Summary Sheet

	Suii	illiary Sii	eei					
Catchment	Total area			2 square mi	les		1.72	
	Area in recha	rge		none			N SA	
	Creek length			4 miles				700 M
	Receiving wa	iter		Town Lake				人
Demographics	2000 populati	ion		10,455				
	2030 projecte	d population		12,490			~	
	30 year projec	cted % increas	e	19 %				~~~
Land Use	Impervious co	over (2003 est	imate)	46.4 %			and the same	
	Impervious co	over (2013 est	imate)	54.4 %				
	2000	2003	2006	2009	2011	2013		
Overall EII Scores	50	55	53	47	37	58	Featured Watershed	Other Phase I Watersheds

Flow Regime* for Sample Sites on East Bouldin Creek

Phase II

							0 11		S		101	Du	TTTT	,,,,		CD O		240		Jului										
		20	01			200	3					2006	3			- 2	2009)		2010		201	1				2	013		-
Site	Site Name	Feb	Feb	Feb	Mar	Mar	May	Sep	Dec	Feb	Мау	Jul	Aug	Nov	Feb	May	Jun	Oct	Dec	Dec	Mar	Jun	Jun	Sep	Jan	Apr	M-J	Jun	Jun	Sep
		WQ	Bio	WQ	WQ	Bio	WQ	WQ	WQ	WQ	WQ	Bio	WQ	WQ	WQ	WQ	Bio	WQ	WQ	WQ	WQ	WQ	Bio	WQ	WQ	WQ	Bio	WQ	Bio	WQ
121	Alpine	В	В	В	В	В	В	n	n	В	В	В	n	n	n	n	n	В	В	n	n	n	n	n	В	n	n	n	n	n
119	Elizabeth	В	В	В	В	В	В	В	В	В	В	В	n	В	n	В	В	В	В	В	В	В	В	n	В	В		В	В	В
120	S Austin Center	В	В	В	В	В	В	В	n																					
115	Riverside	В	В	В	В	В	В	В	n																					
1338	Post Oak									В	В	В	n	n	n	n	n	В	В	В	В	n	n	n						
5401	Christopher																								В	В	В	n		В
	* B - baseflow	n	- no	flow	, (C - ct	orm	flou	7	hh	10 -	Can	nnla	c wa	ro t	lan		ligh	at bla	10 - C	ample	oc 117	oro	not	taka	n	hlai	1k –	not v	icited

