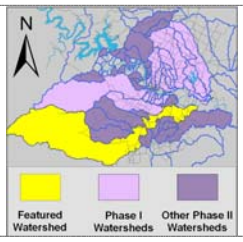
Onion Creek Watershed

Catchment	Total area		211 sq. miles	
	Area in recharge		24.6 sq. miles	
	Creek length		79 miles	
	Receiving water		Colorado River	
Demographics	2000 population		32,955	
Land Use	Impervious cover (2003 estimate)		3.28 %	
Overall EII Scores	2001	2004	2007	2010
	82	80	79	86



Flow Regime* for Sample Sites on Onion 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
4595	at Hudson Tract															B	B	B	B
1365	at Pfulman Ranch	B	B	B	B	B	B	B	B	B	B	B	B	B	B				
1118	South Fork at Hwy 12	B	B	n	B														
1364	at most upstream Hwy 150	B	B	B	B														
612	near Driftwood (Hwy 150)					B	B	B	B	B	B	B	B	B	B	B	B	B	B
1494	at Sky Ranch	B	B	n	B														
610	at Buda (USGS)					B	B	B	B	B									
236	at Twin Creeks Road	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
239	above IH35	B	B	B	B														
241	above Footbridge										B	B	B	B	B	B	B	B	B
220	at Old Lockhart Hwy	B	B	B	B														
255	McKinney Falls below lower	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
611	at US183 (USGS)					B	B	B	B	B									
1366	at S. Austin Regional WWTP	B	B	B	B	B	B	B	B	B	B	B	S	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

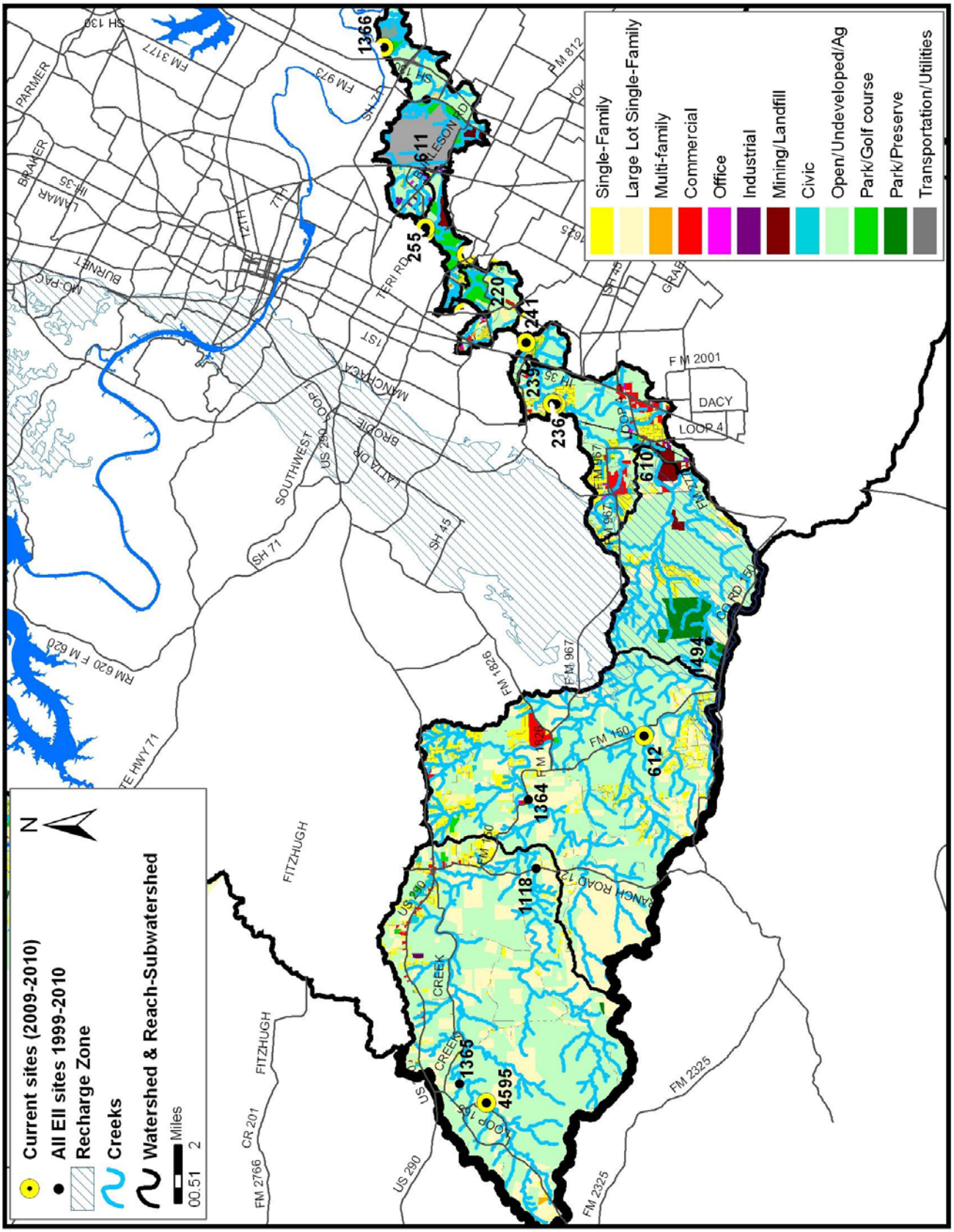
2010 Summary	Parameter	Mean	Max	Min	Discussion
Physicochemical	**D.O.** mg/l	9.6	12.7	7.6	Consistently within normal range
	pH st.units	8.1	9.8	7.4	Within normal range with higher values in upstream reaches in 2010 samples
	Cond uS/cm	563	644	487	Within normal range
Nutrients	**NH_3** mg/l	0.01	0.03	0.01	Generally low or within normal range
	NO_3 mg/l	0.64	1.78	0.00	Generally above average concentrations with an increasing trend over time
	Ortho P mg/l	1.88	6.40	0.50	Consistently low
Sediment Load	**TSS** mg/l	1.9	6.4	0.5	Generally low in upstream reaches and higher in downstream reaches
	Turbidity ntu	2.5	10.9	0.8	Generally low in upstream reaches and higher in downstream reaches
Biology	**E.Coli** /100ml	32	153	1	Consistently low or within normal range
	Benthic Macs	Excellent diversity and community structure. Generally above average to excellent scores.			
	Diatoms	Excellent diversity and above average Cymbella richness. Good scores for pollution tolerance index.			

