



Small Watershed Rotating Basin Monitoring Program

Basin Group 2: Upper North Canadian, Cimarron, and Upper Arkansas Basins

Third Cycle

Final Report

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Table of Contents

LIST OF TABLES.....	3
LIST OF FIGURES.....	3
1. INTRODUCTION.....	4
1.1 Project Background and Description	4
2.0 MATERIALS AND METHODS.....	6
2.1 General.....	6
2.2 Water Quality Monitoring.....	11
2.3 Biological Monitoring.....	12
2.3.1 Habitat Assessment.....	12
2.3.2 Fish	14
2.3.3 Macroinvertebrates	16
2.4 Watershed Assessment.....	18
2.5 Beneficial Use Support Assessment.....	18
3.0 RESULTS AND DISCUSSION.....	19
3.1 Water Quality Monitoring.....	19
3.2 Biological Monitoring.....	42
3.2.1 Habitat Assessment.....	42
3.2.2 Fish Collections	51
3.2.3 Macroinvertebrate Collections	66
3.2.4 Overall Biological Assessment.....	70
3.3 ASSESSMENT	80
Fixed Sites	80
Probabilistic Sites	81
3.4 DESIGNATED USE SUPPORT ASSESSMENT.....	88
4.0 LITERATURE CITED	92
APPENDICES	93

LIST OF TABLES

Table 1. Fixed Site List for Rotating Basin Monitoring Program: Basin Group 2, Cycle 3.	7
Table 2. Probabilistic Site List for Rotating Basin Monitoring Program: Basin Group 2.	9
Table 3. Index of Biotic Integrity (IBI) scoring criteria for fish.	15
Table 4. Index of Biotic Integrity (IBI) score interpretation for fish.	16
Table 5. Bioassessment scoring criteria for macroinvertebrates.	18
Table 6. Bioassessment score interpretation for macroinvertebrates.	18
Table 7. Mean <i>in-situ</i> water quality values for Basin Group 2 Fixed Monitoring Sites, 2011-2013.	19
Table 8. Mean water quality values for Basin Group 2 Fixed Monitoring Sites, 2011-2013.	21
Table 9. <i>In-situ</i> water quality values for Basin Group 2 Probabilistic Sites.	22
Table 10. Water quality values for Basin Group 2 Probabilistic Sites.	24
Table 11. Low dissolved oxygen values (based on OAC 785:46-15; OWRB 2011)	27
Table 12. Geometric mean of bacteria values for Basin Group 2 fixed monitoring sites	29
Table 13. Bacteria values for probabilistic sites.	30
Table 14. Statistical comparisons of cycles 1, 2 and 3 of Rotating Basin Project water quality data.	40
Table 15. Habitat assessment metric values for fixed monitoring sites	42
Table 16. Habitat assessment metric values for probabilistic monitoring sites	44
Table 17. Metric values for calculation of fish IBI scores (OCC method) for fixed sites	51
Table 18. Metric values for calculation of fish IBI scores (OCC method) for probabilistic sites	53
Table 19. IBI scores for fixed sites based on OCC's modified RBP method	55
Table 20. IBI scores for probabilistic sites based on OCC's modified RBP method.	56
Table 21. Comparison of fish data from previous cycles to cycle 3.	62
Table 22. Macroinvertebrate metric values determined for each fixed monitoring site	67
Table 23. Macroinvertebrate metric values determined for each probabilistic monitoring site	70
Table 24. Watershed landuse for each fixed monitoring site.	82
Table 25. Permitted landuse for each site.	85
Table 26. Comparison of sites with and without NPDES permits based on one-way ANOVAs.	86
Table 27. Beneficial use support assessment.	88

LIST OF FIGURES

Figure 1. Fixed and probabilistic monitoring sites in "Basin Group 2"	5
Figure 2. Select nutrients for each site by ecoregion	33
Figure 3. Select physical parameters by ecoregion.	37
Figure 4. Total habitat score for each fixed site by ecoregion.	47
Figure 5. Total habitat score for each probabilistic site by ecoregion.	49
Figure 6. IBI score (fish) for each fixed site plotted by ecoregion	58
Figure 7. IBI score (fish) for each probabilistic site plotted by ecoregion	60
Figure 8. Comparison of habitat, fish, macroinvertebrate, and chemistry scores for fixed sites relative to the average high quality site in each ecoregion.	72
Figure 9. Comparison of habitat, fish, macroinvertebrate and chemistry scores for probabilistic sites relative to the average high quality sites in each ecoregion.	76

1. INTRODUCTION

1.1 Project Background and Description

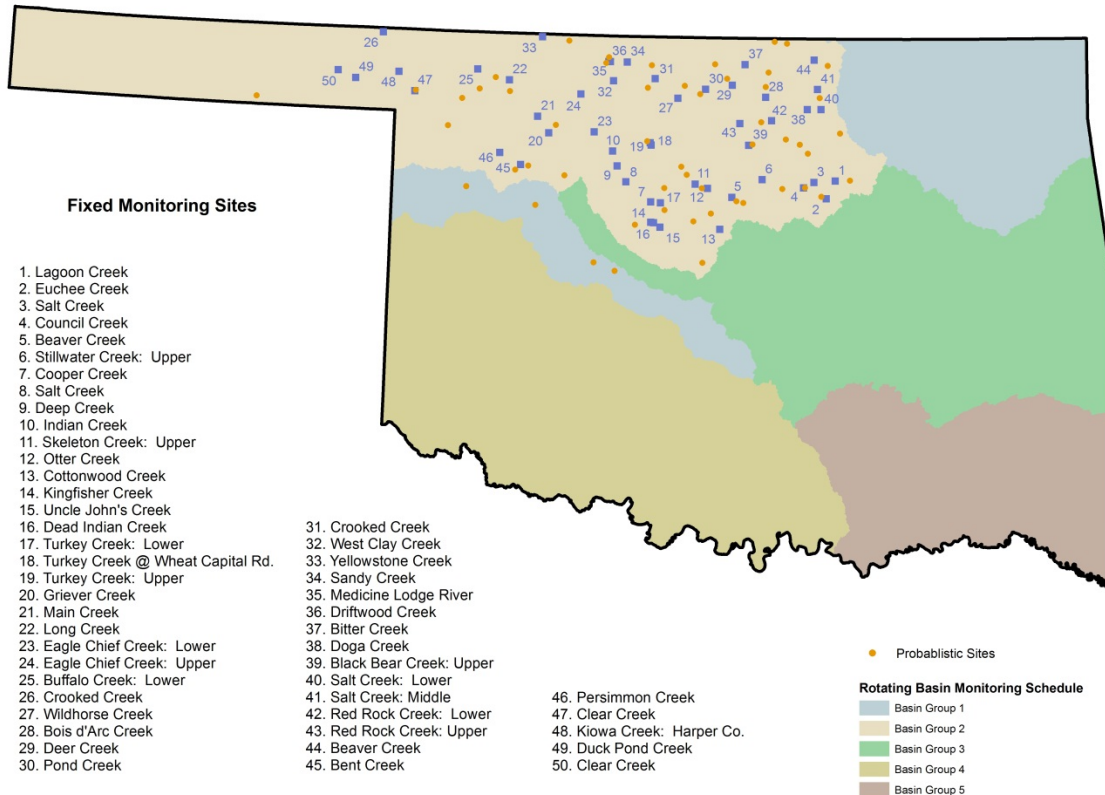
The Clean Water Act has charged each state's nonpoint source (NPS) pollution agency with two primary tasks: 1) identify all waters being impacted by NPS pollution, and 2) develop a management program describing programs to be implemented to correct any identified problems. In addition, each state's NPS agency is charged with identification of all programs which are actively planning or enforcing NPS controls in order to reduce NPS pollution in cooperation with local, regional, and interstate entities. The state NPS agency can then report on total program status with regard to efforts to address NPS impacts and improve water quality. The Oklahoma Conservation Commission (OCC) is charged by Oklahoma state statute as the NPS Program technical lead and therefore must monitor to determine the occurrence, nature and extent of NPS impacts to state waters. Robust and meaningful assessment of the state's water quality is the foundation for meeting the long-term goals of the Oklahoma NPS program and water quality management in general.

In 2000, the Oklahoma Conservation Commission (OCC) initiated a progressive ambient monitoring program to assess NPS issues on a larger spatial and temporal scale than previously done. Known as the *Small Watershed Rotating Basin Monitoring Program* ("Rotating Basin Program"), this effort entails fixed station sampling at or near the outlets of complete eleven digit Hydrologic Unit Code watersheds (HUC-11). Oklahoma contains all or part of 414 U.S. Geological Survey (USGS) 11-digit HUC basins which have been collated into eleven larger planning basins for state water quality management purposes. The sampling units for the Rotating Basin Monitoring Program are based at the outlets of HUC 11 watersheds located entirely in the state, with secondary sites located upstream in selected watersheds where isolation of a particular tributary influence is necessary. Fixed stations are segregated into strategic basin groups and are sampled every five weeks for a period of two years. Each year, sampling is initiated in a new basin group, resulting in a statewide coverage of all sites in five years. The data collected as part of the Rotating Basin Monitoring Program is used to determine designated use attainment as part of the State's biannual integrated report in accordance with the protocol in State law (OAC 785:45 and 785:46). Monitoring sites are coordinated with other agencies in the state to assure that little or no overlapping data is collected. Data is used to help determine priority watershed projects as part of the state NPS management plan approximately every five years. This report focuses on the second set of planning basins monitored in the five year rotation, the Upper North Canadian, Cimarron, and Upper Arkansas River basins (Figure 1).

