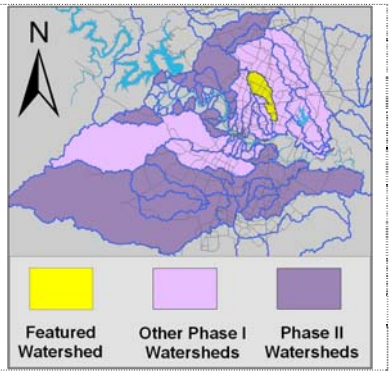
Little Walnut Creek Watershed

Summary Sheet

Catchment	Total area	11 square miles		
	Area in recharge	none		
	Creek length	9 miles		
	Receiving water	Walnut Creek		
Demographics	2000 population	63,827		
	2030 projected population	69,571		
	30 year projected % increase	9 %		
Land Use	Impervious cover (2003 estimate)	43.97 %		
Overall EII Scores	2000	2003	2006	2009
	70	63	67	65



Flow Regime* for Sample Sites on Little Walnut Creek Upstream to Downstream

Site # upstream to downstream	Site Name	2003					2006					2009				
		Feb WQ	Mar Bio	May WQ	Sep WQ	Dec WQ	Feb WQ	May WQ	Jul Bio	Aug WQ	Nov WQ	Feb WQ	Jun WQ	Jun Bio	Jun-July WQ	Dec WQ
838	Little Walnut at Golden Meadow	B	B	B	B	B	B	B	B	n	B	B	B	B	B	B
3860	Little Walnut at Georgian						B	B	B	B	B	B	B	B	B	B
839	Little Walnut at Hermitage Drive	B	B	B	B	B										
3857	Little Walnut at Cameron						B	B	B	n	B	B	B	B	B	B
840	Little Walnut at US290	B	B	B	B	B										
634	Little Walnut at US 183	B	B	B	B	B	B	B	B	B	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 2009 Data for Little Walnut Creek

2009 Summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	**D.O.** mg/l	9.5	13.0	6.1	Generally within normal range
	pH st.units	8.0	8.3	7.4	Generally within normal range
	Cond uS/cm	543	668	325	Within normal range with decreasing trend from upstream to downstream
Nutrients	**NH_3** mg/l	0.01	0.009	0.005	Generally within normal range with some high values in past years
	NO_3 mg/l	0.33	1.42	0.004	Generally above average concentrations
	Ortho P mg/l	0.05	0.26	0.02	Generally low with some above average values at site 838
Sediment Load	**TSS** mg/l	1.3	3.7	0.5	Generally within normal range with some high values in past years
	Turbidity ntu	1.6	4.1	0.8	Consistently low
Biology	**E.Coli** /100ml	490	2420	31	Chronically elevated with high levels in the upstream reach site 838
	Benthic Macs	Average diversity and pollution tolerance, increasing in integrity toward the downstream reaches			
	Diatoms	Generally above average metrics. Sites 838 and 3857 have low Cymbella richness with high diversity while 3860 and 634 have high Cymbella richness and average diversity.			

Index scores* for Little Walnut Creek Sites by Year

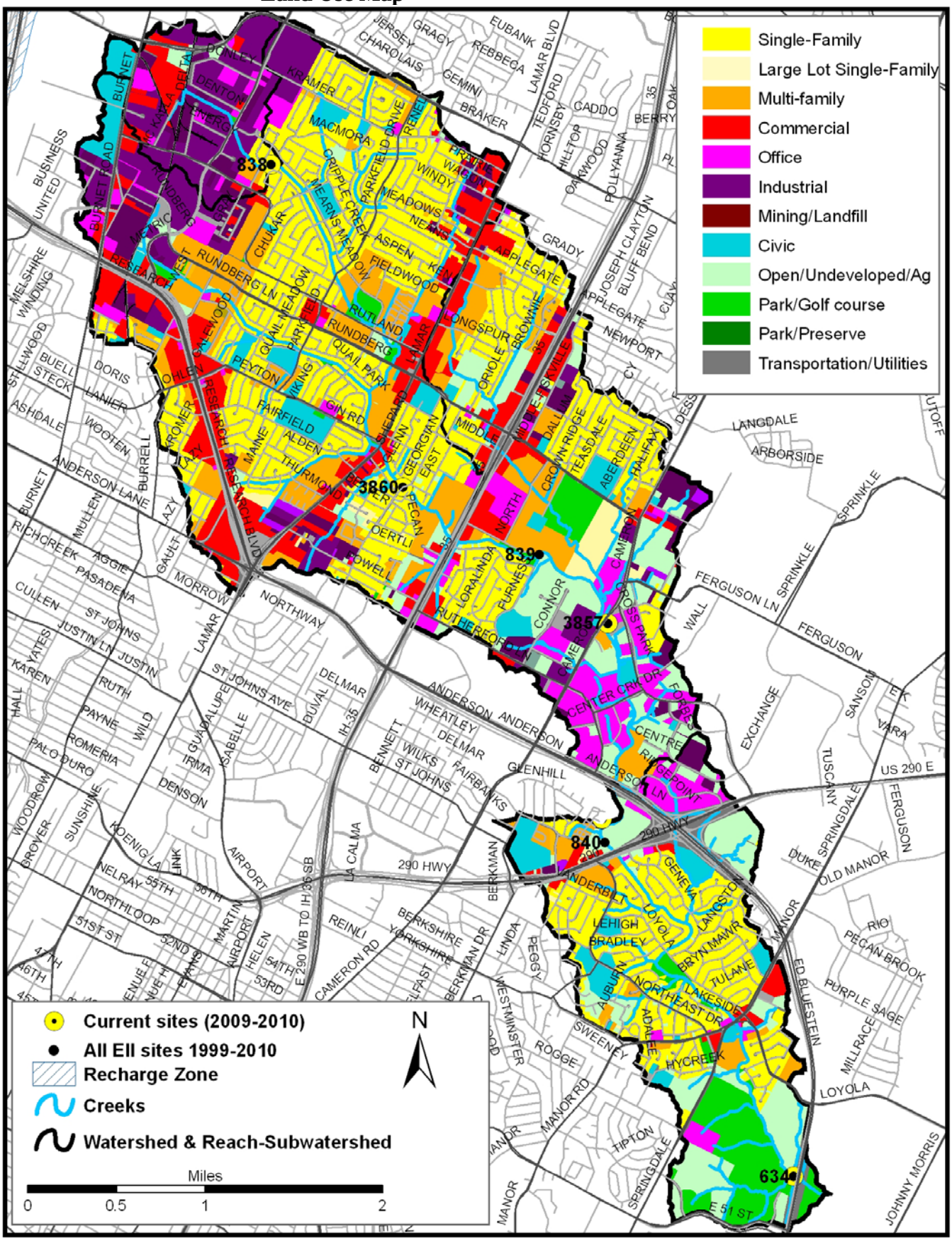
Reach	Site	Site Name	Year	Water Quality	Sediment**	Contact Recreation	Non-Contact Recreation	Physical Integrity	Aquatic Life	Benthic subindex	Diatom subindex	**Total EII Score**
LWA1	634	Little Walnut Creek @ US183	2000	75	92	89	84	35	54	49	58	72
LWA1	840	Little Walnut Creek @ US290	2000	70	92	90	83	55	67	64	69	76
LWA2	839	Little Walnut Creek @ Hermitage Drive	2000	67	92	91	64	31	68	64	71	69
LWA4	838	Little Walnut Creek @ Golden Meadow Rd	2000	54	92	71	62	31	75	91	59	64
LWA1	634	Little Walnut Creek @ US183	2003	55	75	79	60	58	71	75	67	66
LWA1	840	Little Walnut Creek @ US290	2003	58	75	72	77	67	48	50	46	66
LWA2	839	Little Walnut Creek @ Hermitage Drive	2003	57	75	78	73	53	59	66	52	66
LWA4	838	Little Walnut Creek @ Golden Meadow Rd	2003	54	75	33	58	48	54	61	46	54
LWA1	634	Little Walnut Creek @ US183	2006	67	80	63	73	45	91	91		70
LWA2	3857	Little Walnut @ Cameron Rd	2006	67	80	68	73	49	82	81	82	70
LWA3	3860	Little Walnut Creek @ Georgian Dr	2006	63	80	55	72	53	83	82	84	68
LWA4	838	Little Walnut Creek @ Golden Meadow Rd	2006	51	80	25	72	55	71	61	80	59
LWA1	634	Little Walnut Creek @ US183	2009	73	78	54	78	49	95	90	99	71
LWA2	3857	Little Walnut @ Cameron Rd	2009	69	78	44	70	58	79	75	82	66
LWA3	3860	Little Walnut Creek @ Georgian Dr	2009	65	78	32	67	52	91	82	99	64
LWA4	838	Little Walnut Creek @ Golden Meadow Rd	2009	59	78	27	70	54	71	64	77	60