Metric index scores for Onion 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
ONI5	612	Onion Creek near Driftwood (Hwy 150)	1998	77	63	92	96	83	92	100	84	84
ONI6	1116	Onion Creek @ Hwy 12	1998	76	63	88						57
ONI6	1118	Onion Creek South Fork @ Hwy 12	1998	79	63	79	93	76	90	88	92	80
ONI1	1366	Onion at South Austin Regional WWTP (SAR)	2001	46	88	84	88	82	68	91		72
ONI2	255	Onion Creek @ McKinney Below Lower Falls	2001	58	88	90	94	82	82	87	77	78
ONI3	220	Onion Creek @ Old Lockhart Hwy (ON4)	2001	60	88	86	84	87	66	61	70	74
ONI4	236	Onion Creek @ Twin Creeks Road (OC1)	2001	65	88	88	93	84	72	60	83	78
ONI4	239	Onion Creek Above IH35 (OC2)	2001	67	88	83	92	94	70	70	69	78
ONI5	1364	Onion Creek at Most u/s Hwy 150 Crossing	2001	71	88	89	100	86	73	70	76	81
ONI5	1494	Onion Creek @ Sky Ranch	2001	68	88	89	100	95	67	70	64	80
ONI6	1118	Onion Creek South Fork @ Hwy 12	2001	68	88	81	98	82	65	69	61	76
ONI6	1365	Onion Creek at Pfulman Ranch	2001	71	88	94	98	82	64	78	50	79
ONI1	1366	Onion at South Austin Regional WWTP (SAR)	2004	52	89	57	76	74	88	97	79	73
ONI2	255	Onion Creek @ McKinney Below Lower Falls	2004	59	89	58	85	82	89	94	83	77
ONI4	236	Onion Creek @ Twin Creeks Road (OC1)	2004	77	89	66	87	84	80	74	85	81
ONI4	610	Onion Creek @ Buda (USGS)	2004	75	89	79	71	67	71	45	96	75
ONI5	612	Onion Creek near Driftwood (Hwy 150)	2004	77	89	60	100	92	97	100	93	86
ONI6	1365	Onion Creek at Pfulman Ranch	2004	85	89	72	99	97	88	99	77	88
ONI1	1366	Onion at South Austin Regional WWTP (SAR)	2007	52	82	59		89	75	100	50	71
ONI2	255	Onion Creek @ McKinney Below Lower Falls	2007	63	82	83	70	85	91	96	86	79
ONI3	241	Onion Creek Above Footbridge (OC3)	2007	62	82	70	83	69	91	100	81	76
ONI4	236	Onion Creek @ Twin Creeks Road (OC1)	2007	70	82	63	89	78	95	96	94	80
ONI5	612	Onion Creek near Driftwood (Hwy 150)	2007	69	82	50	100	91	99	98	100	82
ONI6	1365	Onion Creek at Pfulman Ranch	2007	77	82	69	97	84	93	99	87	84
ONI1	1366	Onion at South Austin Regional WWTP (SAR)	2010	63	87	84	91	87	94	98	89	84
ONI2	255	Onion Creek @ McKinney Below Lower Falls	2010	72	87	87	91	89	95	95	95	87
ONI3	241	Onion Creek Above Footbridge (OC3)	2010	65	87	67	85	70	91	85	96	78
ONI4	236	Onion Creek @ Twin Creeks Road (OC1)	2010	79	87	85	94	82	100	100	99	88
ONI5	612	Onion Creek near Driftwood (Hwy 150)	2010	80	87	83	97	97	96	92	100	90
ONI6	4595	Onion Creek at Hudson Tract	2010	82	87	93	100	89	89	91	87	90