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

Index scores* for East Bouldin Creek Sites by Year

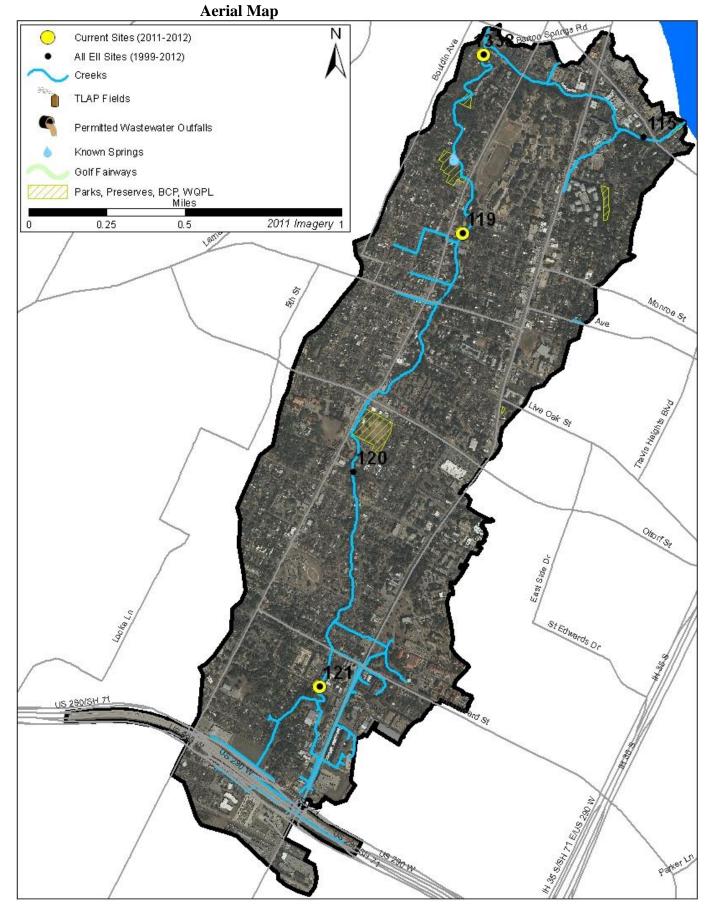
		mach scores for East	e Doure		· • • • • • • • • • • • • • • • • • • •	tes ~						
Reach	Site	Site Name	Year	Water Quality	Sediment**	Contact Recreation	Non- Contact Rec.	Physical Integrity	Aquatic Life	Benthic subindex	Diatom subindex	Total EII Score
EBO1	115	East Bouldin Creek @ Riverside Dr	2000	39	62	53	49	30	29	35	23	44
EBO2	119	East Bouldin Creek @ Elizabeth St	2000	51	62	57	56	88	29	27	30	57
EBO2	120	East Bouldin Creek @ South Austin Center	2000	55	62	59	67	31	26	27	25	50
EBO3	121	East Bouldin Creek Downstream of W. Alpine	2000	61	62	76	49	22	29	33	25	50
EBO1	115	East Bouldin Creek @ Riverside Dr	2003	35	68	40	46	57	35	52	18	47
EBO2	119	East Bouldin Creek @ Elizabeth St	2003	43	68	52	88	69	22	16	28	57
EBO2	120	East Bouldin Creek @ South Austin Center	2003	54	68	49	71	46	26	26	25	52
EBO3	121	East Bouldin Creek Downstream of W. Alpine	2003	56	68	83	83	46	34	26	42	62
EBO1	1338	East Bouldin Creek @ Post Oak	2006	59	42	34	83	57	57	47	66	55
EBO2	119	East Bouldin Creek @ Elizabeth St	2006	55	42	52	77	60	58	57	58	57
EBO3	121	East Bouldin Creek Downstream of W. Alpine	2006	51	42	43	58	47	26	27	25	45
EBO1	1338	East Bouldin Creek @ Post Oak	2009	59	61	33	57	57				45
EBO2	119	East Bouldin Creek @ Elizabeth St	2009	50	61	37	52	52	51	32	70	51
EBO3	121	East Bouldin Creek Downstream of W. Alpine	2009	68	61	38	20	45	47	47		47
EBO1	1338	East Bouldin Creek @ Post Oak	2011	50		27	40	48				33
EBO2	119	East Bouldin Creek @ Elizabeth St	2011	50		46	42	40	56	25	87	47
EBO3	121	East Bouldin Creek Downstream of W. Alpine	2011				42	30				24
EBO1	5401	East Bouldin Creek @ Christopher	2013	62	62	43	66	68	73	55	90	62
EBO2	119	East Bouldin Creek @ Elizabeth St	2013	45	62	26	73	63	65	55	75	56
EBO3	121	East Bouldin Creek Downstream of W. Alpine	2013	71	62	53	68	48	26	11	41	55
* blank co	ells indica	te parameter was not collected, blank row indicate site	was dropp	ed	>	**sedin	nent samı	oles only	collec	ted at the	he dow	nstream s

**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

Land Use Map Coult s, BAUERLE SUNSET SUNSE WA Single-Family Large Lot Single-Family Multi-family Commercial Office Industrial Mining/Landfill Civic Open/Undeveloped/Ag Park/Golf Course US 290/SH 71 Park/Preserve WOODWARD Transportation

Land Use 2006, 2010 Current Sites (2011-2012) All Ell Sites (1999-2012) Recharge Zone Creeks Watershed & Reach-Subwatersheds 0.25 0.5



Water Quality Data – <u>Temperature, Conductivity, pH, Dissolved Oxygen & E. coli</u> <u>for 2013 Sample Sites</u> (Downstream to Upstream)

Qualifiers to	>	greater than	Qualifiers to	(blank)	Useable
the left of	<	less than	the right of	S	Exceeds standard range
value:	< J	less than detection limit	value:	-	Deinsted feiled OC
	J	Estimated		R	Rejected, failed QC

			Temp.			Cond.			pН			D.O.			E.coli	
Site Name	Site # Reach	Date	<> Value	flag	<> '	Value	flag	<>	Value	flag	<>	Value	flag	>	Value	flag
East Bouldin @ Christopher	5401 EBO1	01/22/2013	11.8			867			7.94			8.8	R		149.7	
East Bouldin @ Christopher	5401 EBO1	04/24/2013	16.5			851			7.76			7.0			198.9	
East Bouldin @ Christopher	5401 EBO1	09/26/2013	24.1			529			7.51			5.8			198.9	
Site 5401 Mean			17.5			749			7.74			7.2			182.5	
East Bouldin @ Elizabeth St	119 EBO2	01/22/2013	11.8			812			7.62			7.4	R		410.6	
East Bouldin @ Elizabeth St	119 EBO2	04/24/2013	14.5			816			7.73			6.4			980.4	
East Bouldin @ Elizabeth St	119 EBO2	06/26/2013	25.5			691			7.33			3.0			2419.6	
East Bouldin @ Elizabeth St	119 EBO2	09/26/2013	23.0			668			7.56			3.5			1203.3	
Site 119 Mean			18.7			747			7.56			5.1			1253.5	
East Bouldin ds West Alpine Rd	121 EBO3	01/22/2013	18.3			633			7.75			11.4			67.7	
Site 121 Mean			18.3			633			7.75			11.4			67.7	
Watershed Mean			18.2			733			7.65			6.7			703.6	

Orange highlighting indicates that the value exceeds one standard deviation from the mean of all E.I.I. sites combined.