* 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

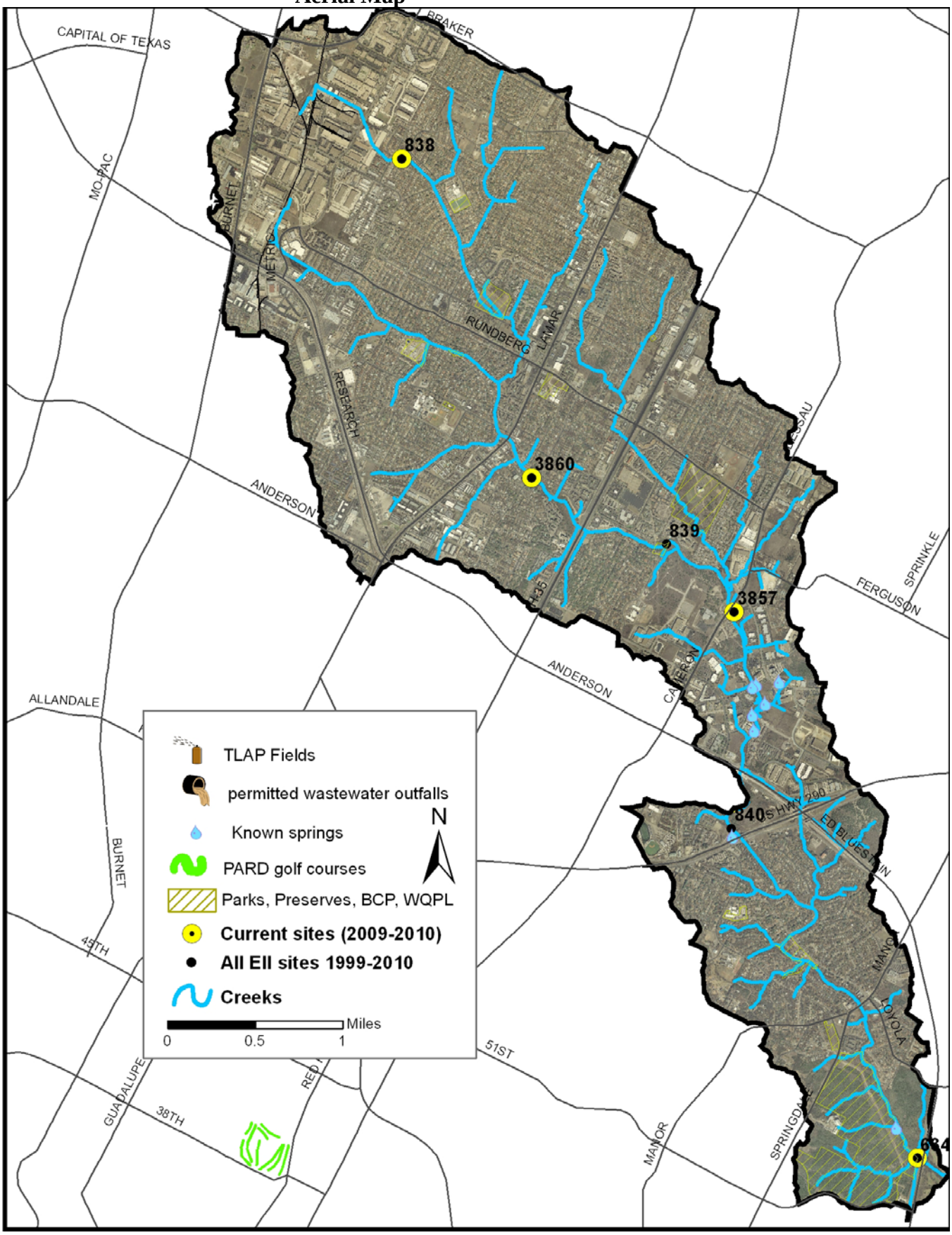
Little Walnut Creek Watershed

Land Use Map



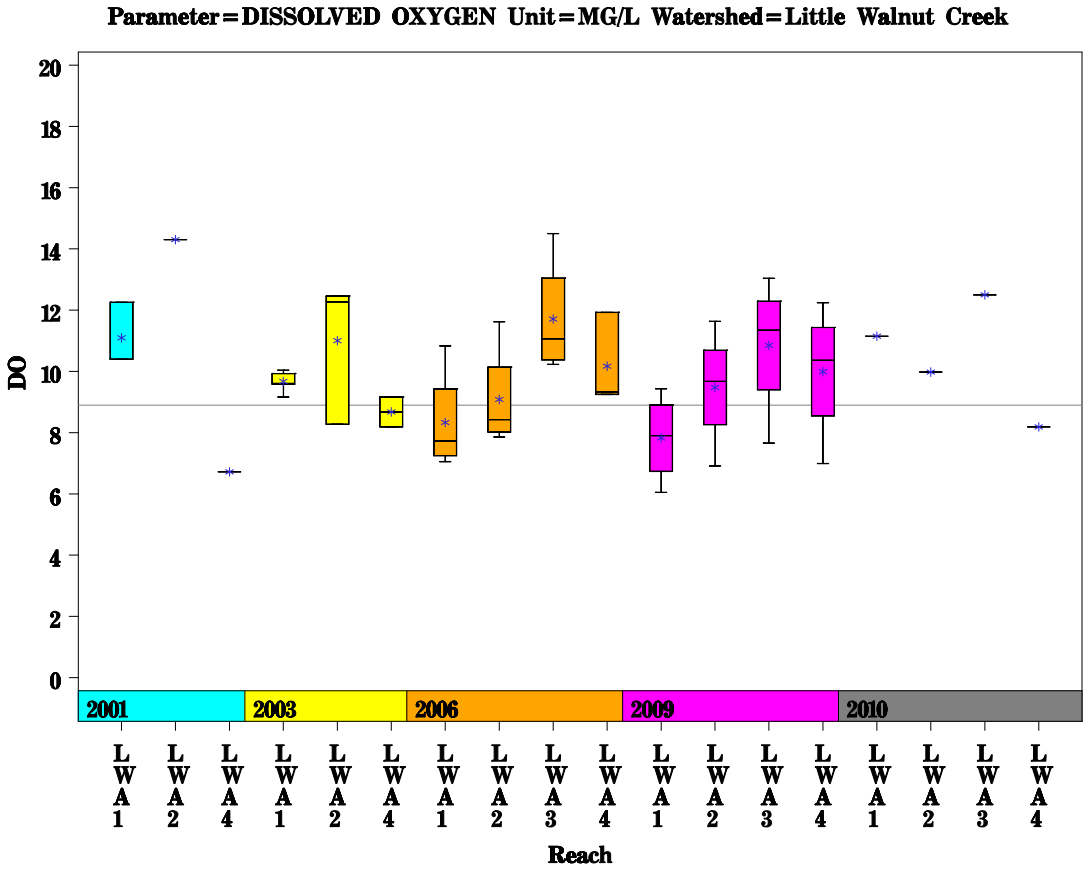
Little Walnut Creek Watershed