To complement the fixed site monitoring, the OCC added a probabilistic component to the Rotating Basin Monitoring Program in 2008. This addition to the Rotating Basin Program provides a statistically qualified assessment of water quality conditions throughout each of the project basin units. To accomplish this, sites are randomly selected from all of the waters of interest in a target area (i.e., basin unit), and the monitoring results are used to estimate water quality conditions in the larger area with known confidence (USGAO 2004). Through the probabilistic component, data will be collected from 250 stream locations over a five-year period, with 50 targeted sites sampled each year. The probabilistic sites will be coordinated with the basins being sampled by the rotating basin project in any given year;

thus, for 2012, sites were sampled in the Upper North Canadian, Cimarron, and Upper Arkansas River basins (Figure 1).

Figure 1. Fixed and probabilistic monitoring sites in "Basin Group 2" for the third cycle of the Small Watershed Rotating Basin Monitoring Project.



Effectively coordinated with other state monitoring programs, the OCC's Rotating Basin program is designed to accomplish the state's NPS monitoring needs in four stages. The first stage includes a comprehensive, coordinated investigation and analysis of the causes and sources of NPS pollution throughout the state – *Ambient Monitoring*. The second stage involves more intensive, specialized monitoring designed to identify specific causes and sources of NPS pollution – *Diagnostic Monitoring*. The data from diagnostic monitoring can be used to formulate an implementation plan to specifically address the sources and types of identified NPS pollution. The third stage of monitoring is designed to initiate remedial and/or mitigation efforts to address the NPS problems – *Implementation Monitoring*. Finally, the fourth stage evaluates the effectiveness of the implementation through assessment and post-implementation monitoring – *Success Monitoring*. This assessment program provides a thorough and statistically sound evaluation of Oklahoma's waters every five years, which helps focus NPS program planning, education, and implementation efforts in areas where they can be most effective.

The Small Watershed Rotating Basin Monitoring Program considers the following specific questions in the context of Oklahoma Water Quality Standards and Use Support Assessment Protocols (USAPs) in addressing NPS pollution:

1. Which HUC 11 waterbodies are not supporting assigned beneficial uses due to NPS or NPS plus point source (PS) pollution?
2. Which waterbodies show elevated or increasing levels of NPS or NPS plus PS pollutants, which may threaten water quality?
3. What are the sources and magnitude of pollution loading within threatened or impaired waterbodies?
4. Which land uses or changes in land use are sources or potential sources for pollutants causing beneficial use impairment?

In its entirety, OCC's Rotating Basin Monitoring Program provides an assessment of water quality, watershed condition, and support status for selected streams statewide necessary for planning, implementation, and eventual evaluation of mitigation efforts. The statewide ambient monitoring program has allowed a comprehensive approach for the identification of nonpoint source (NPS) affected waters, as well as the identification of high quality streams. Results from this effort are used to assist the state in producing the 305(b) and 303(d) lists which are required by the EPA to assess beneficial use support for waterbodies biannually.

This report discusses the results of the *ambient* (routine physical, chemical, and biological sampling) and *diagnostic* (special parameter sampling) stages of the third cycle of the Rotating Basin program in the Upper North Canadian, Cimarron, and Upper Arkansas River basins (see Figure 1). Data from both fixed and probabilistic sites will be discussed. *Implementation* and *success* monitoring are typically accomplished through priority watershed projects and reported on in project-specific final reports.

This program will continue to provide a robust baseline dataset to assess the impact of NPS pollution throughout the state, identify the causes and sources of the pollution, and determine the success of measures to improve water conditions. The use of probabilistic monitoring in conjunction with the rotating basin monitoring program will allow a statistically valid and qualified assessment/representation of the percentage of stream miles across the state that are in good or bad condition and the percentage of stream miles that are fulfilling or not fulfilling their designated uses.

2.0 MATERIALS AND METHODS

2.1 General

Sampling stations were selected to effectively represent streams of the Upper North Canadian, Cimarron, and Upper Arkansas River basins. Candidate streams were selected from subwatersheds within these basins located entirely within the state of Oklahoma having perennial water. Watersheds that did not have perennial water or were actually a segment of a larger river being sampled by another agency were not chosen. Where a particular watershed was monitored by another entity, the stream was dropped from consideration for a Rotating Basin site if the monitoring being conducted met the project data quality objectives. For most subwatersheds, the monitoring site was located near the outflow of the primary stream far enough upstream to limit backwater (surface and alluvial) effects of the waterbody to which it drained. For larger subwatersheds, an additional site was sometimes located upstream to isolate a particularly strong tributary influence. In some cases, sites were specifically

chosen to monitor a stream draining an area of landuse different from the majority of the other streams being monitored in that region or subwatershed.

Reconnaissance of all of the potential sites within the Upper North Canadian, Cimarron, and Upper Arkansas River basins was accomplished prior to the first round of monitoring in 2002, and sites which did not meet the sampling criteria were removed from the project. Seventy-two sites were monitored during the first rotating basin cycle, from 2002-2004. Seventy of the original streams were monitored in the second cycle from June 2007-May 2009. The third cycle of monitoring in these basins occurred from June 2012-May 2014. There were 50 fixed sites during this cycle of monitoring. Some of the original sites had to be dropped due to continuing severe drought.

With the initiation of the probabilistic component of the Rotating Basin Program, the OCC sampled a total of 52 randomly selected sites in the Upper North Canadian, Cimarron, and Upper Arkansas River basins during the summer of 2012. These sites were part of a master site list generated by Tony Olsen with the EPA Corvallis Lab which included 150 sites total. Sampling occurred in the order the list was generated in an attempt to get at least 50 sites assessed. The additional sites were “back-ups” to be used if one of the first 50 sites was inaccessible or if access permission was denied.

The sites monitored in the Upper North Canadian basin occur over two level-three ecoregions: Southwestern Tablelands (SWT) and Central Great Plains (CGP) (Woods et al. 2005). In the Upper Arkansas basin, sites are located in the Southwestern Tablelands, Central Great Plains, or Flint Hills (FH) ecoregions. The Cimarron basin includes sites in the Southwestern Tablelands and Central Great Plains ecoregions, as well as one site in the Cross Timbers (CT) ecoregion: however, the site in the CT ecoregion (Lagoon Creek) has a heavy CGP influence (i.e., it is very close to the ecoregion border and its water originates in the CGP ecoregion), so it was grouped with the CGP sites when compared to reference conditions. One other site was grouped with the ecoregion from which a large influence was exerted, as shown in the “modified ecoregion” column in Table 1: Doga Creek (located in CGP but influenced by FH).

Table 1. Fixed Site List for Rotating Basin Monitoring Program: Basin Group 2, Cycle 3.

Site Name	WBID	Latitude	Longitude	Legal Description	County	Ecoregion	Modified Ecoregion
Beaver Creek (Logan)	OK620900-03-0230C	36.0193	-97.3715	SW NW SW 24-18N-2W	Logan	CGP	CGP
Beaver Creek (Osage)	OK621210-00-0050L	36.8689	-96.7454	N.B. 34-28N-5E	Osage	FH	FH
Bent Creek	OK720500-01-0070D	36.1920	-99.0091	SE NE SE 21-20N-17W	Woodward	CGP	CGP
Bitter Creek	OK621100-00-0100G	36.8366	-97.2834	SW NW NW 11-27N-1W	Kay	CGP	CGP
Black Bear Creek: Upper	OK621200-03-0260B	36.3416	-97.2467	SE NE 36-22N-1W	Noble	CGP	CGP
Bois d'Arc Creek	OK621000-03-0010C	36.6375	-97.1206	SE SE SE 18-25N-2E	Kay	CGP	CGP
Buffalo Creek: Lower	OK620920-05-0010G	36.7707	-99.3668	NW SW SW 33-27N-20W	Harper	CGP	CGP