	Summary Statistics for all 2013 – 2014 E.I.I. Sites Combined.											
Parameter	2013-2014 Average	2013-2014 Minimum	2013-2014 Maximum	1 Standard Deviation Above	1 Standard Deviation Below							
Temperature (C°)	19.6	8.6	34.0	25.8								
Conductivity (uS/cm)	711	107	1783	942								
pH (Standard units)	7.86	6.96	8.97	8.19	7.52							
D.O. (mg/l)	8.1	1.2	30.5	11.4	4.8							
E.coli. (col/100ml)	435	1	4840	1127								

Water Quality Data – <u>Ammonia, Nitrate / Nitrite, Ortho-Phosphorus, Total Suspended Solids & Turbidity</u> <u>for 2013 Sample Sites</u> (Downstream to Upstream)

Qualifiers to	>	greater than	Qualifiers to	(blank)	Useable
the left of	٧	less than	the right of	S	Exceeds standard range
value:	< J	less than detection limit	value:	В	Dejected foiled OC
	J	Estimated		R	Rejected, failed QC

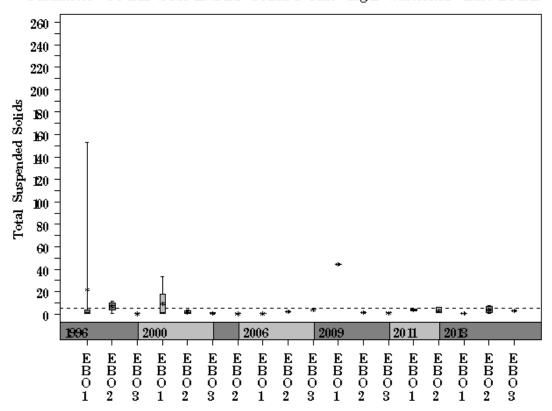
				NH3-N		NO3/N	02		Ortho-P			T.S.S.			Turb.	
Site Name	Site # Reach	Date	>	Value	flag	<> Value	flag	<>	Value	flag	<>	Value	flag	>	Value	flag
East Bouldin @ Christopher	5401 EBO1	01/22/2013	7	0.012		0.43		< J	0.004		< J	1.0			1.8	
East Bouldin @ Christopher	5401 EBO1	04/24/2013	J	0.018	R	0.62			0.028		< J	1.0			0.9	R
East Bouldin @ Christopher	5401 EBO1	09/26/2013	۲>	0.008		0.03			0.024	R	< J	1.0			3.6	
Site 5401 Mean				0.013		0.36			0.019			1.0			2.1	
East Bouldin @ Elizabeth St	119 EBO2	01/22/2013		0.073		1.07		J	0.008		< J	1.0			2.4	
East Bouldin @ Elizabeth St	119 EBO2	04/24/2013		0.038	R	0.84			0.028			7.8			2.8	R
East Bouldin @ Elizabeth St	119 EBO2	06/26/2013		0.046		0.08			0.015			1.3			1.9	
East Bouldin @ Elizabeth St	119 EBO2	09/26/2013		0.087		0.06			0.015			5.8			13.0	
Site 119 Mean				0.061		0.52			0.017			4.0			5.0	
East Bouldin ds West Alpine Rd	121 EBO3	01/22/2013	۲>	0.008		J 0.01	,	< J	0.004			3.0			2.4	
Site 121 Mean				0.008		0.01			0.004			3.0			2.4	
Watershed Mean				0.036		0.39			0.016			2.7			3.6	

Orange highlighting indicates that the value exceeds one standard deviation from the mean of all E.I.I. sites combined.