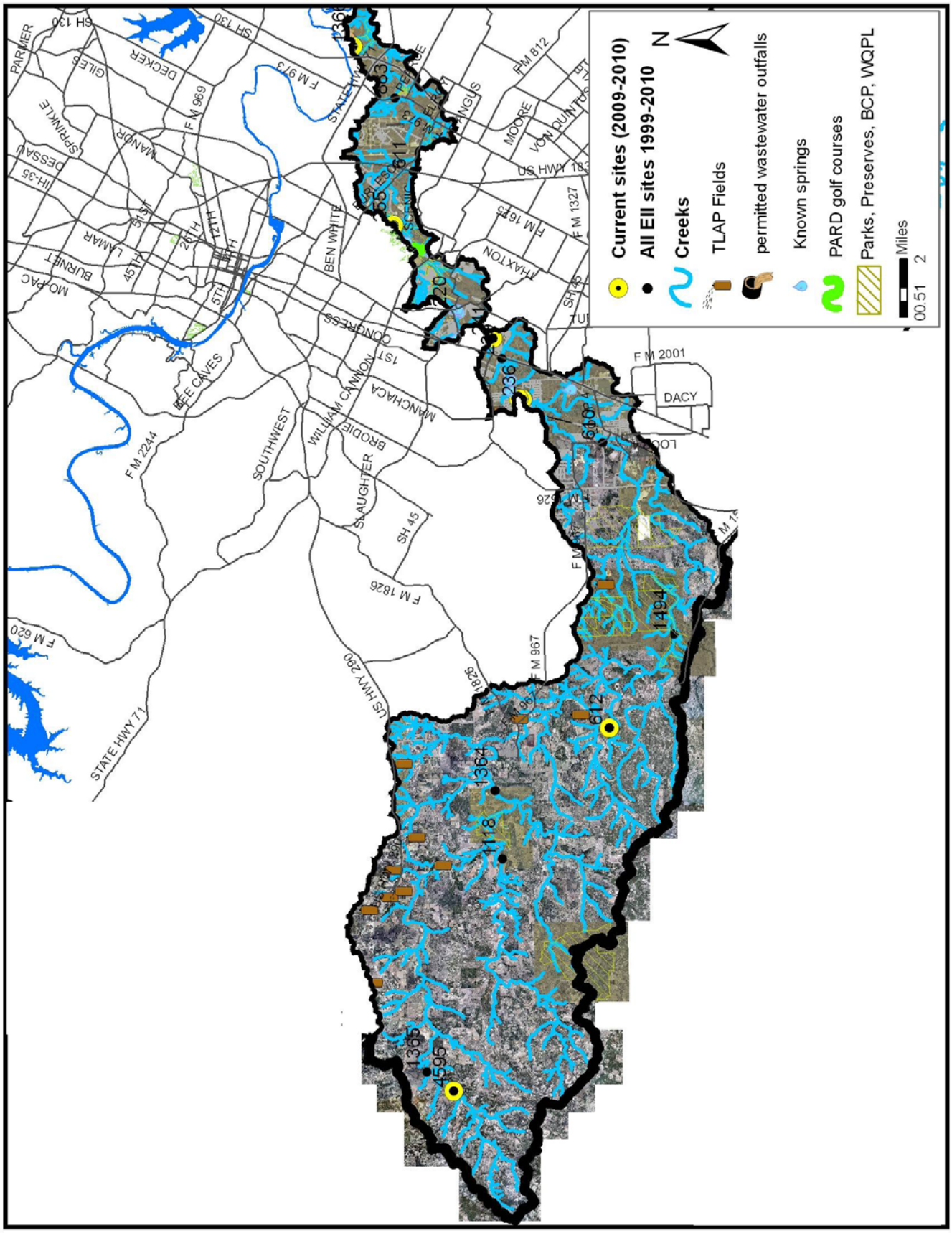
Onion Creek Watershed

Land Use Map



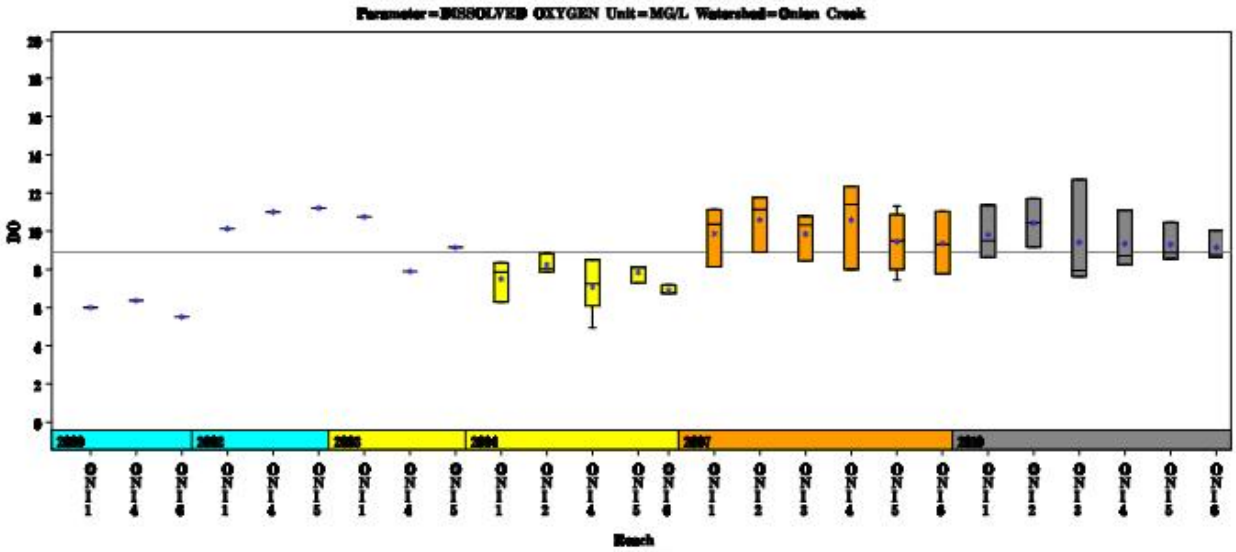
Onion Creek Watershed

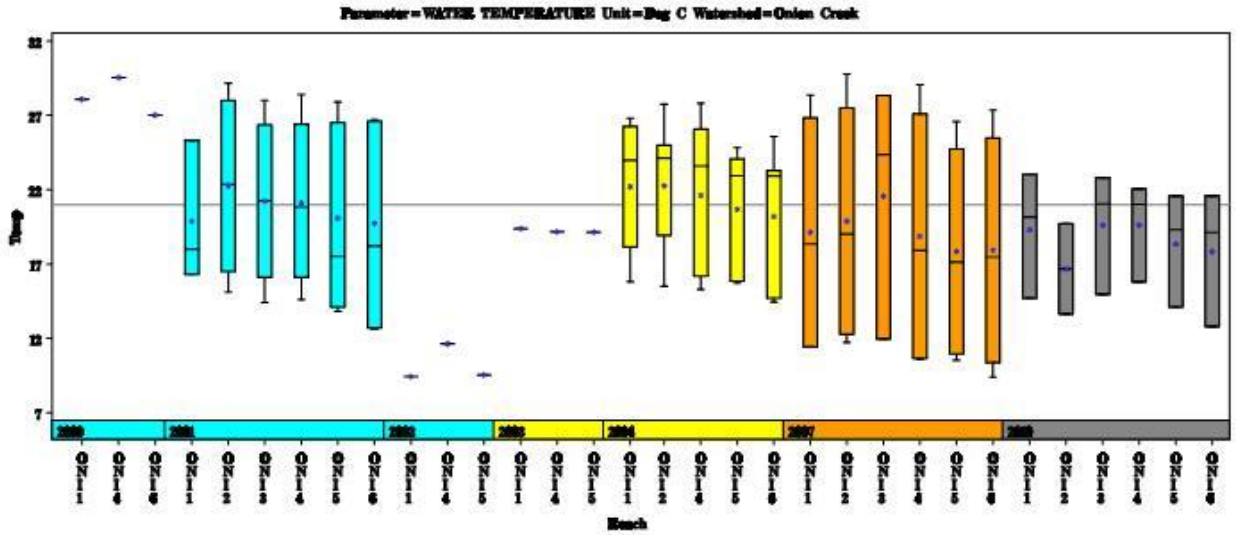
