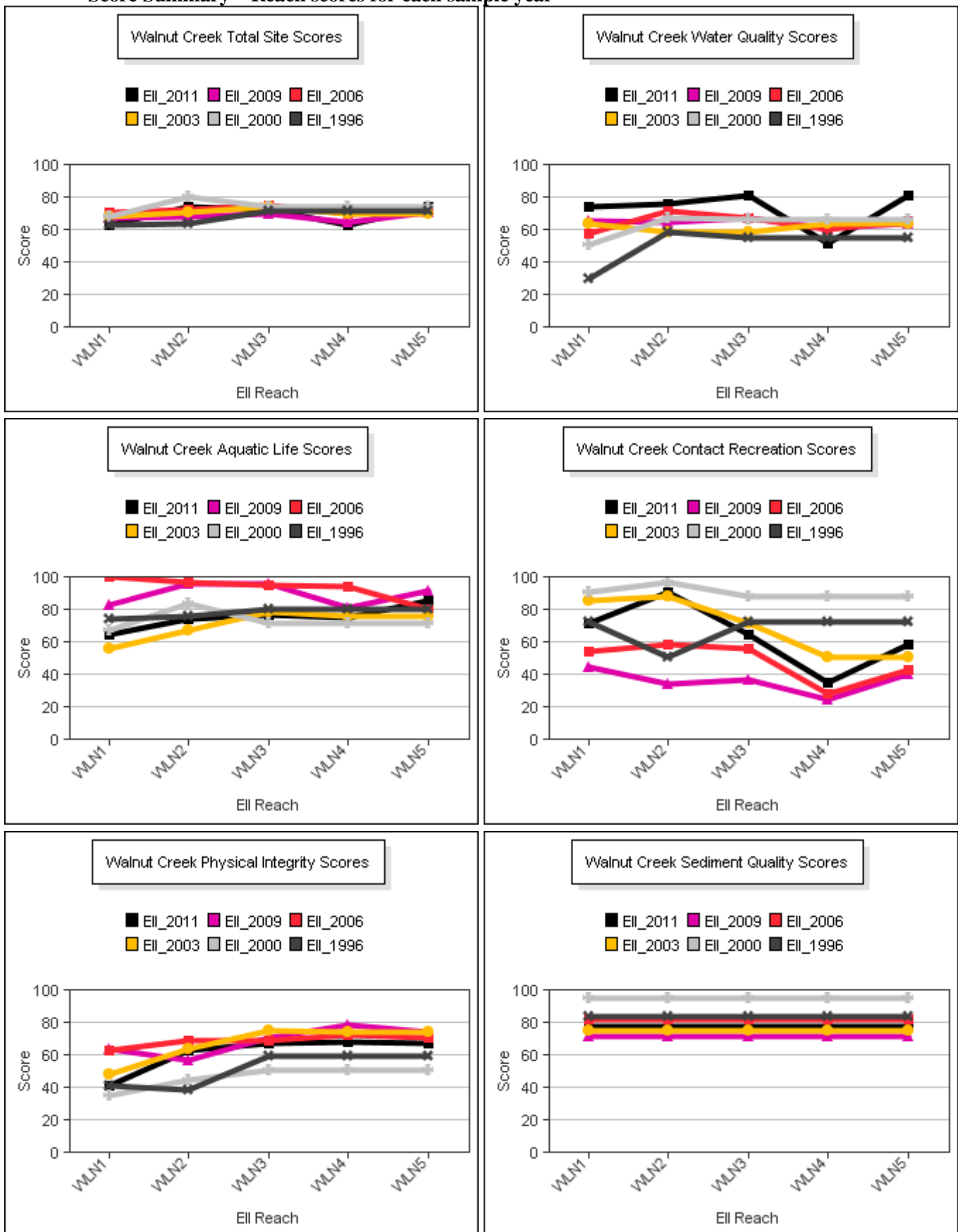


Parameter=TURBIDITY Unit=NTU Watershed=Walnut Creek



Walnut Creek Watershed

Score Summary – Reach scores for each sample year



Walnut Creek Watershed

Site Photographs



463_t00-us-05_29_2009



463_t00-ds-05_29_2009



895_t00-us1-07_07_2006



895_t00-ds-07_07_2006



464_t00-us-05_29_2009



464_t00-ds-05_29_2009

Walnut Creek Watershed

Site Photographs



502_t00-ds-07_11_2006



502_t00-us1-07_11_2006



465_t00-us-03_12_2002



465_t00-ds-12_07_2000



503_t3-ds-06_14_2006



503_t00-ds-03_12_2003

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