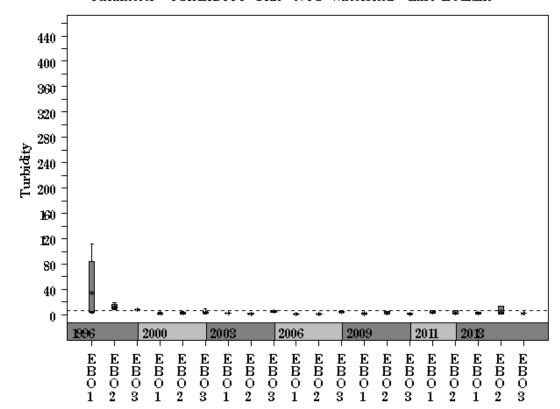
	Summary Statistics for all 2013 – 2014 E.I.I. Sites Combined.											
Parameter	2013-2014 Mean	2013-2014 Minimum	2013-2014 Maximum	1 Standard Deviation Above								
NH3-M (mg/l)	0.031	0.008	2.250	0.150								
NO3-N (mg/l)	1.16	0.01	16.30	4.02								
Ortho-P (mg/l)	0.041	0.004	1.360	0.164								
TSS (mg/l)	5.6	1.0	70.0	15.3								
Turbidity (NTU)	4.5	0.0	97.1	13.2								

 $\textbf{Data Summary Graphs} - \underline{\textbf{Total Suspended Solids}} \ \textbf{and} \ \underline{\textbf{Turbidity}} \ (\textbf{Downstream to Upstream by Year})$

Parameter= TOTAL SUSPENDED SOLIDS Unit= mg/L Watershed= East Bouldi

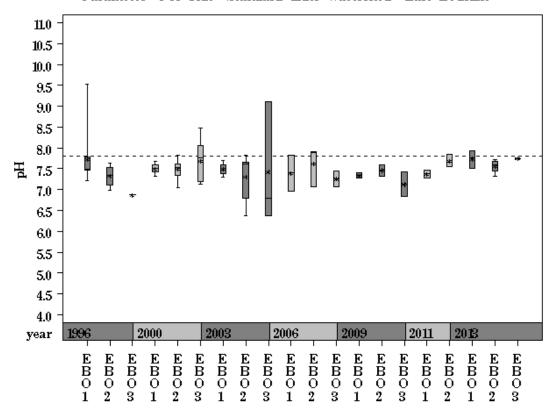


Parameter = TURBIDITY Unit = NTU Watershed = East Bouldin

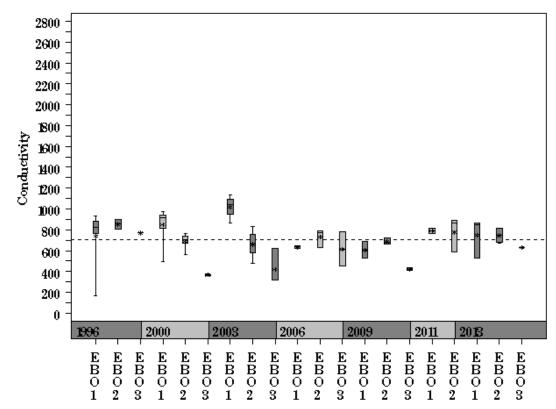


Data Summary Graphs – <u>pH</u> and <u>Conductivity</u> (Downstream to Upstream by Year)

Parameter= PH Unit= Standard units Watershed= East Bouldin

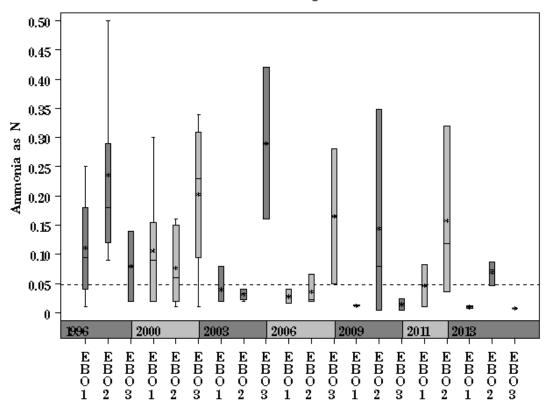


Parameter = CONDUCTIVITY Unit = uS/cm Watershed = East Bouldin

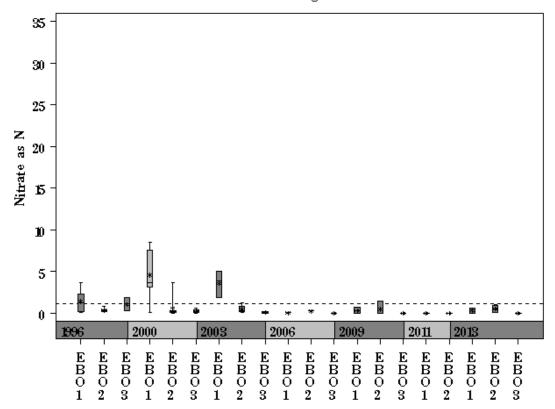


Data Summary Graphs – Ammonia and Nitrate/Nitrite (Downstream to Upstream by Year)