Site Name	WBID	Latitude	Longitude	Legal Description	County	Ecoregion	Modified Ecoregion
Clear Creek (Beaver)	OK720500-02-0300F	36.7317	-100.4531	NE NE NE 15-3N-24E	Beaver	SWT	SWT
Clear Creek (Harper)	OK720500-02-0070G	36.6222	-99.8510	SE SW SW 24-25N-25W	Harper	SWT	SWT
Cooper Creek	OK620910-02-0040C	35.9830	-97.9965	SW NW NW 6-17N-7W	Kingfisher	CGP	CGP
Cottonwood Creek	OK620910-04-0010E	35.8221	-97.4603	NW SW NW 31-16N-2W	Logan	CGP	CGP
Council Creek	OK620900-02-0050H	36.0829	-96.8196	W.B. 31-19N-5E	Payne	CGP	CGP
Crooked Creek (Beaver)	OK620930-00-0100G	36.9759	-100.1151	SW NW NW 23-6N-27E	Beaver	SWT	SWT
Crooked Creek (Grant)	OK621000-06-0010C	36.7412	-97.9826	NW SW SW 8-26N-7W	Grant	CGP	CGP
Dead Indian Creek	OK620910-05-0080A	35.8555	-97.9727	NW NE NW 20-16N-7W	Kingfisher	CGP	CGP
Deep Creek	OK620910-02-0250C	36.1994	-98.2639	SW NW NW 22-20N-10W	Major	CGP	CGP
Deer Creek	OK621000-04-0010D	36.7096	-97.3813	NE NE NW 26-26N-2W	Kay	CGP	CGP
Doga Creek	OK621200-02-0020C	36.5647	-96.7959	N.B. 17-24N-5E	Osage	CGP	FH
Driftwood Creek	OK621010-03-0030C	36.8407	-98.3466	SE SW SE 2-27N-11W	Alfalfa	CGP	CGP
Duck Pond Creek	OK720500-02-0250F	36.6886	-100.3148	NW NW NE 36-3N-25E	Beaver	SWT	SWT
Eagle Chief Creek: Lower	OK620920-04-0010C	36.4053	-98.4465	SW SE SE 2-22N-12W	Major	CGP	CGP
Eagle Chief Creek: Upper	OK620920-04-0010G	36.6363	-98.5582	NW NW NW 24-25N-13W	Woods	CGP	CGP
Euchee Creek	OK620900-01-0290D	36.0172	-96.6426	W.B. 23-18N-6E	Payne	CGP	CGP
Griever Creek	OK620920-01-0130G	36.3915	-98.7998	SE SE SE 9-22N-15W	Major	CGP	CGP
Indian Creek	OK620910-02-0310C	36.2897	-98.2999	SW SW SW 17-21N-10W	Major	CGP	CGP
Kingfisher Creek	OK620910-05-0010J	35.8576	-97.9944	SW SW SW 18-16N-7W	Kingfisher	CGP	CGP
Kiowa Creek: Harper Co.	OK720500-02-0130C	36.7374	-99.9804	NW NW NW 14-26N-26W	Harper	SWT	SWT
Lagoon Creek	OK620900-01-0180J	36.1260	-96.5746	N.C. 16-19N-7E	Creek	CT	CGP
Long Creek	OK620920-02-0080D	36.7107	-99.1179	NW NE NE 27-26N-18W	Woodward	CGP	CGP
Main Creek	OK620920-01-0180F	36.4920	-98.8898	NE NE NE 10-23N-16W	Major	CGP	CGP
Medicine Lodge River	OK621010-03-0010D	36.8406	-98.3334	S.B. 1-27N-11W	Alfalfa	CGP	CGP
Otter Creek	OK620910-03-0040C	36.0724	-97.5613	SW SE SW 31-19N-3W	Logan	CGP	CGP
Persimmon Creek	OK720500-01-0150G	36.2619	-99.1737	NW NW NW 31-21N-18W	Woodward	CGP	CGP
Pond Creek	OK621000-05-0010D	36.6815	-97.5881	SE SE SE 35-26N-4W	Grant	CGP	CGP
Red Rock Creek: Lower	OK621200-05-0010K	36.4942	-97.0725	SW SE 3-23N-2E	Noble	CGP	CGP
Red Rock Creek: Upper	OK621200-05-0160G	36.4743	-97.3183	SW NW NW 16-23N-1W	Noble	CGP	CGP
Salt Creek (Kingfisher)	OK620910-02-0100D	36.1027	-98.1926	SW SW SW 20-19N-9W	Kingfisher	CGP	CGP
Salt Creek (Payne)	OK620900-02-0020D	36.1159	-96.7390	Sections 14/23 19N-5E	Payne	CGP	CGP
Salt Creek: Lower	OK621200-04-0010F	36.5649	-96.6888	SW 8-24N-6E	Osage	FH	FH
Salt Creek: Middle	OK621200-04-0010K	36.6887	-96.7167	SW SW NE 36-26N-5E	Osage	FH	FH
Sandy Creek	OK621010-02-0010D	36.8405	-98.2026	SW SE SE 6-27N-9W	Alfalfa	CGP	CGP
Skeleton Creek: Upper	OK620910-03-0010S	36.0978	-97.6569	NE SE NE 30-19N-4W	Logan	CGP	CGP

Site Name	WBID	Latitude	Longitude	Legal Description	County	Ecoregion	Modified Ecoregion
Stillwater Creek: Upper	OK620900-04-0070T	36.1305	-97.1401	NE 13-19N-1E	Payne	CGP	CGP
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	36.3329	-98.0031	NE NW NE 1-21N-8W	Garfield	CGP	CGP
Turkey Creek: Lower	OK620910-06-0010B	35.9784	-97.9228	NW SW NW 2-17N-7W	Kingfisher	CGP	CGP
Turkey Creek: Upper	OK620910-06-0010T	36.3473	-98.0098	NW NE NW 36-22N-8W	Garfield	CGP	CGP
Uncle John's Creek	OK620910-05-0030C	35.8276	-97.9215	SW SW SW 26-16N-7W	Kingfisher	CGP	CGP
West Clay Creek	OK621010-01-0130R	36.7234	-98.3068	NE NE NE 19-26N-10W	Alfalfa	CGP	CGP
Wildhorse Creek	OK621000-02-0040F	36.6236	-97.8033	SW SW SW 24-25N-6W	Grant	CGP	CGP
Yellowstone Creek	OK621010-01-0270C	36.9814	-98.8691	NW SW NW 19-29N-15W	Woods	CGP	CGP

Table 2 shows the site information for the probabilistic sites which were sampled.

Table 2. Probabilistic Site List for Rotating Basin Monitoring Program: Basin Group 2.

Site Name	WBID	Latitude	Longitude	Legal Description	County	Ecoregion
Black Bear Creek - 015	CCA12-015	36.346	-97.2184	NE NW NE 32-22N-1E	Noble	CGP
Black Bear Creek - 074	CCA12-074	36.347	-96.8516	NW NW NW 35-22N-4E	Pawnee	CGP
Bois d'Arc Creek - 031	CCA12-031	36.701	-97.1207	NW NW SW 29-26N-2E	Kay	CGP
Bug Creek - 052	CCA12-052	36.418	-96.54	SW NW NE 3-22N-7E	Osage	CT
Camp Creek - 058	CCA12-058	36.159	-99.0511	SE SW SE 31-20N-17W	Dewey	CGP
Camp Creek - 068	CCA12-068	36.293	-96.7889	NE SW SE 17-21N-5E	Pawnee	CGP
Canyon View Creek - 044	CCA12-044	35.552	-98.264	SW SE SE 33-13N-10W	Canadian	CGP
Chilocco Creek - 011	CCA12-011	36.979	-97.0546	SE SW NE 23-29N-2E	Kay	CGP
Chilocco Creek - 039	CCA12-039	36.968	-96.9588	SE NE NE 27-29N-3E	Kay	CGP
Cimarron River - 013	CCA12-013	36.027	-96.6814	SW NE NE 20-18N-6E	Payne	CGP
Cimarron River - 016	CCA12-016	35.933	-97.8907	NE NE SE 24-17N-7W	Kingfisher	CGP
Cimarron River - 018	CCA12-018	35.995	-97.337	SE SE NE 31-18N-1W	Logan	CGP
Cimarron River - 046	CCA12-046	36.442	-98.7466	SW SW NW 30-23N-14W	Major	CGP
Cimarron River - 050	CCA12-050	35.866	-97.667	SE SE NW 18-16N-4W	Logan	CGP
Cimarron River - 056	CCA12-056	36.129	-96.4607	NW SE NE 16-19N-8E	Creek	CT
Cimarron River - 065	CCA12-065	35.986	-97.2844	SE SE SE 34-18N-1W	Logan	CGP
Clear Creek - 009	CCA12-009	36.627	-99.8426	SE NW SE 24-25N-25W	Harper	CGP
Council Creek - 079	CCA12-079	36.083	-96.8083	NE SW NW 31-19N-5E	Payne	CGP

Site Name	WBID	Latitude	Longitude	Legal Description	County	Ecoregion
Deer Creek - 063	CCA12-063	36.748	-97.422	NW SE NW 9-26N-2W	Kay	CGP
Deer Creek - 070	CCA12-070	36.836	-97.5175	NE SE NE 9-27N-3W	Grant	CGP
Doe Creek - 026	CCA12-026	36.641	-99.1102	SE SW SW 14-25N-18W	Woodward	CGP
Dry Creek - 022	CCA12-022	35.613	-97.5922	NW SW SE 11-13N-4W	Oklahoma	CGP
Kingfisher Creek - 060	CCA12-060	35.84	-98.1159	NE NW NW 25-16N-9W	Kingfisher	CGP
Lariat Creek - 078	CCA12-078	35.602	-98.4268	NW NW SE 13-13N-12W	Blaine	CGP
Little Turkey Creek - 072	CCA12-072	36.069	-97.8952	NE SW NE 1-18N-7W	Kingfisher	CGP
Medicine Lodge River - 007	CCA12-007	36.867	-98.3466	SE NW NE 35-28N-11W	Alfalfa	CGP
Nash Creek - 084	CCA12-084	36.684	-98.0377	NE SE SE 34-26N-8W	Grant	CGP
North Canadian River - 042	CCA12-042	36.186	-98.9503	NW NE NE 30-20N-16W	Major	CGP
North Canadian River - 062	CCA12-062	36.133	-98.6687	NE SW SW 11-19N-14W	Dewey	CGP
North Canadian River - 080	CCA12-080	36.588	-99.4804	NE SE NE 6-24N-21W	Woodward	CGP
Palo Duro Creek - 057	CCA12-057	36.547	-101.079	NW SW SW 13-1N-18E	Texas	SWT
Pond Creek - 059	CCA12-059	36.7	-97.7516	NE NE SE 29-26N-5W	Grant	CGP
Red Rock Creek - 047	CCA12-047	36.483	-97.1531	SE NE SW 12-23N-1E	Noble	CGP
Salt Creek - 024	CCA12-024	36.635	-96.7005	NE NE NW 19-25N-6E	Osage	FH
Salt Creek - 040	CCA12-040	36.833	-96.6385	NE SE SW 10-27-6E	Osage	FH
Salt Fork Arkansas River - 076	CCA12-076	36.83	-98.3674	SW NW SE 10-27N-11W	Alfalfa	CGP
Sand Creek - 035	CCA12-035	36.823	-98.0099	SE NW NE 13-27N-8W	Grant	CGP
Skeleton Creek - 004	CCA12-004	36.202	-97.7678	NE NE NE 19-20N-5W	Garfield	CGP
Skeleton Creek - 020	CCA12-020	36.153	-97.7233	SW SE NW 3-19N-5W	Kingfisher	CGP
Skeleton Creek - 034	CCA12-034	36.072	-97.6056	NE NE NE 3-18N-4W	Logan	CGP
Sleeping Bear Creek - 030	CCA12-030	36.65	-99.346	NE NW NW 15-25N-20W	Harper	CGP
Spring Creek - 023	CCA12-023	36.962	-98.6604	SW NW SE 25-29N-14W	Woods	CGP
Spring Creek - 081	CCA12-081	36.789	-97.1	SE SW NW 28-27N-2E	Kay	CGP
Stillwater Creek - 073	CCA12-073	36.074	-96.9838	SW SE SE 33-19N-3E	Payne	CGP
Traders Creek - 077	CCA12-077	36.723	-99.2256	SW NE NE 22-26N-19W	Woodward	CGP
Turkey Creek - 003	CCA12-003	36.354	-98.0352	NE NE SE 27-22N-8W	Garfield	CGP
Turkey Creek - 014	CCA12-014	36.417	-99.5825	SW NE NW 5-22N-22W	Woodward	SWT
Turkey Creek - 036	CCA12-036	36.378	-96.9605	SW SW SW 14-22N-3E	Pawnee	CGP
Turkey Creek - 082	CCA12-082	36.047	-99.4239	SW NW SE 10-18N-21W	Ellis	CGP
Unnamed Creek - 064	CCA12-064	35.945	-98.8871	NW SE SE 15-17N-16W	Dewey	CGP
Unnamed Trib of Cimarron River - 006	CCA12-006	35.917	-97.5314	NW NW SW 28-17N-3W	Logan	CGP
Unnamed Trib of Salt Fork of Arkansas - 043	CCA12-043	36.651	-97.6294	NE NW NE 16-25N-4W	Grant	CGP