Aerial Map



Onion Creek Watershed

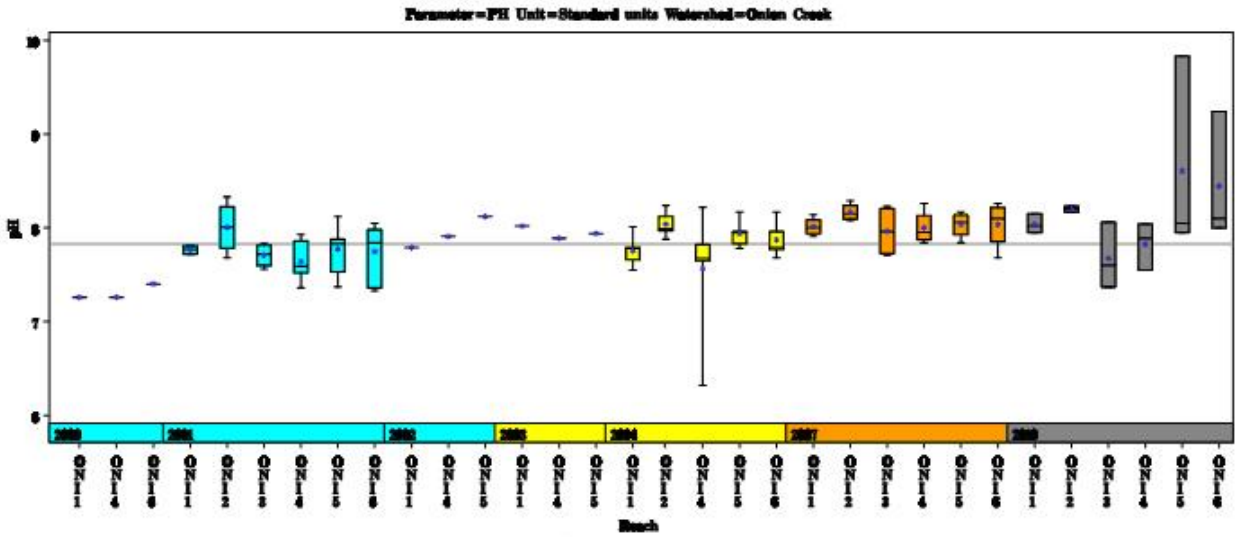
Data Summary Graphs – <u>Dissolved Oxygen</u> and <u>Temperature</u> (Downstream to Upstream by Year)