Parameter= AMMONIA AS N Unit=mg/L Watershed= East Bouldin

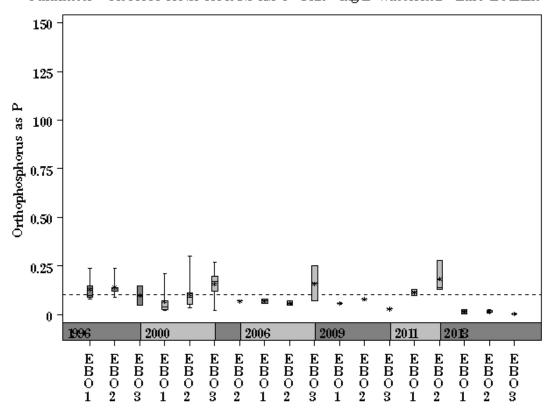


Parameter= NITRATE AS N Unit= mg/L Watershed= East Bouldin

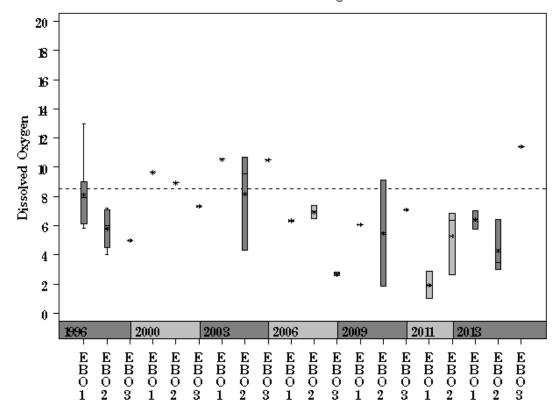


Data Summary Graphs – Orthophosphate and Dissolved Oxygen (Downstream to Upstream by Year)

Parameter = ORTHOPHOSPHORUS AS P Unit = mg/L Watershed = East Bouldin

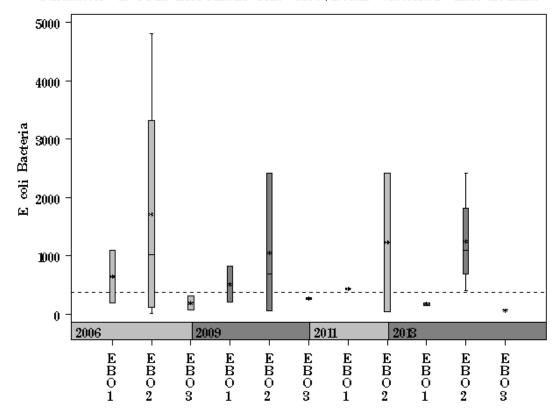


Parameter= DISSOLVED OXYGEN Unit= mg/L Watershed= East Bouldin

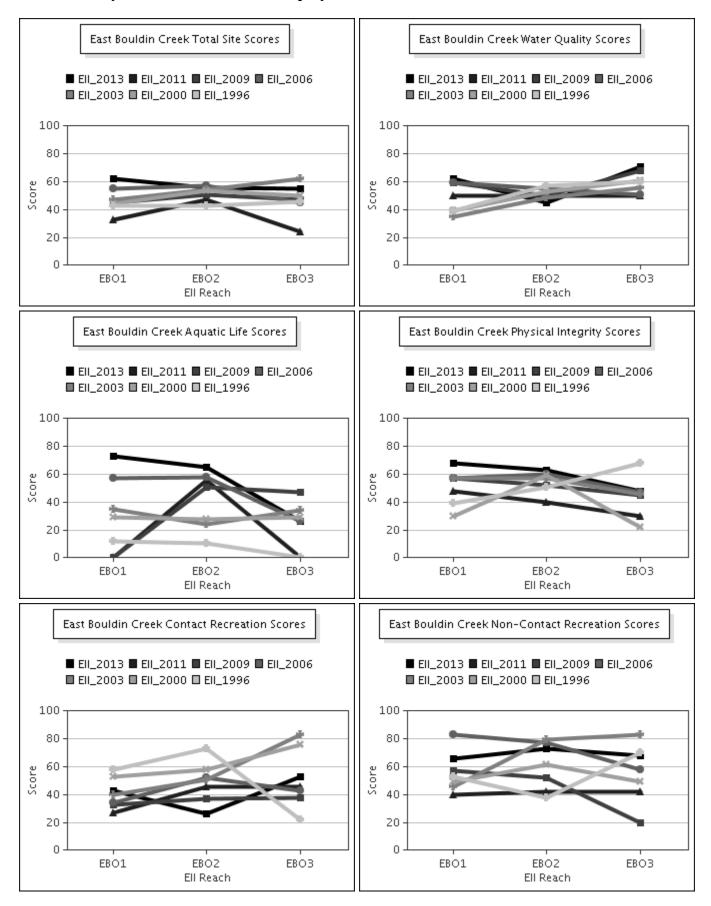


Data Summary Graphs – <u>E.coli</u> (Downstream to Upstream by Year)