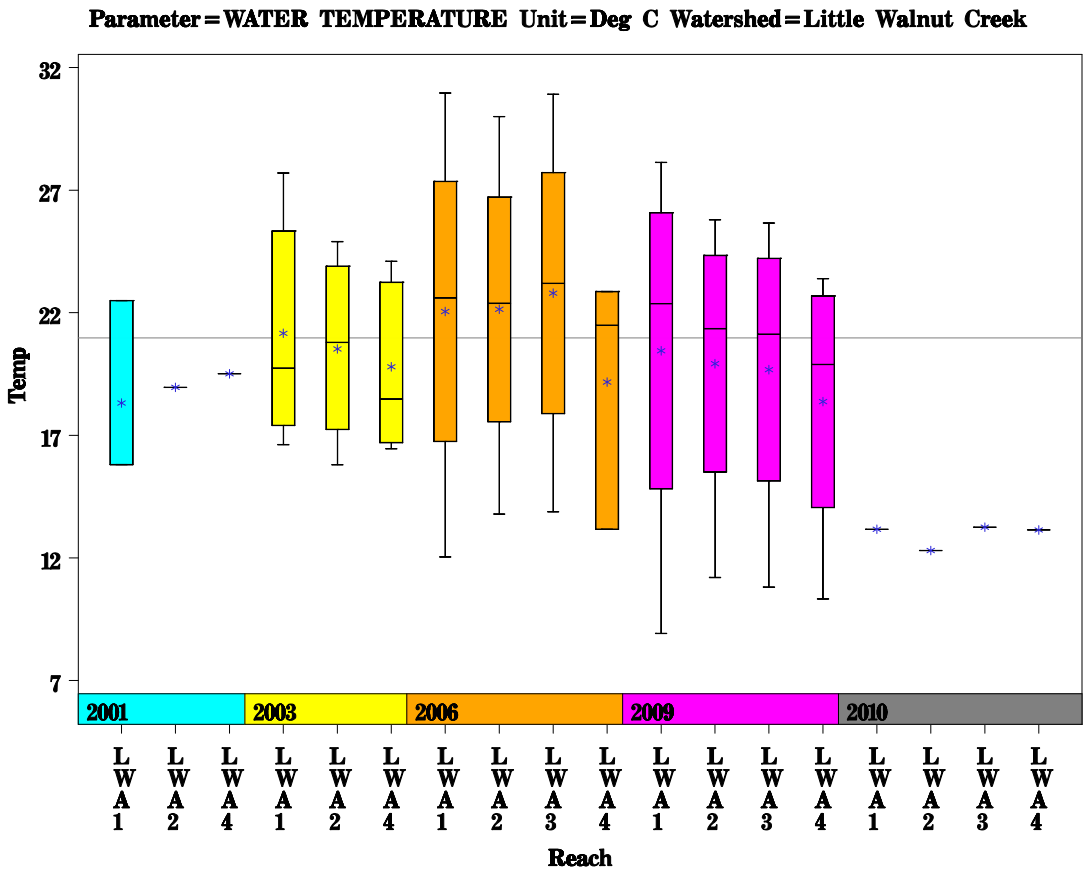
Aerial Map



Little Walnut Creek Watershed

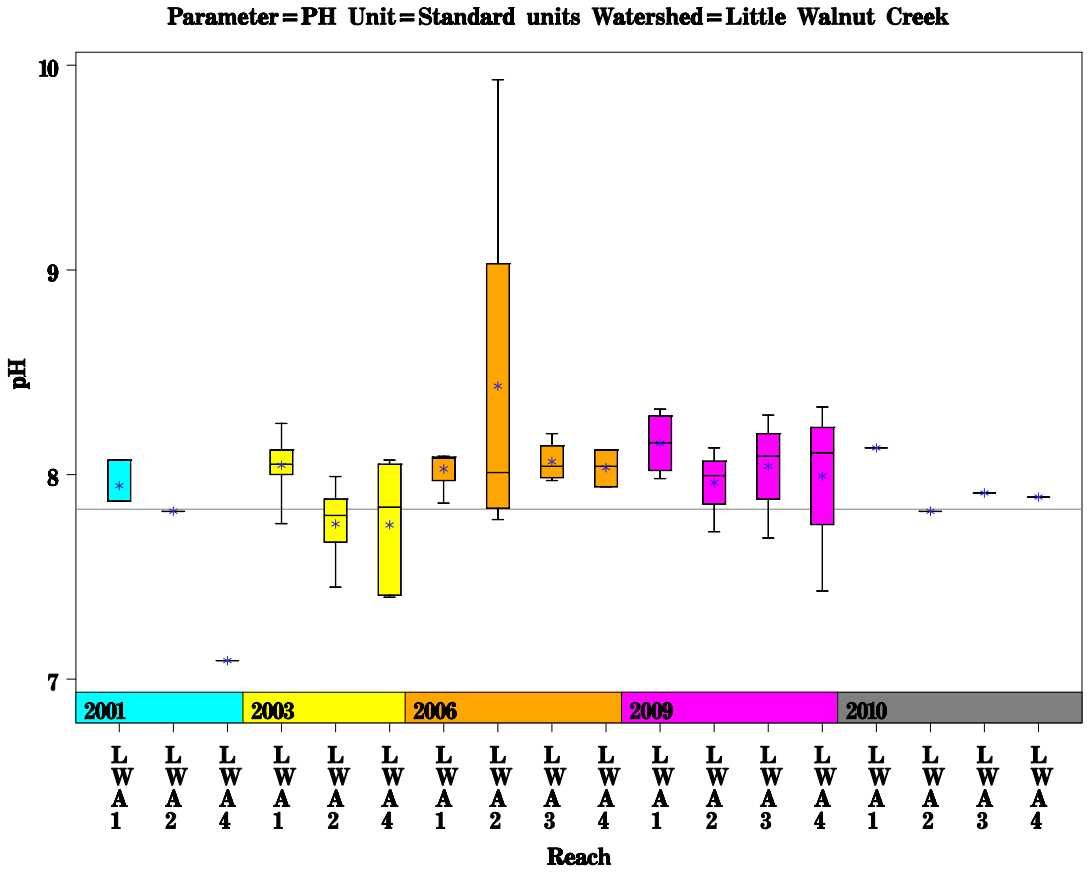
Data Summary Graphs – Dissolved Oxygen and Temperature (Downstream to Upstream by Year)