All sampling and analyses performed during this project were conducted under a Quality Assurance Project Plan (QAPP) approved by EPA Region VI and on file at the OCC Water Quality Division, the Oklahoma Secretary of Energy and the Environment (OSEE), and EPA Region VI in Dallas. The reader is encouraged to obtain and consult the QAPP for specific questions concerning laboratory analytical methods, detection limits, and accuracy and precision limits. All sampling and measurement activities of OCC Water Quality staff followed procedures outlined in the appropriate OCC Standard Operating Procedure (OCC 2011). Water quality chemical analyses were conducted by the Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) laboratory.

2.2 Water Quality Monitoring

Starting in June 2012, 52 sites were monitored for physical and chemical parameters on a fixed interval schedule of ten sampling events per year (five-week intervals) through May 2014 (usually 20 total events per site). This sampling frequency exceeds state data requirements for beneficial use assessment and meets a sample number necessary to provide a 90% level of confidence for principal water quality data (specifically phosphorus, a critical NPS concern) as determined from EPA's DEFT software. Samples were collected during both base flow and high flow conditions as they occurred on predetermined sampling dates. All sampling and measurement activities followed procedures outlined in the appropriate OCC SOP (OCC 2011).

One water sample was collected per site per 35-day interval in two, new, sample-rinsed HDPE bottles; one was preserved to a pH <2 with H₂SO₄, and both were stored and delivered on ice at 4° C or lower. Quality assurance/control samples were collected in accordance with Data Quality Objectives (DQOs) outlined in the project QAPP. Samples were submitted to the ODAFF Laboratory for analysis of the following parameters: Nitrate (NO₃), nitrite (NO₂), orthophosphate (PO₄), total phosphorus (TP), total Kjeldahl nitrogen (TKN), ammonia (NH₃), chloride (Cl), sulfate (SO₄), total suspended solids (TSS), and total dissolved solids (TDS). An estimate of total nitrogen was calculated by summing the values of nitrate, nitrite, and TKN for each sample. Available nitrogen was calculated by summing the values of ammonia, nitrate, and nitrite. In addition, *in-situ* water quality parameters were measured at each sampling location and include the following: water temperature, dissolved oxygen, pH, conductivity, alkalinity, hardness, turbidity, and instantaneous discharge (flow).

Separate samples were collected and submitted concurrently for analysis of *E. coli* bacteria during the recreational season (May 1 – September 30), ensuring that a minimum of 10 samples were assessed per site over the two-year monitoring period. In addition, site observations of odor, excessive bottom deposits, surface scum, oil/grease, foam and other observations were recorded each time.

Probabilistic sites were visited only twice, once to collect the physical and chemical parameters described above, as well as the bacteria sample, and once to collect biological and habitat data as discussed in later sections below. Data was collected only during base-flow or low-flow conditions at the probabilistic sites.

All data were compiled and entered into an Access database for later analysis. Upon retrieval, data were proofed and quality assured, and the descriptive statistics were generated for each parameter using the statistical software package *Minitab V. 14*.

2.3 Biological Monitoring

2.3.1 Habitat Assessment

In the summer of 2012, OCC staff began conducting instream and riparian habitat assessments at sites concurrent with fish collections; any sites not sampled in 2012 were sampled in the summer of 2013 (see Appendix B for exact dates). All assessments were conducted in accordance with procedures outlined in the OCC Habitat Assessment SOP (OCC 2011). The OCC's habitat assessment adheres to a modified version of the EPA Rapid Bioassessment Protocols (RBP) (Plafkin et al. 1989) and is designed to assess habitat quality in relation to its ability to support biological communities in the stream. The assessment is based on particular parameters grouped into three categories for a total of eleven components (Plafkin et al. 1989). The eleven components are discussed in more detail below. The three primary categories assessed include micro scale habitat, macro scale habitat, and riparian/bank structure. Micro scale habitat includes substrate makeup, stable cover, canopy, depth, and velocity. Macro scale assesses the channel morphology, sediment deposits, and other parameters. The third category looks at the riparian zone quality, width, and general makeup (trees, shrubs, vines, and grasses) as well as bank features. Bank erosion and streamside vegetative cover are incorporated into this section.

Each stream segment was surveyed for 400 meters upstream or downstream of the starting point (usually a road crossing). Investigators recorded data for the described parameters for 20 stations at 20 meter intervals. Habitat data were entered, metrics were computed, and a "total habitat score" was rendered via Access programming. The total habitat score, which can reach a maximum of 180 points, was calculated based on quantitative weighting given to each of the habitat parameters in relation to their biological significance. Scores were computed for each of the eleven categories, summed, and assigned as an evaluation of that stream section and riparian zone.

OCC's habitat assessment components include:

- (1) **Instream cover** is the component of habitat that organisms hide behind, within, or under. High quality cover consists of things like submerged logs, cobble and boulders, root wads, and beds of aquatic plants. Cover required by smaller members of the stream community will consist of gravel, cobbles, small woody debris, and dense beds of fine aquatic plants. At least 50% of the stream's area should be occupied by a mixture of stable cover types for this category to be considered optimal.
- (2) **Pool bottom substrate** describes the type of stream bed found in pools. Pools are depositional areas of the stream, and as such, are easily damaged by materials that settle. A loose shifting pool bottom will not provide substrate for burrowing organisms and will not allow bottom-spawning fish to successfully spawn. It will not provide habitat to the smaller vertebrates and invertebrates that are necessary to support many of the pool dwelling fish. At least 80% of all pool bottoms must have stable substrate for a reach to be considered optimal for the habitat component.

- (3) **Pool variability** describes the depth of pools. A healthy, diverse community of aquatic organisms requires both deep and shallow pools. A fairly even mix of pool depths from a few centimeters to 0.5 meters or greater is optimal.
- (4) **Canopy cover** assesses the shading of the stream section. Plants lie at the base of almost all food chains. Since plants require light for growth and survival, a stream that is functioning well needs some amount of light. Moderation is optimal, however, because light is associated with heat, and most aquatic organisms are more stressed by the warmer waters and the lower oxygen solubility and higher metabolic rates that accompany the warming of water.
- (5) The **percent of rocky runs and riffles** is calculated for the fifth component. Rocky runs and riffles offer an unique combination of highly oxygenated, turbulent water, flowing over high quality cover and substrate. Turbulence prevents the formation of nutrient concentration gradients from cell membranes outward so that algae and other plants grow at a much higher rate than they would at the same concentration in pools. More food means more growth. Larger crops of algae are translated into larger invertebrate crops. It is these invertebrates, reared in riffle areas, that feed many of the fish in the stream. Because turbulent water is well oxygenated, there has been no selection pressure for riffle dwelling organisms to develop tolerance to poorly oxygenated waters. These are often the first animals to disappear from the stream if oxygen becomes scarce. The presence of rocky runs and riffles offers habitat for many highly adapted animals that will increase diversity of samples collected from the streams they occupy.
- (6) **Discharge** at representative low flow reflects stream size. Water is the most basic requirement of aquatic organisms. Larger streams tend to have more water, and thus, more varied high quality habitat. Overall habitat quality should rise as streams increase in size and discharge, other factors being equal.
- (7) **Channel alteration** is the seventh category. The presence of newly formed point bars and islands is very significant. Unstable streambeds support fewer types of animals than those that are stable. This is because unstable streambeds tend to have unstable pool bottom substrate, riffle areas whose cobbles are embedded in finer material, and little cover because it is continually being buried. Few or no signs of channel alteration are considered optimal.
- (8) **Channel sinuosity** measures how far a channel deviates from a straight line. More sinuous channels tend to have more undercut banks, root wads, submerged logs, etc. Index of Biotic Integrity (IBI) scores should be higher as channels become more sinuous. Sinuosity is calculated by dividing the length of the assessment (400 meters) by the distance between the GPS location of the start point and end point of the assessment.
- (9) The **bank erosion** index assesses the stability of the stream bank. Stable stream banks tend to increase IBI scores for many reasons. Most importantly, they do not contribute sediment to the stream channel. As a rule, channels with stable banks tend to be deeper and narrower than channels with unstable banks. Because of the increased depth and decreased width, they tend to be cooler and they also tend to grow less algae for a given amount of nutrients than do shallow, wide channels. Overall habitat quality should increase as bank stability increases.
- (10) The **vegetative stability of the stream bank** is an important component. Stream banks can be stabilized with a number of materials including rock, concrete, and fabric. Banks that are stabilized with vegetation benefit the aquatic community more than those stabilized with other materials. This is

because the vegetation offers several extra advantages beyond that of bank stability. The riparian plants of the stream bank offer a high quality source of food and shade to the aquatic community. Riparian vegetation stabilizes point bars and contributes greatly to structure in the form of root wads and woody debris. Overall habitat quality should improve as bank vegetative stability increases.