Parameter = E COLI BACTERIA Unit = MPN/100mL Watershed = East Bouldin



Score Summary – Reach scores for each sample year



 $\frac{\textbf{Benthic Macroinvertebrates} - \underline{\textbf{Taxa List, Pollution Tolerance Index \& Functional Feeding Group}}{\textbf{for 2013 Sample Sites (Downstream to Upstream)}}$

			East Bouldin @	East Bouldin @ Elizabeth	East Bouldin ds West
Benthic			Christopher	St	Alpine Rd
Macroinvertebrate ID	PTI	FFG	(Site 5401)	(Site 119)	(Site 121)
Fallceon quilleri	4	SC,CG	90	182	
Simulium sp.	4	FC	2		
Argia sp.	6	Р	17	4	
Cheumatopsyche sp.	6	FC	306	9	
Chironomidae	6	P,FC	100	23	45
Hydracarina	6				3
Tanypodinae	6	Р	4	5	1
Scirtidae	7	SH,SC,CG		1	
Oligochaeta	8	CG		4	6
Physella sp.	9	SC	36		3
Trepobates sp.	10	Р	1		
Dugesia sp.		P,CG	58	44	2

Benthic Macroinvertebrates – Metric Summary for 2013 Sample Sites (Downstream to Upstream)

Scoring Metric	East Bouldin @ Christopher (Site 5401)	East Bouldin @ Elizabeth St (Site 119)	East Bouldin ds West Alpine Rd (Site 121)
Number of Taxa *	8	7	5
Hilsenhoff Biotic Index *	5.9	4.4	6.4
Number of Ephemeroptera Taxa *	1	1	0
Percent of Total as Chironomidae *	17	10	77
Number of EPT Taxa *	2	2	0
Percent of Total as EPT *	64	70	0
Percent of Total as Predator *	29	28	80
Number of Intolerant Taxa *	2	1	0
Percent Dominance (Top 3 Taxa) *	81	92	90
EPT / EPT + Chironomidae	1	1	0
Number of Diptera Taxa	2	1	1
Number of Non-Insect Taxa	2	2	4
Number of Organisms	614	272	60
Percent Dominance (Top 1 Taxa)	50	67	75
Percent of Total as Collector / Gatherer	24	85	13
Percent of Total as Dominant Guild (FFG)	67	85	80
Percent of Total as Elmidae	0	0	0
Percent of Total as Filterers	67	14	77
Percent of Total as Grazers (PI & SC)	21	67	5
Percent of Total as Tolerant Organisms	6	0	5
Percent of Trichoptera as Hydropsychidae	100	100	0
Ratio of Intolerant : Tolerant Organisms	0.19	3.95	0.00
TCEQ Qualitative Aquatic Life Use Score	17	19	17
TCEQ Quantitative Aquatic Life Use Score	29	29	15

- * Ell scoring parameter: Nine metric parameters are used in the calculation of the Ell Benthic Subindex score. Other metrics are shown to supplement evaluation.
- # of Taxa: Higher diversity (number of taxa) correlates with greater biological integrity. The average number of taxa per site for 2013/2014 samples was 15; the lowest value was 5 and the highest value was 30.
- Hilsenhoff Biotic Index (HBI): HBI values range from 0 to 10. Low HBI values reflect a higher abundance of taxa that are sensitive
 to organic (nutrient) pollution, thus a lower level of this type of pollution. The average HBI per site for 2013/2014 samples was 5.4;
 the lowest value was 3.7 and the highest value was 8.1.
- 3. # of Ephemeroptera taxa: A higher number of Ephemeroptera (mayfly) taxa correlates with greater biological integrity. The average number of taxa per site for 2013/2014 samples was 2; the lowest value was 0 and the highest value was 7.
- 4. % of total as Chironomidae: The percentage of the sample represented by the Dipteran family Chironomidae will increase with a decrease in biological integrity. The average percent Chironomidae per site for 2013/2014 samples was 16%; the lowest value was 0% and the highest value was 77%.
- # of EPT Taxa: A higher number of Ephemeroptera (mayfly), Plecoptera (stonefly) and Trichoptera (caddisfly) taxa correlates with greater biological integrity. The average number of EPT taxa per site for 2013/2014 samples was 4; the lowest value was 0 and the highest value was 12.
- 6. % of total as EPT: The percentage of the sample represented by the insect orders Ephemeroptera (mayfly), Plecoptera (stonefly) and Trichoptera (caddisfly) will decrease with a decrease in biological integrity. The average percent EPT taxa per site for 2013/2014 samples was 46%; the lowest value was 0% and the highest value was 89%.
- 7. % of total as Predator: The percentage of the sample represented by predators is variable with regard to biological integrity. The average percent predator per site for 2013/2014 samples was 31%; the lowest value was 3% and the highest value was 82%.
- # of Intolerant Taxa: A higher number of pollution intolerant taxa correlates with greater biological integrity. The average number of intolerant taxa per site for 2013/2014 samples was 5; the lowest value was 0 and the highest value was 15.
- 9. % Dominance (top 3 taxa): The percentage of the sample represented by the three most abundant taxa will increase with a decrease in biological integrity. The average percent of sample dominated by the top three taxa per site for 2013/2014 samples was 72%; the lowest value was 39% and the highest value was 96%.