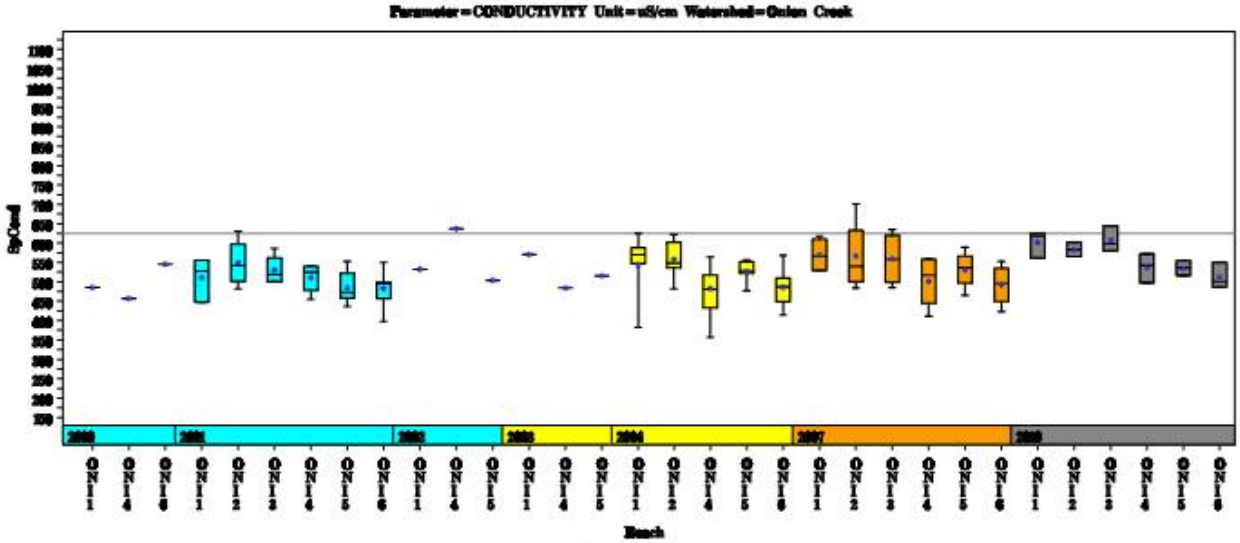




Onion Creek Watershed

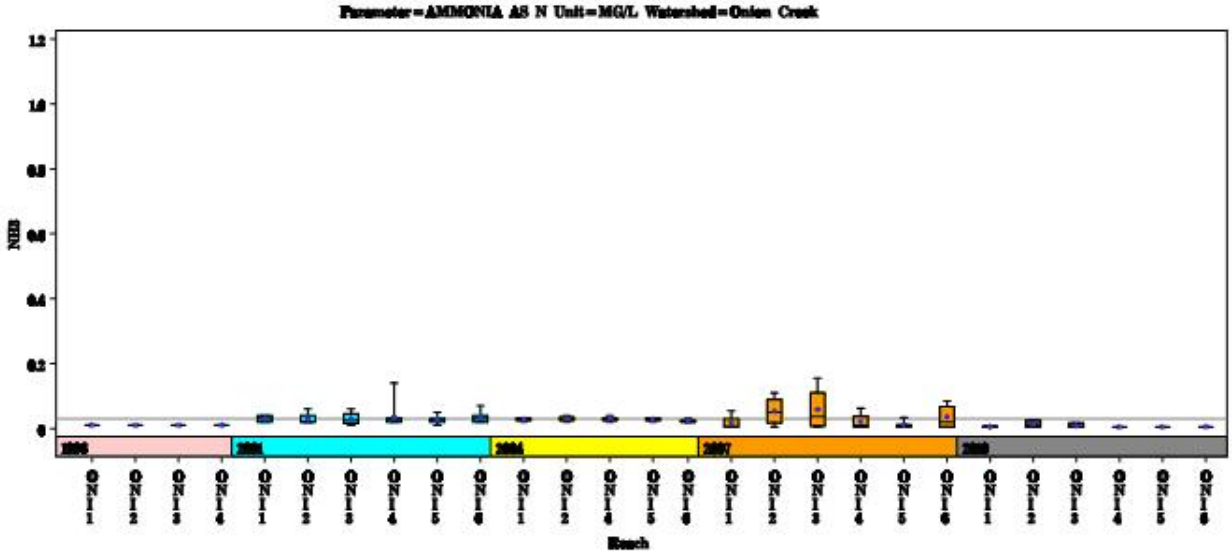
Data Summary Graphs – <u>pH</u> and <u>Conductivity</u> (Downstream to Upstream by Year)

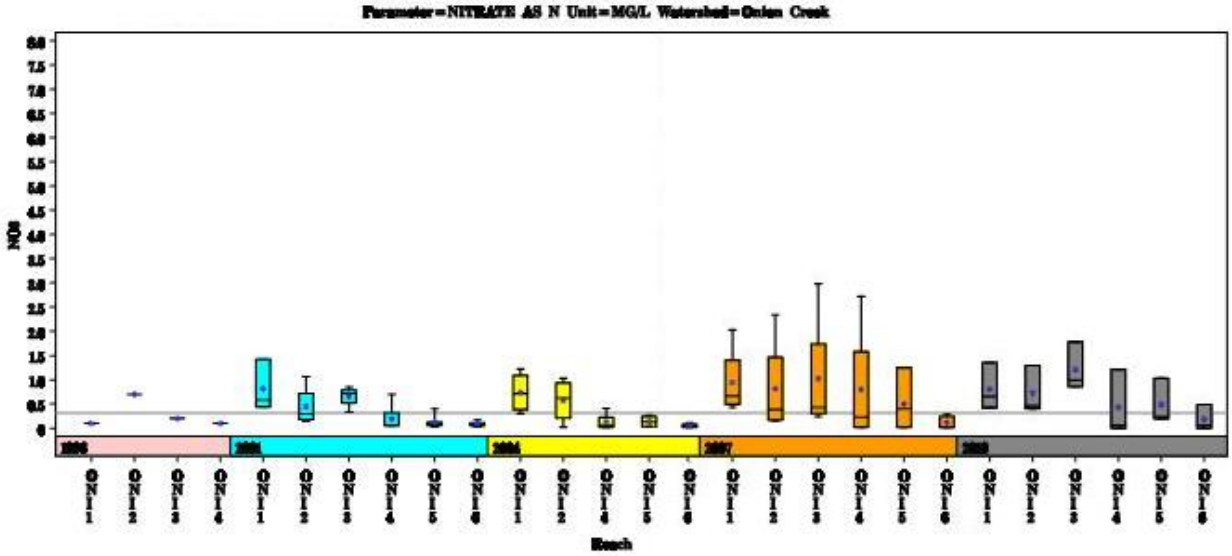




Onion Creek Watershed

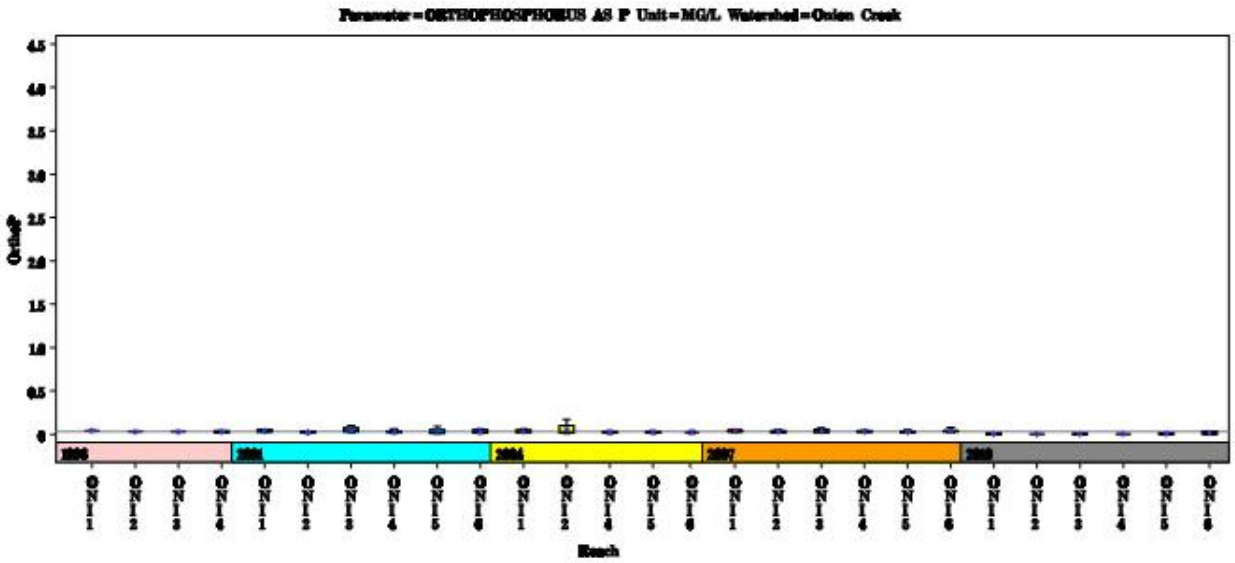
Data Summary Graphs – <u>Ammonia</u> and <u>Nitrate/Nitrite</u> (Downstream to Upstream by Year)