(11) The last category is **streamside cover**. A large part of the energy and food input to the stream comes from the terrestrial vegetation along the banks. A mixture of grasses, forbs, shrubs, vines, saplings, and large trees transfer these necessities to the stream more effectively than does any single type of vegetation. Habitat quality should increase as the form of bank vegetation increases in diversity.

2.3.2 Fish

Fish collections were obtained in the summer of 2012 or 2013 for each site. Fish were collected from a 400-meter reach at all sites using a combination of seining and electroshocking according to procedures outlined in OCC SOP (2011). The collection of fish follows a modified version of the EPA Rapid Bioassessment Protocol V (Plafkin et al., 1989) supplemented by other documents. Specific techniques and relative advantages of seining and electrofishing vary considerably according to stream type and conductivity. Depending upon workable habitat, seining was performed first at all sites and was accomplished by use of either 6' X 10' or 6' X 20' seines of ¼ inch mesh equipped with 8' brailes. Electroshocking was undertaken at all sites with suitable conductivities (usually < 1000 µS/cm) and involved the use of a Smith Root LR 24 backpack shocker. For sites possessing long pools too deep to seine or backpack shock, OCC field personnel employed a boat electrofishing unit consisting of a Smith-Root GPP 2.5 shocking unit powered by a Honda 5kw generator or a floating pram, a Smith-Root VVP-15B electrofisher system with a Honda 5kw generator.

Except for those individuals readily identifiable, fish were placed in 10% formalin upon capture and identified to species by a professional taxonomist. Fish species identified and released in the field were photographed for reference. All fixed fish samples were transferred to ethanol and retained for future reference.

Fish data were compiled and analyzed by site using state biocriteria and methods outlined in the state's *Use Support Assessment Protocols* (OWRB 2007). In addition, each site was assessed using a modified version of Karr's Index of Biotic Integrity (IBI) (adapted from Plafkin et al. 1989). Descriptive statistics were determined for each metric using the *Minitab V 14* software. The condition of the fish community was based on indices of species richness, community quality, trophic structure, and by comparison to the average scores of high-quality streams in that ecoregion. The modified IBI score was calculated using the following metrics:

- (1) The **total number of fish species** decreases with decreasing water or habitat quality.
- (2) The **number of sensitive benthic species** decreases with increasing siltation and increasing benthic oxygen demand. Many of these fish actually live within the cobble and gravel interstices and are very good indicators of conditions that make this environment inhospitable. These species are weak swimmers that do not readily travel up and down a stream, so their presence or absence at a site relates well to both past and present habitat and water quality conditions at that site.

- (3) The **number of sunfish species** decreases with decreasing pool quality and with decreasing cover. Sunfish also require a fairly stable substrate on which to spawn, so their long-term success is also tied to conditions that affect the amount of sediment that enters and leaves the stream.
- (4) The **number of intolerant species** is a characteristic of the fish community that separates high quality from moderate quality sites. A high quality stream will have several members of the fish community that are intolerant to environmental stress. A stream of only moderate quality will have fish that are moderately and highly tolerant of environmental stress. The intolerant species will not be present in the moderate quality stream.
- (5) The **proportion of tolerant individuals** is a characteristic that allows moderate quality streams to be separated from low quality streams. These are opportunistic, tolerant fish that dominate communities that have lost their competitors through loss of habitat or water quality.
- (6) The **proportion of individuals as insectivorous cyprinids** increases as the quality and quantity of the invertebrate food base increases. These are the dominant minnows in North American streams but are replaced by either omnivorous or herbivorous minnows as the quality of the food base deteriorates. Often, as the density of aquatic invertebrates decreases, the standing crop of algae increases. This is because the aquatic invertebrates are the largest group of primary consumers. Fish that can switch their diet to algae or fish that eat only algae will replace fish that cannot adapt to the new conditions.
- (7) The **proportion of individuals as lithophilic spawners** decreases as the quality of the stream decreases. Lithophilic spawners require cobble or gravel in order to spawn; hence, these fish are sensitive to siltation. This metric allows separation of excellent streams from moderate quality streams.

For each of these seven metrics, a score of 5, 3, or 1 was assigned (Table 3), and these scores were summed to get a total IBI score (35 point maximum) for each site. For all “proportion” metrics, the score was based on the actual metric. For all non–proportion metrics, the score was determined by dividing the monitoring site’s metric by the average high quality site metric of the same ecoregion. Each monitoring site’s total score was then compared to the high quality site total score in that ecoregion and given an integrity rating (as established and suggested by the EPA RBP; see Table 4, below). IBI scores that fell between the assessment ranges were classified in the closest scoring group. This score indicates the quality of the fish community (high scores indicate higher quality) but says nothing about whether any deficiencies are due to degraded water quality or to degraded habitat.

Table 3. Index of Biotic Integrity (IBI) scoring criteria for fish.

Metrics	5	3	1
Number of species	>67%	33-67%	<33%
Number of sensitive benthic species	>67%	33-67%	<33%
Number of sunfish species	>67%	33-67%	<33%
Number of intolerant species	>67%	33-67%	<33%
Proportion tolerant individuals	<10%	10-25%	>25%
Proportion insectivorous cyprinid individuals	>45%	20-45%	<20%
Proportion individuals as lithophilic spawners	>36%	18-36%	<18%

Table 4. Index of Biotic Integrity (IBI) score interpretation for fish.

% Comparison to the Reference Score	Integrity Class	Characteristics
97 – 100 %	Excellent	Comparable to pristine conditions, exceptional species assemblage
80 – 87%	Good	Decreased species richness, especially intolerant species
67 – 73%	Fair	Intolerant and sensitive species rare or absent
47 – 57%	Poor	Top carnivores and many expected species absent or rare; omnivores and tolerant species dominant
20 – 37%	Very Poor	Few species and individuals present; tolerant species dominant; diseased fish frequent

2.3.3 Macroinvertebrates

Collection of macroinvertebrates was attempted at all fixed sites for both winter and summer index periods of July 2012 through March 2014 according to procedures outlined in the OCC SOP (2011). A single macroinvertebrate collection was obtained during the summer period for each probabilistic site. Index periods represent seasons of relative community stability that afford opportunity for meaningful site comparisons. For Oklahoma, the summer index occurs from June 1 to September 15; the winter index occurs from January 1 to March 15. In order for macroinvertebrate collections to be obtained, flowing water must be present. Sampling efforts included attempts to procure animals from all available habitats at a site; thus, total effort at a site may entail up to three total samples with one from each of the following habitats: rocky riffles, streamside vegetation, and woody debris.

Collection methods involved sampling each of the habitats similar to methods outlined in the EPA Rapid Bioassessment Protocols (Plafkin et al. 1989). Riffle sampling effort consisted of three, one meter squared kicknet samples in the areas of rocky substrate reflecting the breadth of the velocity regime at a site. Riffles with substrates of bedrock or tight clay were not sampled. Any streamside vegetation in the current that appeared to offer fine structure was sampled by agitation within a #30 mesh dip net for three minutes total agitation time. Any dead wood with or without bark which was in current fast enough to offer suitable habitat for organisms was sampled by agitation or by scraping/brushing upstream of a #30 mesh dip net for 5 minutes. Woody debris sampled generally ranged in size from ¼” to about 8” in diameter. Each sample type was preserved independently in quart mason jars with ethanol, labeled, and sent to a professional taxonomist for picking and identification.

Data was compiled, collated by year, season, and sample type and entered into a spreadsheet for metric calculations. The six metrics used to assess the macroinvertebrate community include the following:

- (1) The **number of taxa** refers to the total number of taxonomically different types of animals in the sample. As is the case with the fish, this number rises with increasing water and/or habitat quality (Plafkin et al. 1989).
- (2) The **Modified Hilsenhoff Biotic Index (HBI)** is a measure of the invertebrate community's tolerance to organic pollution. It ranges between 0 and 10 with 0 being the most pollution sensitive. The index used in the RBP Manual is based on the pollution tolerance of invertebrates from the upper Midwest. The Index used here is calculated the same way, but used tolerance values of North Carolina invertebrates (Plafkin et al. 1989).
- (3) The **EPT Index** is the number of different taxa from the orders Ephemeroptera, Plecoptera, and Trichoptera, the mayflies, stoneflies, and caddis flies respectively. With few exceptions, these insects are more sensitive to pollution than any other groups. As a stream deteriorates in quality, members of this group will be the first to disappear. This robust metric allows discrimination between all but the worst of streams (Plafkin et al. 1989).
- (4) The **percent EPT** is a measure of how many individuals in the sample are members of the EPT group. This metric helps to separate high quality streams from those of moderately high quality. The highest quality streams will have many individuals of many different taxa of EPT. As conditions deteriorate, animals will begin to die or to drift downstream. At this point, the community will still have many taxa of EPT, but there will be fewer individuals (Plafkin et al. 1989).
- (5) **Percent dominant two taxa** is the percentage of the collection composed of the most common two taxa. As more and more species are excluded by increasing pollution, the remaining species can increase in numbers due to the unused resources left by the excluded animals. This metric helps to separate the high quality streams from those of moderate quality (Plafkin et al. 1989).
- (6) The **Shannon-Weaver Species Diversity Index** measures the evenness of the species distribution. It increases as more and more taxa are found in the collection and as individual taxa become less dominant. The metric increases with increasing biotic quality (Plafkin et al. 1989).