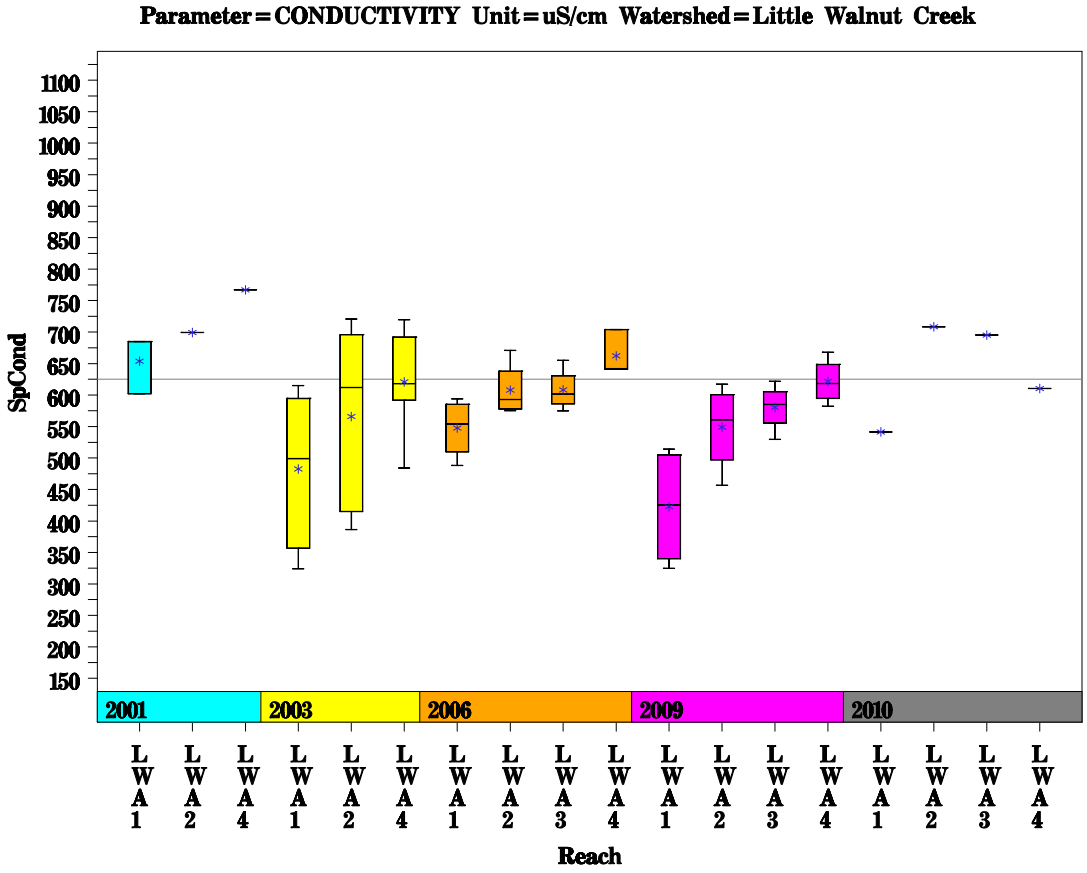




Little Walnut Creek Watershed

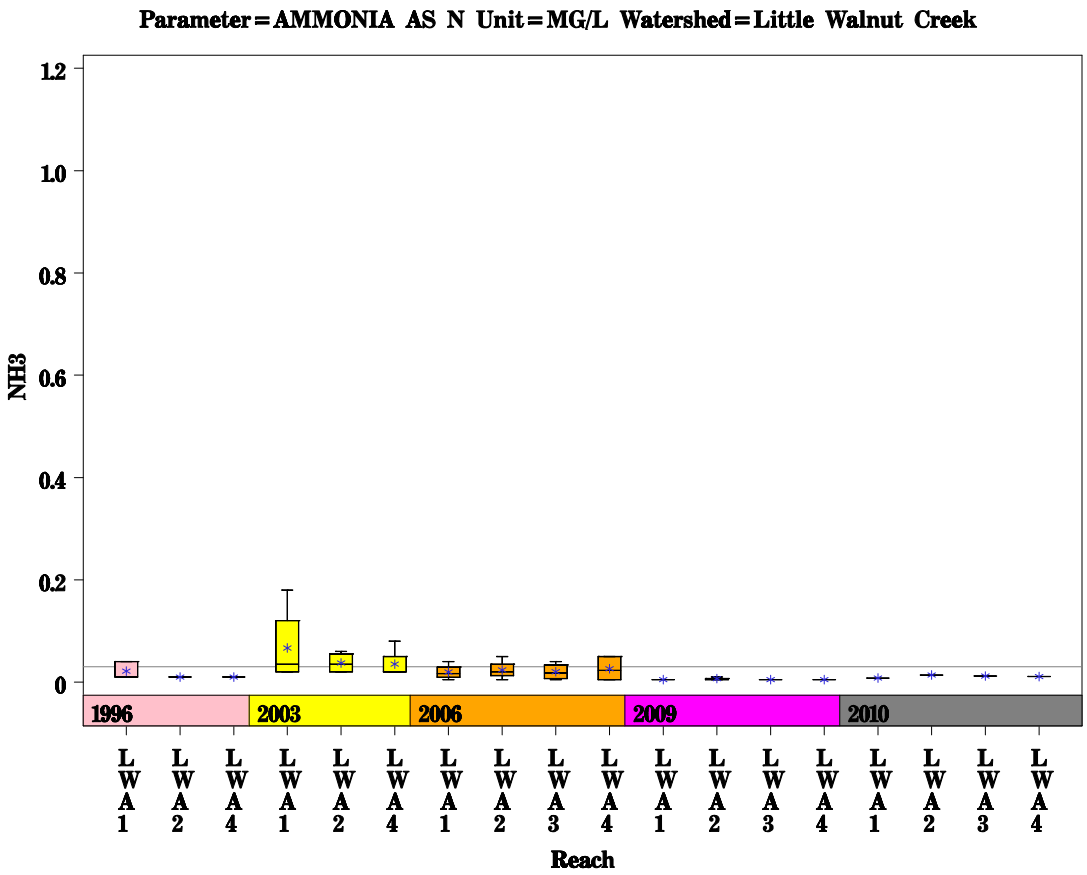
Data Summary Graphs – pH and Conductivity (Downstream to Upstream by Year)