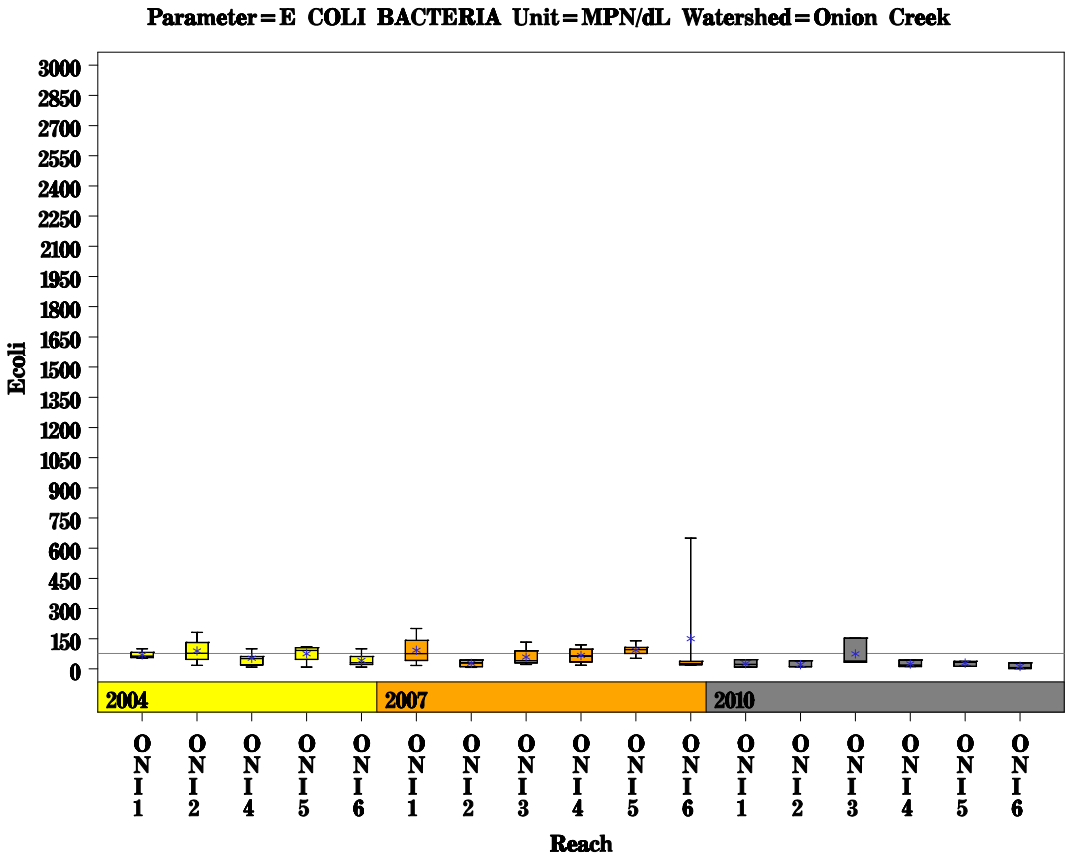




Onion Creek Watershed

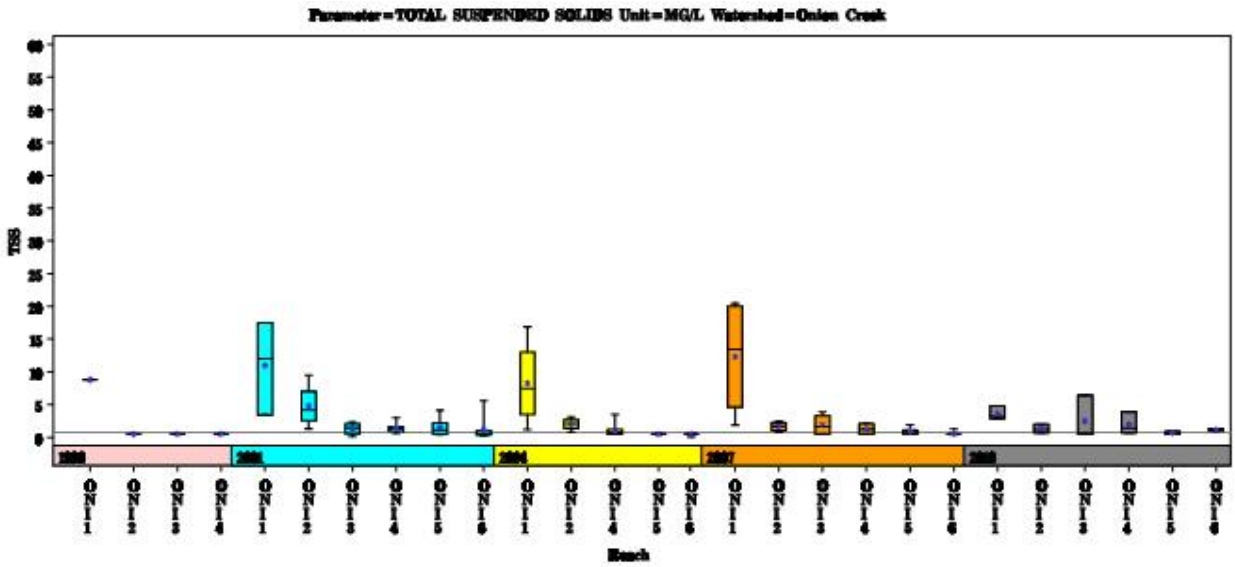
Data Summary Graphs – Orthophosphate and *E.coli* (Downstream to Upstream by Year)