Descriptive statistics of each season-specific sample type (e.g., summer riffle, winter vegetation, summer woody) for each site were determined via *Minitab V. 14* and were compared to the average respective metric of high-quality streams in the ecoregion. A Bioassessment score was calculated similarly to the IBI score for fish. For each site, scores of 6, 4, 2, or 0 were assigned for each metric (according to the criteria in Table 5, below) and then summed to get a total bioassessment score for each site, with a maximum of 36 points. For taxa richness and EPT taxa richness, the percentages used to assign scores were obtained by dividing each monitoring site metric by the average high quality site metric in a particular ecoregion. For the HBI metric, the high quality site value was divided by the monitoring site value (high quality site metric / monitoring site metric). For the remaining metrics, the score was based on the actual values obtained instead of being relative to the high quality site metric.

Each monitoring site's total score was then compared to the average high quality sites' total score (in that ecoregion) and classified according to the condition gradient outlined in Table 6 (adapted from Plafkin et al. 1989).

Table 5. Bioassessment scoring criteria for macroinvertebrates.

Metrics	6	4	2	0
Taxa Richness**	>80%	60-80%	40-60%	<40%
Modified HBI* (**)	>85%	70-85%	50-70%	<50%
EPT/Total***	>30%	20-30%	10-20%	<10%
EPT Taxa**	>90%	80-90%	70-80%	<70%
% Dominant 2 Taxa**	<60%	60-70%	70-80%	>80%
Shannon-Weaver***	>3.5	2.5-3.5	1.5-2.5	<1.5

*Modified HBI Using North Carolina Tolerance Values

**RBP for Use in Streams and Rivers 1989

***Modified by OCC

Table 6. Bioassessment score interpretation for macroinvertebrates.

% Comparison to the Reference Score	Biological Condition	Characteristics
>83%	Non-Impaired	Comparable to the best situation expected within the ecoregion. Balanced trophic and community structure for stream size.
54-79%	Slightly Impaired	Community structure less than expected. Species richness is less than expected due to loss of some intolerant forms. Percent contribution of tolerant forms is increased.
21-50%	Moderately Impaired	Fewer species due to the loss of most intolerant forms. Reduction in EPT index.
<17%	Severely Impaired	Few species present. If high densities of organisms occur, they are dominated by 1 or 2 taxa.

2.4 Watershed Assessment

To investigate potential sources of NPS pollution for streams showing beneficial use impairment, relevant data layers were explored using ArcView Geographic Information System (GIS) software. Data explored included the 2011 National Land Cover Dataset (NLCD) created by the Multi-Resolution Land Characteristics (MRLC) Consortium, oil and gas wells, confined animal feeding operations (Dept. of Agriculture, April 2014), national pollution discharge elimination system permit holders (Department of Environmental Quality, May 2014), total retention sites (DEQ 2009), biosolid land application sites (DEQ, 2009), public water supplies (DEQ January 2014), solid waste landfills (DEQ 2014) and other data layers. The NLCD was explored to determine percent occurrence of particular landuse types such as bare rock/sand/clay, vegetation (broken into several categories, both natural and agricultural), open water, and residential/commercial/industrial uses (divided into several categories).

2.5 Beneficial Use Support Assessment

Each fixed site's assigned beneficial uses were evaluated following the protocols outlined in the state's *Continuing Planning Process, Integrated Water Quality Report Listing Methodology* (OWRB 2013) and

per Oklahoma Administrative Code 785, Chapter 46: Implementation of Oklahoma’s Water Quality Standards, Subchapter 15: Use Support Assessment Protocols (OWRB 2013). Streams were considered non-supporting when Oklahoma Water Quality Standards were violated as determined by criteria and rules listed in these documents. Parameters not addressed in OAC 785:46-15 were assessed using applicable state and federal rules and regulations to determine support status. Assessment results were submitted to the ODEQ for final assimilation in the state’s 2014 Integrated Report to be submitted to EPA Region VI.

3.0 RESULTS AND DISCUSSION

3.1 Water Quality Monitoring

All chemical and physical water quality data collected for the project are included in Appendix A.1; Appendix A.2 contains the bacteria data. Table 7 gives the mean values of all water quality parameters collected in-situ for each fixed site, regardless of elevated or base flow. Instantaneous discharge is recorded in the table as “flow” (all discharges included). Table 8 provides the means for all chemical analytes assessed, regardless of flow. Descriptive statistics for water quality parameters are presented by site in Appendix A.3.

Table 7. Mean *in-situ* water quality values for Basin Group 2 Fixed Monitoring Sites, 2012-2014.

Site Name	WBID	Water Temp (°C)	DO (mg/L)	Oxygen % Saturation	Alkalinity (CaCO ₃)	Conductivity (µS/cm)	Hardness (mg/L)	pH (SU)	Turbidity (NTU)	Flow (cfs)
Beaver Creek (Logan)	OK620900-03-0230C	16.9	7.83	76.24	244	971.9	457.5	8.22	47.10	0.84
Beaver Creek (Osage)	OK621210-00-0050L	15.7	7.58	72.10	193	379.2	241.8	7.64	36.45	4.37
Bent Creek	OK720500-01-0070D	14.5	10.80	103.30	221	1943.0	1208.3	8.06	2.42	3.25
Bitter Creek	OK621100-00-0100G	14.3	8.05	73.30	210	3112.9	1321.0	7.63	32.82	3.47
Black Bear Creek: Upper	OK621200-03-0260B	16.2	8.11	78.87	230	2254.1	632.6	8.02	44.16	3.68
Bois d'Arc Creek	OK621000-03-0010C	15.1	7.81	71.27	206	1429.7	546.8	7.70	40.85	3.71
Buffalo Creek: Lower	OK620920-05-0010G	18.7	10.61	103.88	123	4009.0	2259.1	8.08	13.18	0.48
Clear Creek (Beaver)	OK720500-02-0300F	14.2	7.00	65.91	237	1820.6	681.7	7.87	5.68	0.79
Clear Creek (Harper)	OK720500-02-0070G	14.4	8.51	83.27	206	630.4	254.2	7.96	15.39	4.69
Cooper Creek	OK620910-02-0040C	15.4	9.38	88.95	263	2335.8	591.0	8.31	73.79	1.42
Cottonwood Creek	OK620910-04-0010E	17.0	9.33	94.27	216	1150.1	403.1	8.17	121.64	39.91
Council Creek	OK620900-02-0050H	15.3	7.22	71.74	249	677.2	312.9	7.71	69.87	0.44
Crooked Creek (Beaver)	OK620930-00-0100G	14.6	6.47	60.38	191	5459.4	628.0	7.83	56.75	0.06
Crooked Creek (Grant)	OK621000-06-0010C	16.3	9.69	96.17	348	969.1	449.0	8.44	16.56	0.86
Dead Indian Creek	OK620910-05-0080A	14.5	8.01	72.53	223	1864.7	628.3	8.07	73.72	3.99
Deep Creek	OK620910-02-0250C	14.3	9.00	84.30	252	1703.9	755.5	8.09	70.08	1.27