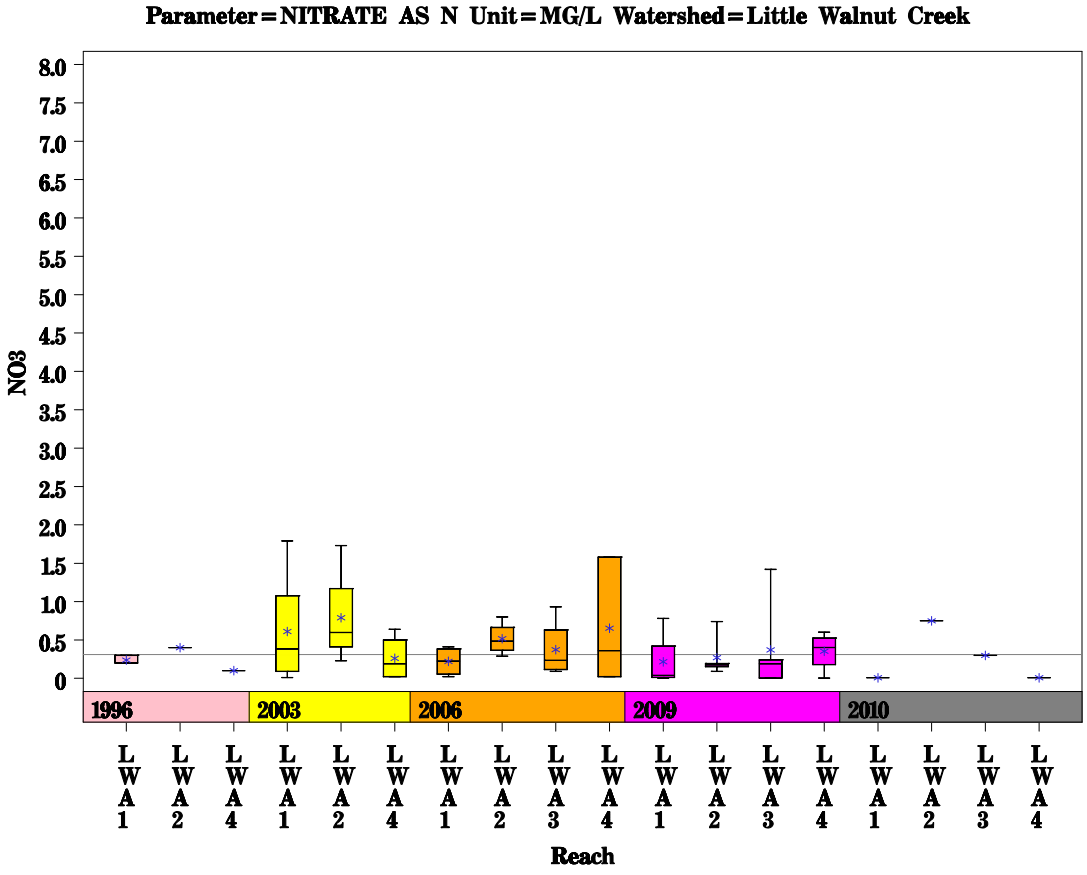




Little Walnut Creek Watershed

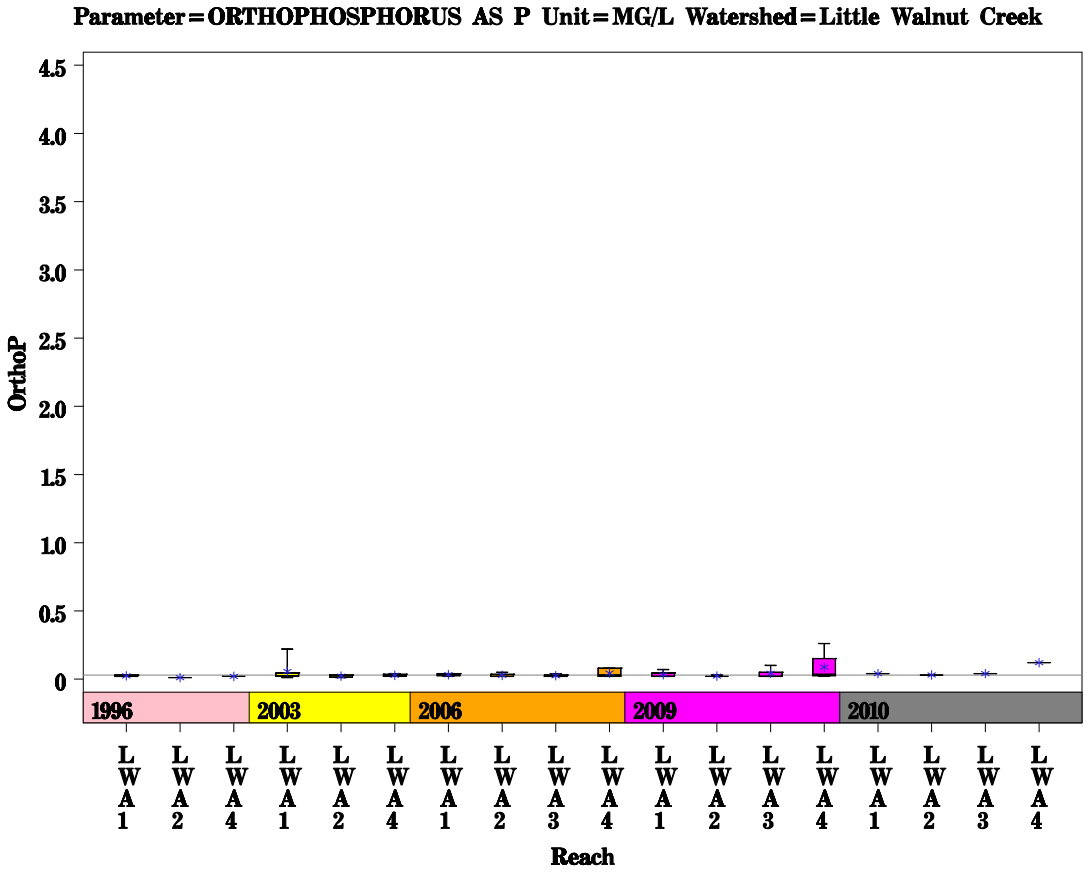
Data Summary Graphs – Ammonia and Nitrate/Nitrite (Downstream to Upstream by Year)