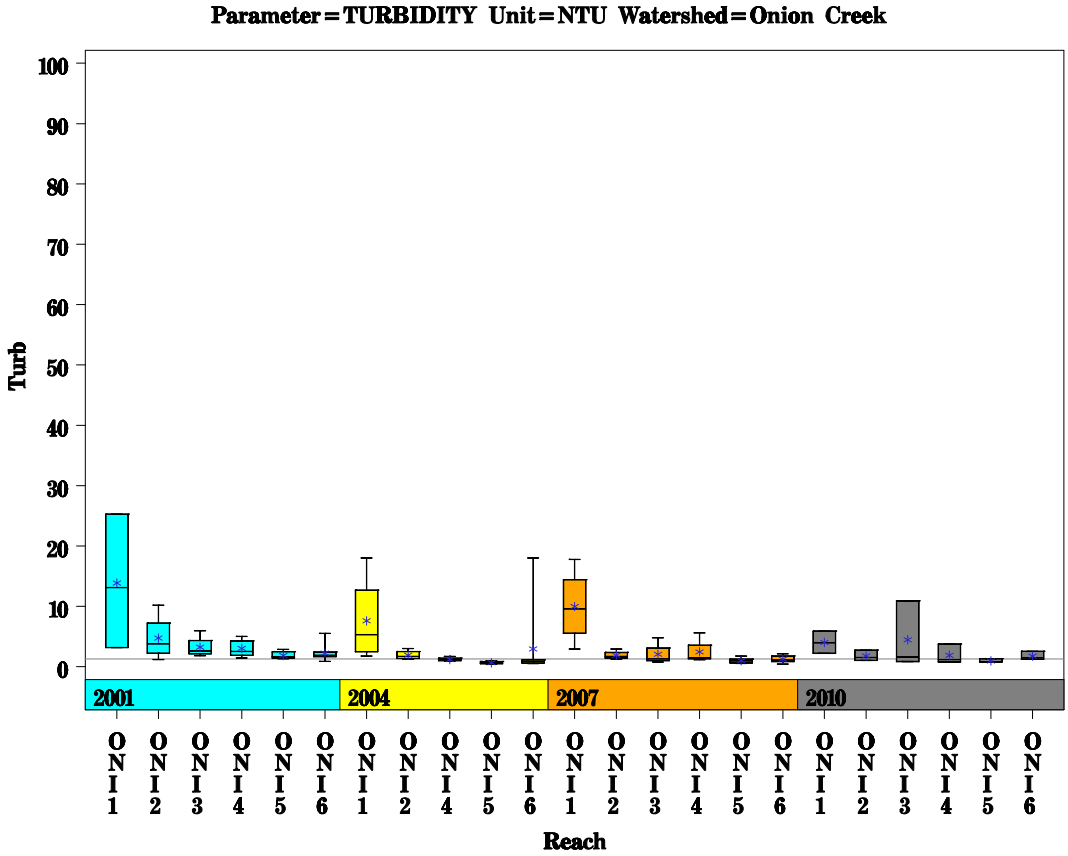




Onion Creek Watershed

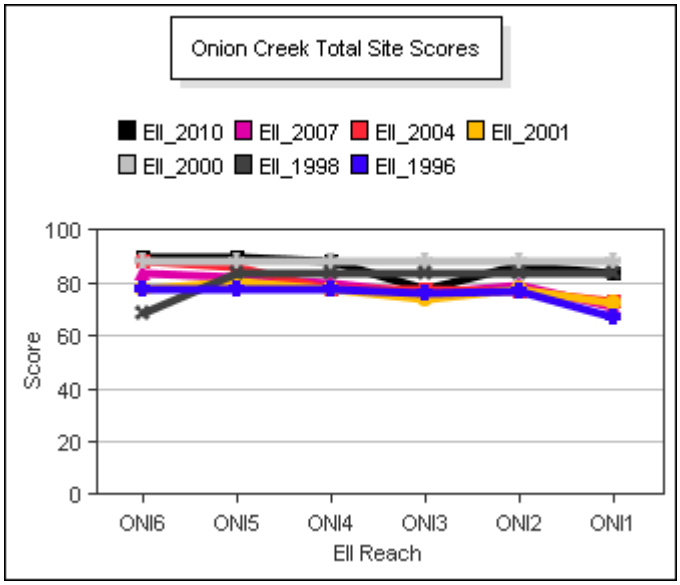
Data Summary Graphs – Total Suspended Solids and Turbidity (Downstream to Upstream by Year)