Site Name	WBID	Water Temp (°C)	DO (mg/L)	Oxygen % Saturation	Alkalinity (CaCO ₃)	Conductivity (µS/cm)	Hardness (mg/L)	pH (SU)	Turbidity (NTU)	Flow (cfs)
Deer Creek	OK621000-04-0010D	15.7	9.16	88.93	250	1933.1	656.7	8.21	55.23	1.41
Doga Creek	OK621200-02-0020C	17.4	7.14	73.64	191	507.4	232.7	7.62	30.62	0.74
Driftwood Creek	OK621010-03-0030C	17.5	9.42	102.55	369	2030.8	868.3	8.25	108.86	0.03
Duck Pond Creek	OK720500-02-0250F	14.0	7.89	64.41	194	1145.2	288.5	7.90	6.82	0.29
Eagle Chief Creek: Lower	OK620920-04-0010C	15.2	11.76	109.53	241	1147.5	516.6	8.18	29.56	9.80
Eagle Chief Creek: Upper	OK620920-04-0010G	16.9	9.79	105.39	261	1612.1	945.8	7.99	32.05	3.29
Euchee Creek	OK620900-01-0290D	16.7	8.52	88.07	182	553.6	203.8	7.96	37.03	0.00
Griever Creek	OK620920-01-0130G	13.0	11.07	102.59	177	3528.2	2149.0	8.07	10.53	0.88
Indian Creek	OK620910-02-0310C	14.4	10.45	98.11	220	1255.6	417.7	8.05	6.29	2.96
Kingfisher Creek	OK620910-05-0010J	15.6	8.15	77.09	246	2064.4	712.8	8.12	86.94	6.29
Kiowa Creek: Harper Co.	OK720500-02-0130C	12.9	8.81	80.62	219	804.9	286.1	7.86	16.73	7.58
Lagoon Creek	OK620900-01-0180J	17.4	9.67	96.74	158	932.5	305.1	7.70	16.32	0.02
Long Creek	OK620920-02-0080D	18.7	10.45	107.51	145	3465.4	1928.2	8.05	24.47	0.44
Main Creek	OK620920-01-0180F	13.5	10.72	100.41	158	3529.3	2187.6	7.87	16.85	5.73
Medicine Lodge River	OK621010-03-0010D	18.4	9.34	99.52	208	1387.3	526.7	8.35	12.29	22.78
Otter Creek	OK620910-03-0040C	16.5	8.87	86.81	265	804.8	437.6	8.31	34.38	2.38
Persimmon Creek	OK720500-01-0150G	16.5	12.50	126.79	225	884.7	405.8	8.45	14.28	8.24
Pond Creek	OK621000-05-0010D	17.1	9.64	99.30	384	1075.4	459.5	8.19	69.89	0.97
Red Rock Creek: Lower	OK621200-05-0010K	14.8	6.66	62.12	255	906.6	348.5	8.08	111.96	0.77
Red Rock Creek: Upper	OK621200-05-0160G	14.7	5.88	52.92	333	1047.5	425.6	8.11	93.79	0.47
Salt Creek (Kingfisher)	OK620910-02-0100D	12.7	9.21	91.21	280	30980.0	2082.3	7.60	38.52	7.53
Salt Creek (Payne)	OK620900-02-0020D	15.6	7.26	68.77	245	685.8	278.8	7.50	19.23	0.01
Salt Creek: Lower	OK621200-04-0010F	16.9	9.41	93.27	200	517.3	276.9	7.79	38.07	26.54
Salt Creek: Middle	OK621200-04-0010K	16.5	8.77	86.00	190	489.8	263.0	7.74	32.34	17.91
Sandy Creek	OK621010-02-0010D	19.9	9.03	99.74	211	790.1	344.6	8.54	21.40	2.41
Skeleton Creek: Upper	OK620910-03-0010S	16.2	9.80	97.89	284	1665.5	472.3	8.46	62.97	12.47
Stillwater Creek: Upper	OK620900-04-0070T	16.3	3.51	34.83	285	699.3	460.7	7.77	38.45	0.10
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	18.0	14.50	150.80	317	1716.7	330.5	8.52	26.97	6.99
Turkey Creek: Lower	OK620910-06-0010B	15.0	9.17	87.97	262	1277.5	443.7	8.37	41.69	12.28
Uncle John's Creek	OK620910-05-0030C	12.8	8.74	78.37	258	1162.3	498.3	7.80	73.65	11.11
West Clay Creek	OK621010-01-0130R	20.2	10.84	129.63	424	23305.2	1825.5	8.04	6.95	0.14
Wildhorse Creek	OK621000-02-0040F	15.3	6.43	62.30	379	1720.0	482.4	8.34	28.33	0.17
Yellowstone Creek	OK621010-01-0270C	18.7	9.58	104.01	189	2831.0	2240.8	8.02	5.73	0.39

Table 8. Mean water quality values for Basin Group 2 Fixed Monitoring Sites, 2012-2014. An asterisk (*) indicates the fractional analyte exceedance is within method analytical variance of total analyte concentration.

Site Name	WBID	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	OrthoP (mg/L)	Total P (mg/L)	TSS (mg/L)
Beaver Creek (Logan)	OK620900-03-0230C	135.07	79.45	560.3	0.0337	0.0800	0.0550	0.8185	0.0342	0.0976	25.5
Beaver Creek (Osage)	OK621210-00-0050L	10.35	10.21	235.5	0.0334	0.0950	0.0240	0.9460	0.0226	0.0985	25.7
Bent Creek	OK720500-01-0070D	29.69	1074.00	1724.7	0.0872	0.1340	0.0250	0.4235	0.0836	0.1065	10.0
Bitter Creek	OK621100-00-0100G	549.19	1051.44	2390.4	0.0871	0.1500	0.0635	0.8555	0.0771	0.1381	68.0
Black Bear Creek: Upper	OK621200-03-0260B	705.04	38.77	1337.3	0.0834	0.0685	0.0680	1.0025	0.1798	0.2447	24.4
Bois d'Arc Creek	OK621000-03-0010C	196.01	322.41	942.8	0.0723	0.1780	0.0375	0.9170	0.0803	0.1465	42.4
Buffalo Creek: Lower	OK620920-05-0010G	420.48	2013.51	3438.1	0.0303	0.0280	0.0200	0.7565	0.0072	0.0367	12.6
Clear Creek (Beaver)	OK720500-02-0300F	291.81	366.51	1202.6	0.0343	0.0200	0.0400	0.4925	0.0105	0.0294	11.9
Clear Creek (Harper)	OK720500-02-0070G	78.99	30.71	392.0	0.0227	0.5485	0.0335	0.2985	0.0087	0.0190	10.1
Cooper Creek	OK620910-02-0040C	432.25	470.81	1542.5	0.0223	0.3625	0.0935	1.2375	0.1129	0.2149	70.8
Cottonwood Creek	OK620910-04-0010E	123.44	197.61	716.4	0.0619	5.3321	0.1000	1.0100	1.3605	1.4155	155.8
Council Creek	OK620900-02-0050H	81.98	22.60	406.4	0.0469	0.0580	0.0320	1.5820	0.0395	0.1637	32.5
Crooked Creek (Beaver)	OK620930-00-0100G	1695.98	250.36	3316.2	0.1500	0.1312	0.0224	1.5041	0.0359	0.1033	62.8
Crooked Creek (Grant)	OK621000-06-0010C	118.55	80.88	605.0	0.0858	0.1780	0.0430	1.1095	0.0722	0.1650	17.3
Dead Indian Creek	OK620910-05-0080A	193.95	559.19	1244.7	0.0293	0.4420	0.0585	0.9455	0.1026	0.1788	71.4
Deep Creek	OK620910-02-0250C	107.18	553.47	1149.6	0.1436	0.8560	0.0620	0.7490	0.0602	0.1102	34.7
Deer Creek	OK621000-04-0010D	416.34	143.70	1105.8	0.0447	0.1855	0.0340	1.0215	0.1079	0.1827	39.5
Doga Creek	OK621200-02-0020C	39.59	24.88	312.6	0.0234	0.0770	0.0295	0.8010	0.0417	0.0963	24.2
Driftwood Creek	OK621010-03-0030C	190.39	645.27	1466.1	0.0268	0.0580	0.0285	1.1045	0.0704	0.2015	108.2
Duck Pond Creek	OK720500-02-0250F	220.56	48.14	653.7	0.0457	0.0300	0.0365	0.5285	0.0120	0.0497	14.6
Eagle Chief Creek: Lower	OK620920-04-0010C	69.83	313.20	799.5	0.0229	1.9565	0.0985	0.5925	0.0230	0.0597	24.0
Eagle Chief Creek: Upper	OK620920-04-0010G	103.89	695.03	1363.8	0.0483	1.8970	0.0980	0.7175	0.0251	0.0679	18.8
Euchee Creek	OK620900-01-0290D	41.07	49.37	322.1	0.0270	0.1270	0.0280	0.8710	0.3558	0.4229	16.0
Griever Creek	OK620920-01-0130G	263.95	1806.27	3154.8	0.0395	0.0672	0.0200	0.4761	0.0098	0.0296	12.3
Indian Creek	OK620910-02-0310C	189.92	173.63	763.8	0.0497	4.5215	0.2140	0.4120	0.0290	0.0488	11.3
Kingfisher Creek	OK620910-05-0010J	242.89	612.60	1442.4	0.1493	0.6555	0.0575	1.0240	0.1469	0.2149	86.6
Kiowa Creek: Harper Co.	OK720500-02-0130C	119.49	64.88	509.4	0.0208	0.2314	0.0286	0.4436	0.0202	0.0435	19.3
Lagoon Creek	OK620900-01-0180J	186.19	47.71	532.9	0.0240	0.0460	0.0365	0.7465	0.0099	0.0487	13.6
Long Creek	OK620920-02-0080D	281.62	1698.48	2935.3	1.0567	0.0840	0.0200	1.4140	0.0145	0.0752	23.1
Main Creek	OK620920-01-0180F	324.11	1809.90	3159.5	0.0230	0.1810	0.0200	0.3350	0.0117	0.0285	20.0
Medicine Lodge River	OK621010-03-0010D	116.78	227.53	702.9	0.0343	0.3105	0.0240	0.5305	0.0462	0.0761	17.3
Otter Creek	OK620910-03-0040C	84.04	57.22	465.2	0.0357	0.1363	0.0542	0.9484	0.1225	0.1837	15.6