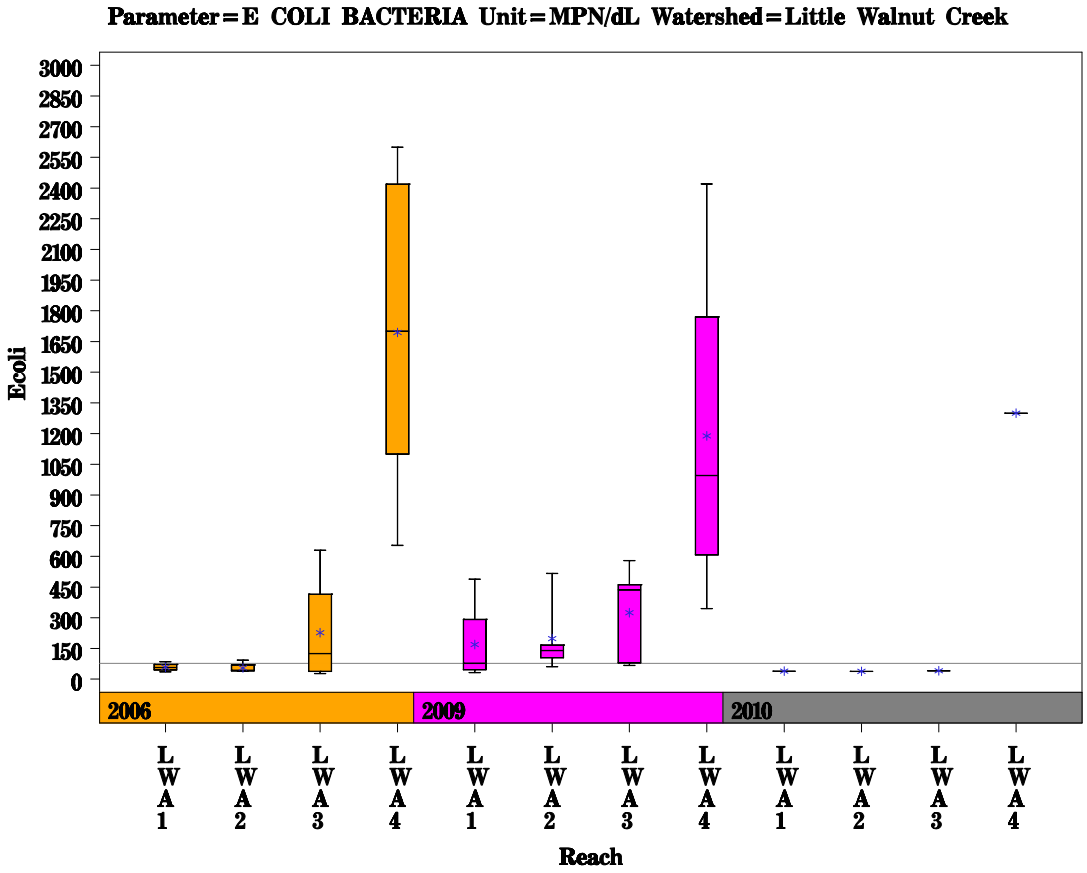




Little Walnut Creek Watershed

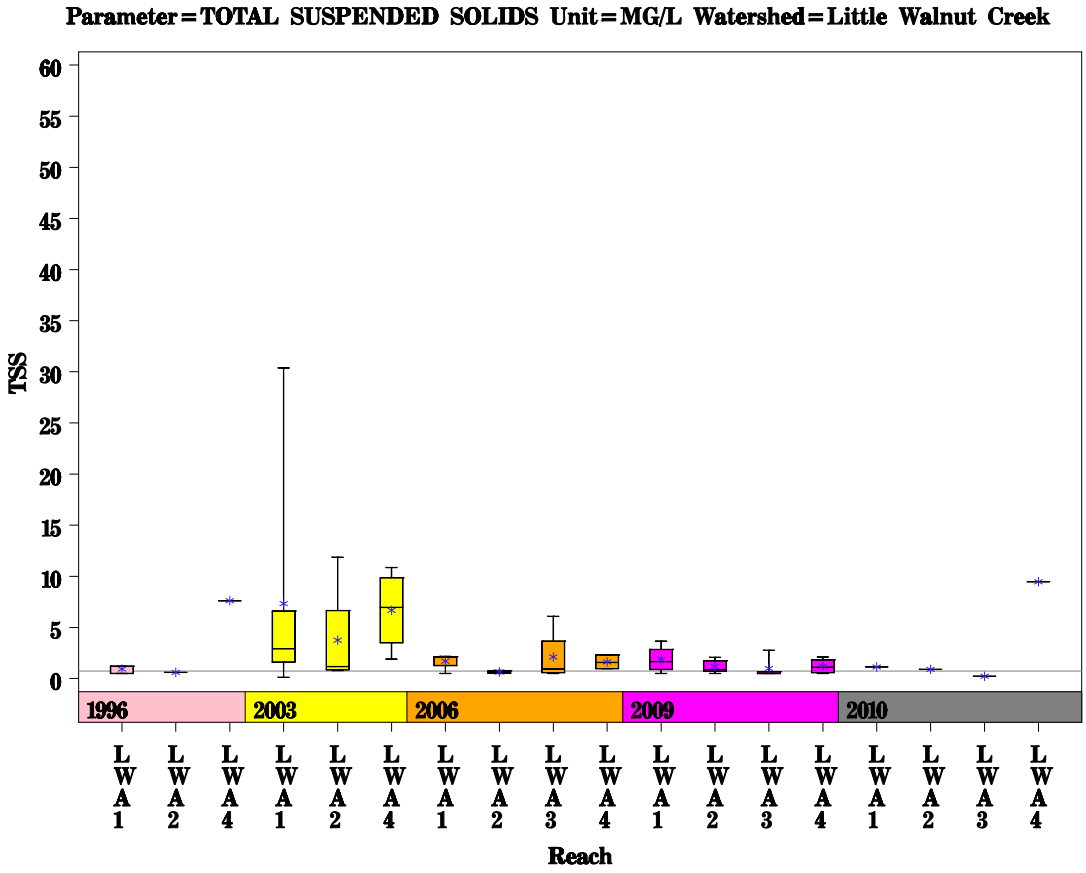
Data Summary Graphs – Orthophosphate and *E.coli* (Downstream to Upstream by Year)