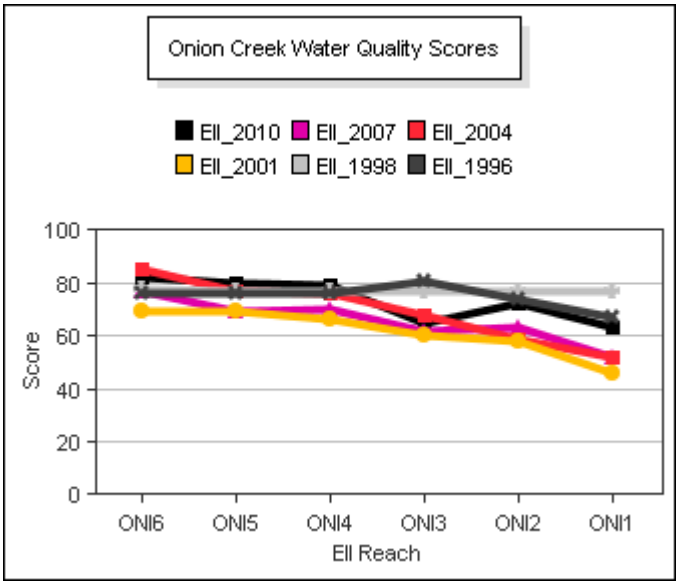


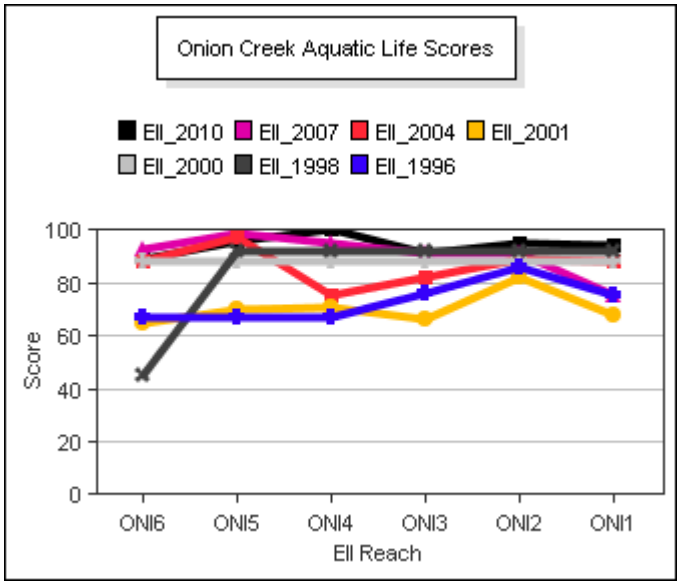


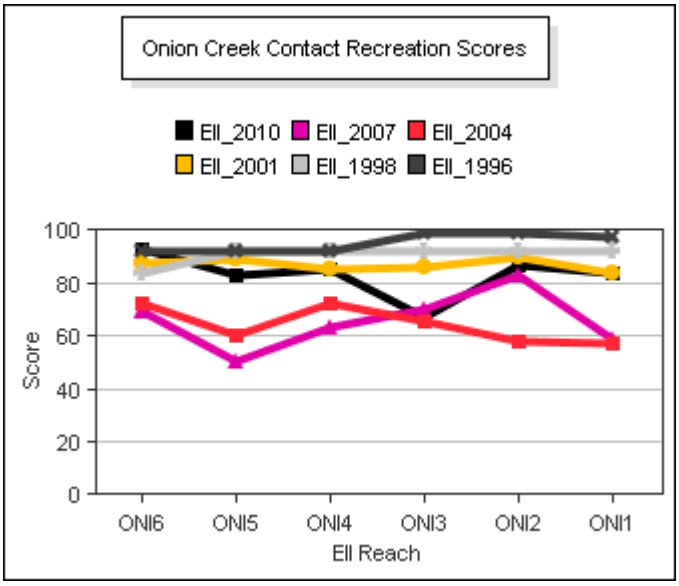
Onion Creek Watershed

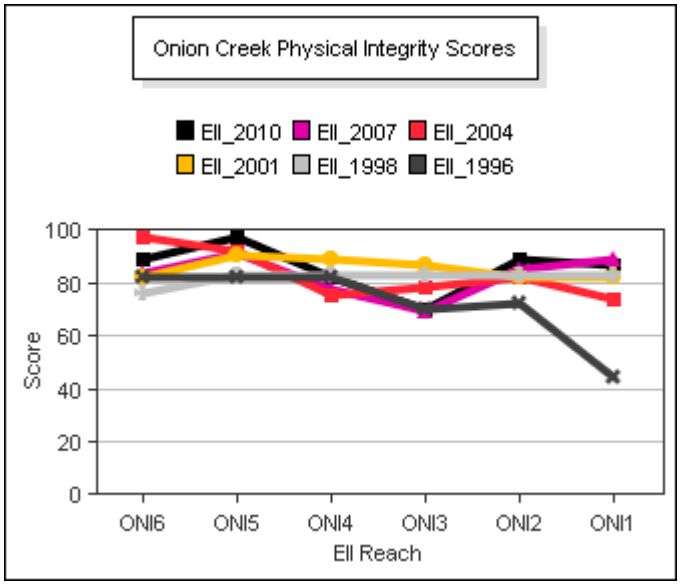
Score Summary – Reach scores for each sample year

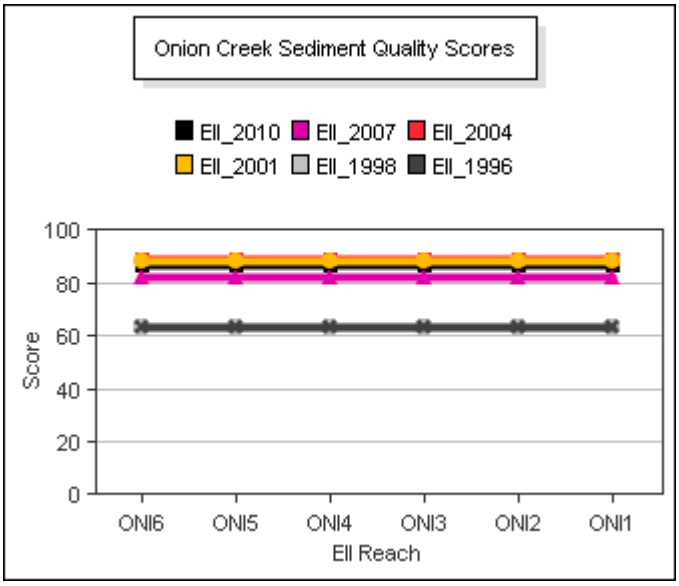












Onion Creek Watershed

Site Photographs

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236_00-ur-05_25_2010

239_t00-ds-03_06_2002

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1364_t00-ds-03_17_2003

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