Diatoms - <u>Taxa List & Pollution Tolerance Index for 2013 Sample Sites</u> (Downstream to Upstream)

Amphona inaniensis 4 10 Achmanthis exigua 3 155 Achmanthindium minutissimum 3 162 110 4 Achmanthindium pyrenacum 3 2 7 2 Amphora ligue 3 1 1 Amphora pediculus 3 22 117 13 Calonesis beallium 3 22 117 13 Collegia Beallium 3 3 2 2 Opmbella affinis 3 3 3 2 Encyorema silesiscum 3 2 2 2 Encyorema silesiscum 3 2 2 5 Encyorema silesiscum 3 4 4 2 Cessalera decussis 3 6 6 6 Geneybronema angustum 3 3 3 2 Environia affine 3 3 3 2 Asylucia cryptotenella 3 10 1 5	B:	DTI	East Bouldin @ Christopher	East Bouldin @ Elizabeth St	East Bouldin ds West Alpine Rd
Achrantinis eviqua 3 152 110 4 Achrantinishim minurissimum 3 162 7 2 Amphora Bilyea 3 1 7 2 Amphora Pediculus 3 2 7 2 Amphora Pediculus 3 22 117 13 Cabreis Bacillum 3 2 2 117 13 Cabreis Bacillum 3 3 2 2 Encotabilima 2 2 Encotabilima 2 2 Encotabilima 3 3 4<	Diatom Species Name	PTI	(Site 5401)	(Site 119)	(Site 121)
Achnanthicium minusissimum 3				10	
Achanthidium pyrenaicum		_			
Amphora pediculus					
Ambhora pediculus				7	2
Cedonies bacillum			1		
Cymbella affiris	Amphora pediculus	3	22	117	13
Denticula kuetzingi 3 34 2	Caloneis bacillum	3			2
Encyonema silesiacum	Cymbella affinis	3	3		
Euronic bilunaris	Denticula kuetzingii	3	34	2	
Fragilaria capucina 3	Encyonema silesiacum	3	2		
Geisstera decussis 3 6 6 6 6 6 6 6 6 6	Eunotia bilunaris	3			5
Geisslera decussis	Fragilaria capucina	3	4		
Gomphonema affine 3 3 3 2 2 3 4 4 4 4 4 4 4 4 4		3	6		
Gophonema angustum 3					
Gomphonema clavatum	•				2
Halamphora montana 3 10 1 5					
Navicula cryptocephala 3		_	10	1	
Navicula cryptotenella 3	,				
Navicula kotschyi					
Navicula radiosa 3 2 Navicula rhynchocephala 3 2 Nitzschia finearis 3 10 Nitzschia finearis 3 2 Pinnularia microstauron 3 2 Reimeria sinuata 3 4 10 Rhoicosphenia abbreviata 3 1 34 2 Achnantheiopsis lanceolata 2 98 36 6 Cyclotella meneghiniana 2 2 5 Diadesmis confervacea 2 1 1 Encyonema minutum 2 8 8 Gomphonema angustatum 2 2 2 Melosira varians 2 19 2 Navicula menisculus 2 1 1 Navicula recens 2 1 1 Navicula trivalis 2 1 1 Navicula reventa 2 2 4 24 Nitzschia clausii 2 2 4 24					5
Navicula rhynchocephala 3 2 Nitzschia Inicaris 3 10 Nitzschia Inicaris 3 2 Pinnularia microstauron 3 4 10 Reimeria sinuata 3 4 10 Reimeria sinuata 3 4 10 Rhoicosphenia abbreviata 3 1 34 2 Achnantheiopsis lanceolata 2 98 36 6 Cyclotella meneghiniana 2 2 5 5 Diadesmis confervacea 2 1				1	
Nitzschia finearis 3 10 Nitzschia linearis 3 2 Pinnularia microstauron 3 2 Reimeria sinuata 3 4 10 Rhoicosphenia abbreviata 3 1 34 2 Achnantheiopsis lanceolata 2 98 36 6 6 Cyclotella meneghiniana 2 2 5 5 Diadesmis confervacea 2 1		_			2
Nitzschia linearis 3		_	2		
Pinnularia microstauron 3 4 10 Reimeria sinuata 3 4 10 Rhoicosphenia abbreviata 3 1 34 2 Achnantheiopsis lanceolata 2 98 36 6 Cyclotella meneghiniana 2 2 5 Diadesmis confervacea 2 1 1 Encyonema minutum 2 8 1 Gomphonema angustatum 2 2 1 Gomphonema angustatum 2 19 2 Melosira varians 2 19 1 Navicula menisculus 2 1 1 Navicula recens 2 1 1 Navicula recens 2 2 1 1 Navicula recens 2 2 11 1 Navicula recens 2 2 2 11 Nitzschia amphibia 2 2 4 24 Nitzschia clausi 2 2 4 <td< td=""><td>Nitzschia fonticola</td><td></td><td></td><td></td><td>10</td></td<>	Nitzschia fonticola				10
Reimeria sinuata 3	Nitzschia linearis	3			2
Rhoicosphenia abbreviata 3	Pinnularia microstauron	3			2
Achnantheiopsis lanceolata 2 98 36 6 Cyclotella meneghiniana 2 2 5 Diadesmis conlervacea 2 1 1 Encyonema minutum 2 8 2 Gomphonema angustatum 2 2 1 Melosira varians 2 19 1 Navicula menisculus 2 1 1 Navicula recens 2 1 1 Navicula recens 2 1 1 Navicula trivialis 2 2 11 Navicula trivialis 2 2 1 Navicula amphibia 2 2 4 24 Nitzschia amphibia 2 2 4 24 Nitzschia inconspicua 2 2 2 2 Sellaphora pupula 2 6 45 45 Surirella angusta 2 2 2 2 Synedra ulna 2 4 1 1	Reimeria sinuata	3	4	10	
Cyclotella meneghiniana 2 2 1 Diadesmis confervacea 2 1 Encyonema minutum 2 8 Gomphonema angustatum 2 19	Rhoicosphenia abbreviata	3	1	34	2
Diadesmis confervacea 2	Achnantheiopsis lanceolata	2	98	36	6
Encyonema minutum	Cyclotella meneghiniana	2	2		5
Comphonema angustatum 2	Diadesmis confervacea	2	1		
Comphonema angustatum 2		2	8		
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Diatoms – Metric Summary for 2013 Sample Sites (Downstream to Upstream)