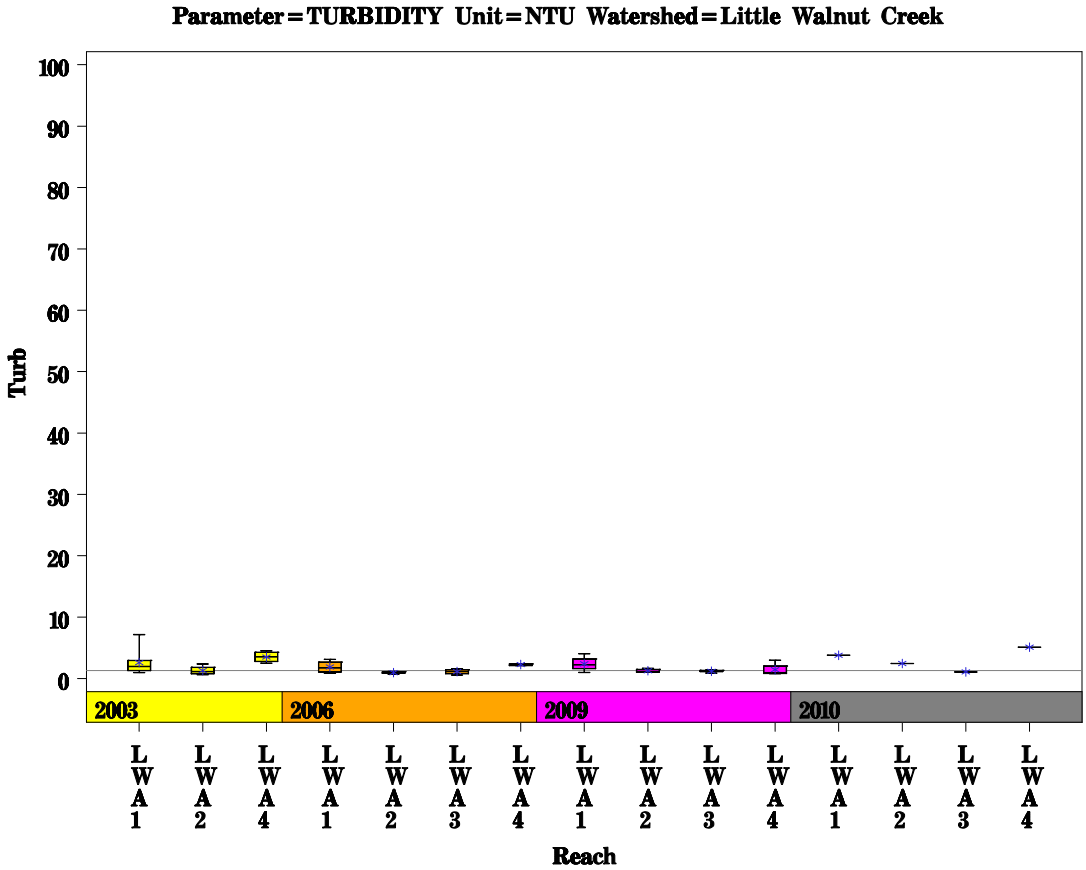




Little Walnut Creek Watershed

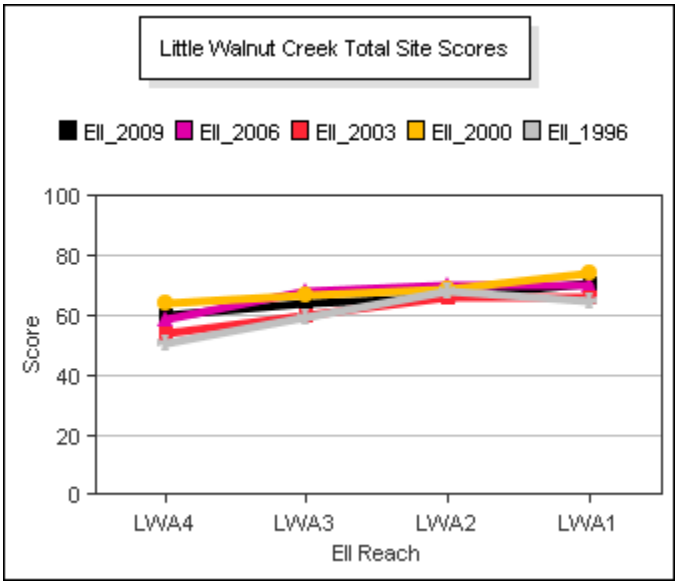
Data Summary Graphs – Total Suspended Solids and Turbidity (Downstream to Upstream by Year)

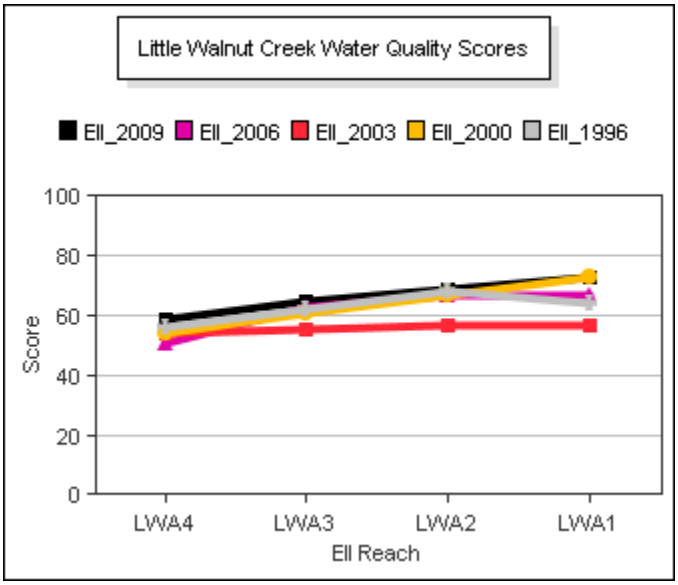


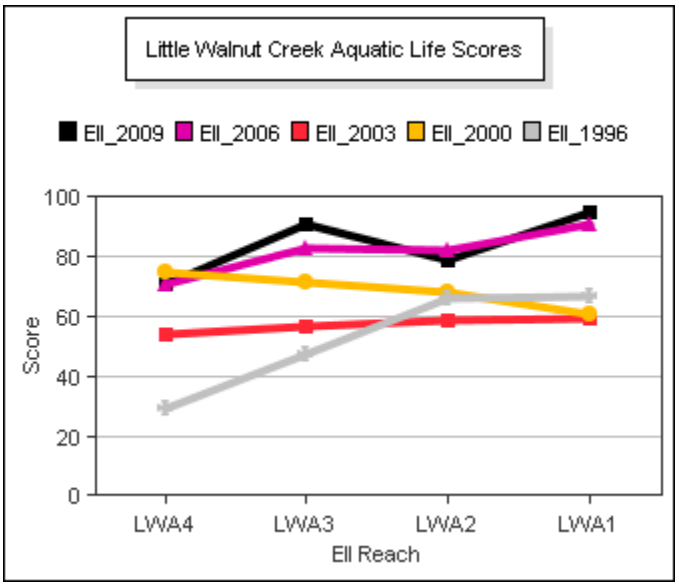


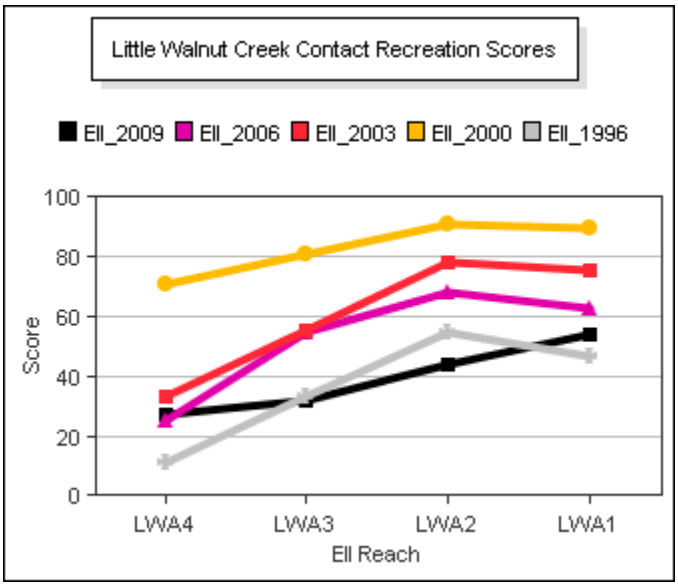
Little Walnut Creek Watershed

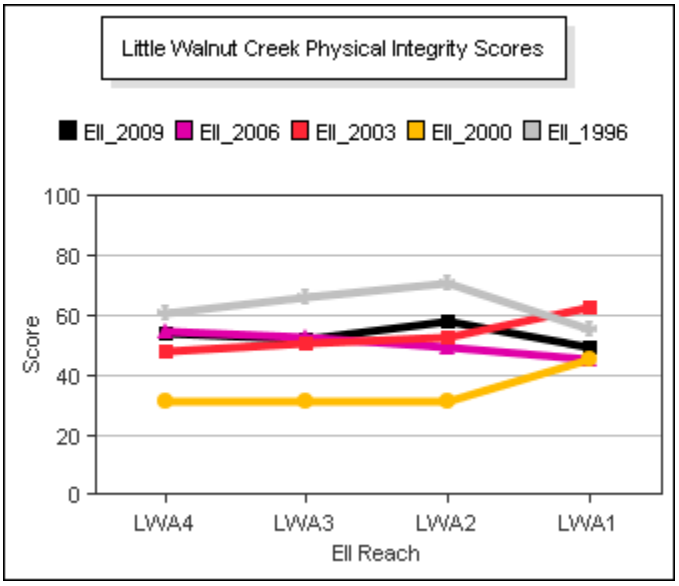
Score Summary – Reach scores for each sample year

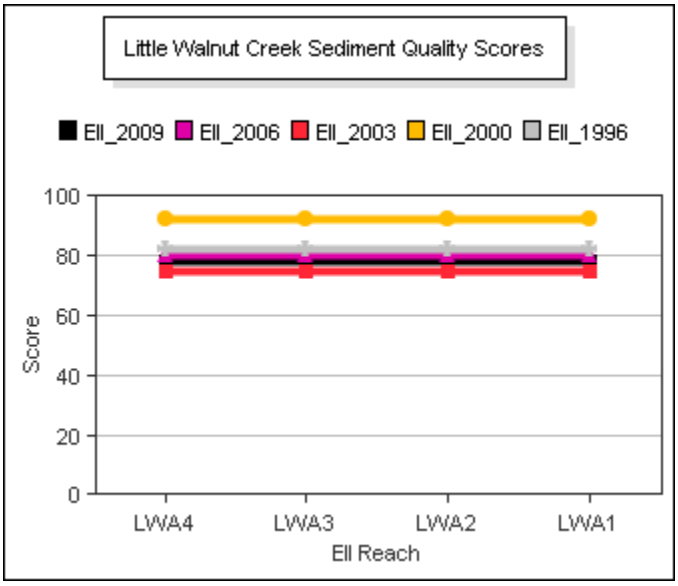












Little Walnut Creek Watershed

Site Photographs

838_t00-us-07_10_2006

838_t00-ds-07_10_2006

3860_t00-us-05-27-2009

3860_t00-ds-05-27-2009

839_t00-us-02_20_2001

839_t00-na-02_19_2003

3857_t00-us1-07_11_2006

3857_t00-us-07_11_2006

840_t00-us-02_19_2003

840_t00-ds-02_20_2001

634_t00-us-07_06_2006

634_t00-ds-07_06_2006

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