Scoring Metric	East Bouldin @ Christopher (Site 5401)	East Bouldin @ Elizabeth St (Site 119)	East Bouldin ds West Alpine Rd (Site 121)
Cymbella Richness	4	1	0
Number of organisms	500	500	500
Number of taxa	33	17	30
Percent motile taxa	10	2	59
Percent similarity to reference condition	39	40	11
Pollution tolerance index	2.49	2.90	1.77

- * Ell scoring parameter: Four metric parameters are used in the calculation of the Ell Diatom Subindex score: Cymbella richness, percent motile taxa, percent similarity to reference condition and pollution tolerance index. Number of taxa is non-scoring, but is shown to supplement evaluation. The number of organisms is typically a sample of 500, but occasionally differs due to sample conditions.
- 1. Cymbella Richness: The Cymbelloid taxa include species in the genus Cymbella, in addition to some species belonging to the genera Cymbellopsis, Cymbopleura, Encyonema, Encyonemopsis, Navicymbula and Reimeria. Their presence highlights the presence of sensitive species, especially with regard to impervious cover, and this value increases with an increase in overall water quality. The average number of Cymbelloid taxa per site for 2013/2014 samples was 3; the lowest value was 0 and the highest value was 7.
- 2. % Motile Taxa: This is a siltation index showing the relative abundance of genera that are able to move towards the surface if covered by silt. A higher percentage is indicative of a degraded condition caused by increased silt pollution. The average percent motile taxa per site for 2013/2014 samples was 16%; the lowest value was 0% and the highest value was 77%.
- 3. % similarity to reference condition: This percentage compares a site to reference sites that are selected based on having low percent impervious cover. A higher percentage reflects greater biological integrity. The average percent similarity per site for 2013/2014 samples was 31%; the lowest value was 6% and the highest value was 57%.
- 4. Pollution Tolerance Index (PTI): This is a total value for a sample, which is a function of the abundance of each taxon (usually species) in a sample and the individual PTI's for each of those taxa. Individual PTI's for each taxon range from 1 (most pollution tolerant) to 4 (most pollution sensitive), thus higher total PTI's for a site reflect greater biological integrity. The average PTI per site for 2013/2014 samples was 2.76; the lowest value was 1.70 and the highest value was 3.45.

Site Photographs



Site Photographs



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