Site Name	WBID	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	OrthoP (mg/L)	Total P (mg/L)	TSS (mg/L)
Persimmon Creek	OK720500-01-0150G	58.57	201.09	627.0	0.0150	0.2490	0.0200	0.5550	0.0389	0.0670	25.9
Pond Creek	OK621000-05-0010D	114.26	78.24	655.5	0.0755	0.9080	0.1260	1.2135	0.1918	0.2871	32.8
Red Rock Creek: Lower	OK621200-05-0010K	128.06	83.84	626.6	0.0471	0.2256	0.0511	1.3306	0.2187	0.3211	47.8
Red Rock Creek: Upper	OK621200-05-0160G	111.21	68.93	575.8	0.0474	0.1310	0.0415	1.2270	0.3187	0.4111	43.9
Salt Creek (Kingfisher)	OK620910-02-0100D	11842.21	1281.57	21277.5	0.0661	0.5535	0.0440	0.4950	0.0296	0.0539	112.1
Salt Creek (Payne)	OK620900-02-0020D	53.46	20.78	379.7	0.0371	0.0516	0.0379	0.6026	0.0202	0.0588	22.2
Salt Creek: Lower	OK621200-04-0010F	40.48	17.85	317.0	0.0153	0.0550	0.0375	0.7235	0.0279	0.0853	33.8
Salt Creek: Middle	OK621200-04-0010K	34.90	20.38	295.6	0.0150	0.0370	0.0237	0.5245	0.0206	0.0600	37.0
Sandy Creek	OK621010-02-0010D	97.41	66.44	452.5	0.0177	0.0435	0.0359	0.8606	0.0696	0.1389	21.5
Skeleton Creek: Upper	OK620910-03-0010S	270.04	217.92	1010.2	0.1210	4.3635	0.4920	1.5165	0.5299	0.6417	57.0
Stillwater Creek: Upper	OK620900-04-0070T	37.12	59.14	422.9	0.2076	0.0483	0.0500	1.2517	0.1496	0.2358	21.9
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	333.32	136.22	1023.0	0.0437	0.9150	0.0935	1.2415	0.2114	0.2957	27.1
Turkey Creek: Lower	OK620910-06-0010B	208.88	111.94	734.9	0.0800	0.6250	0.0965	1.0845	0.1621	0.2497	46.7
Uncle John's Creek	OK620910-05-0030C	77.79	295.46	782.0	0.0446	0.9195	0.0560	0.8455	0.1799	0.2353	106.4
West Clay Creek	OK621010-01-0130R	8287.28	1459.30	14610.1	0.0822	0.2430	0.0680	0.8295	0.0777	0.1500	49.5
Wildhorse Creek	OK621000-02-0040F	261.90	221.77	1057.9	0.2325	0.6430	0.0810	1.3535	0.1609	0.2565	25.9
Yellowstone Creek	OK621010-01-0270C	56.94	2001.33	2922.3	0.0150	0.0833	0.0267	0.2450	0.0062	0.0121	11.3

Tables 9 and 10 give the sample values for the Probabilistic sites.

Table 9. In-situ water quality values for Basin Group 2 Probabilistic Sites.

Site Name	WBID	Water Temp (°C)	DO (mg/L)	Oxygen % Saturation	Alkalinity (CaCO ₃)	Conductivity (µS/cm)	Hardness (mg/L)	pH (SU)	Turbidity (NTU)	Flow (cfs)
Black Bear Creek - 015	CCA12-015	27.0	3.58	45	240	844.5	231.0	8.03	64.35	0.05
Black Bear Creek - 074	CCA12-074	26.9	8.89	115	229	1535.5	324.0	7.97	33.40	17.00
Bois d'Arc Creek - 031	CCA12-031	26.9	4.07	50	217	1407.0	546.0	7.51	10.30	0.10
Bug Creek - 052	CCA12-052	24.7	4.04	38	193	951.0	236.5	7.34	15.21	0.00
Camp Creek - 058	CCA12-058	24.7	6.00	80	366	2893.5	-	7.90	41.00	0.79
Camp Creek - 068	CCA12-068	23.4	3.25	37	265	530.2	244.5	7.63	3.55	0

Site Name	WBID	Water Temp (°C)	DO (mg/L)	Oxygen % Saturation	Alkalinity (CaCO ₃)	Conductivity (µS/cm)	Hardness (mg/L)	pH (SU)	Turbidity (NTU)	Flow (cfs)
Canyon View Creek - 044	CCA12-044	22.7	13.50	171	434	1441.5	-	7.77	6.57	0.25
Chilocco Creek - 011	CCA12-011	26.3	3.44	42	279	418.5	261.0	7.66	18.56	0
Chilocco Creek - 039	CCA12-039	25.7	4.50	54	276	745.0	261.5	7.70	11.54	0.05
Cimarron River - 013	CCA12-013	33.9	11.05	34	171	5590.5	425.0	9.32	48.40	88.37
Cimarron River - 016	CCA12-016	29.0	9.32	128	185	15791.0	1345.0	8.26	12.55	51.07
Cimarron River - 018	CCA12-018	27.2	14.00	176	161	5465.0	451.5	9.16	8.42	51.21
Cimarron River - 046	CCA12-046	29.8	7.83	103	133	36620.0	1940.0	8.02	2.47	3.04
Cimarron River - 050	CCA12-050	25.2	8.08	99	120	12755.0	642.5	8.01	7.54	14.31
Cimarron River - 056	CCA12-056	24.8	6.59	81	163	7800.0	524.5	8.22	36.05	211.83
Cimarron River - 065	CCA12-065	22.3	5.98	69	195	4749.5	447.0	8.74	7.45	51.91
Clear Creek - 009	CCA12-009	21.7	6.07	69	165	661.0	220.0	7.88	2.10	2.31
Council Creek - 079	CCA12-079	25.2	4.02	48	334	720.0	313.5	7.59	17.64	0
Deer Creek - 063	CCA12-063	28.2	3.06	41	260	1479.5	142.0	7.76	7.65	0.01
Deer Creek - 070	CCA12-070	29.5	6.55	90	259	1031.0	280.0	8.32	13.10	0.35
Doe Creek - 026	CCA12-026	22.4	10.04	116	170	3555.0	2820.0	7.78	2.25	<0.1
Dry Creek - 022	CCA12-022	23.3	5.90	71	165	1289.0	-	8.05	15.80	0.73
Kingfisher Creek - 060	CCA12-060	25.5	1.45	18	360	2490.0	783.0	7.75	6.92	<0.1
Lariat Creek - 078	CCA12-078	22.7	4.49	25	361	755.0	620.0	7.64	2.24	0.00
Little Turkey Creek - 072	CCA12-072	24.3	2.55	31	187	773.0	317.0	7.46	3.78	0
Medicine Lodge River - 007	CCA12-007	27.1	-	-	195	921.0	-	8.46	13.00	45.61
Nash Creek - 084	CCA12-084	28.9	8.10	118	520	5210.0	490.0	8.62	9.12	0
North Canadian River - 042	CCA12-042	21.9	8.25	94	184	1716.5	714.0	8.11	2.89	41.67
North Canadian River - 062	CCA12-062	22.4	1.72	21	285	1725.0	-	7.50	131.58	14.52
North Canadian River - 080	CCA12-080	25.4	8.68	106	215	2061.0	1118.0	7.75	1.48	1.79
Palo Duro Creek - 057	CCA12-057	22.4	6.13	70	335	3173.5	3960.0	7.08	13.07	0
Pond Creek - 059	CCA12-059	26.1	5.35	45	177	1591.0	285.0	7.97	16.62	0.29
Red Rock Creek - 047	CCA12-047	26.1	3.81	46	381	1566.0	379.0	8.08	79.70	0
Salt Creek - 024	CCA12-024	28.7	5.29	66	175	414.3	171.5	7.66	10.71	4.09
Salt Creek - 040	CCA12-040	25.2	4.53	55	168	321.8	156.0	7.41	27.25	0
Salt Fork Arkansas River - 076	CCA12-076	23.1	5.44	67	162	1500.5	-	7.69	24.68	0
Sand Creek - 035	CCA12-035	25.6	9.94	131	315	11420.0	350.0	8.45	10.64	5.28
Skeleton Creek - 004	CCA12-004	26.4	5.21	66	291	1492.5	-	8.74	24.25	27.92
Skeleton Creek - 020	CCA12-020	28.4	8.63	110	194	1601.0	315.0	8.71	79.29	9.54
Skeleton Creek - 034	CCA12-034	28.4	5.54	71	200	1857.0	269.5	8.06	122.00	6.32

Site Name	WBID	Water Temp (°C)	DO (mg/L)	Oxygen % Saturation	Alkalinity (CaCO ₃)	Conductivity (µS/cm)	Hardness (mg/L)	pH (SU)	Turbidity (NTU)	Flow (cfs)
Sleeping Bear Creek - 030	CCA12-030	21.8	9.05	105	191	912.5	407.0	8.18	27.15	0.26
Spring Creek - 023	CCA12-023	22.9	5.69	69	333	1863.0	1200.0	7.93	1.83	1.10
Spring Creek - 081	CCA12-081	25.0	2.96	34	293	1280.5	424.5	7.39	16.14	0
Stillwater Creek - 073	CCA12-073	27.8	6.91	88	64	973.5	187.5	7.38	27.90	5.98
Traders Creek - 077	CCA12-077	23.3	8.47	99	131	5760.0	2410.0	7.97	1.86	1.59
Turkey Creek - 003	CCA12-003	24.4	7.80	102	266	1836.0	-	8.54	46.30	2.69
Turkey Creek - 014	CCA12-014	27.2	17.09	224	175	378.3	160.0	8.58	2.74	0.01
Turkey Creek - 036	CCA12-036	22.1	4.91	52	187	270.5	241.5	7.39	260.00	0
Turkey Creek - 082	CCA12-082	24.0	5.45	68	223	1686.0	-	7.97	3.23	0.25
Unnamed Trib of Cimarron River - 006	CCA12-006	14.0	11.44	113	330	786.0	384.0	7.67	4.77	0.20
Unnamed Trib of Salt Fork of Arkansas - 043	CCA12-043	24.4	7.73	98	296	1496.5	298.0	7.99	19.51	0.00
Unnamed Trib. of Trail Creek - 064	CCA12-064	21.4	7.22	86	149	2420.0	-	7.94	2.27	0.33

Table 10. Water quality values for Basin Group 2 Probabilistic Sites. An asterisk (*) indicates the fractional analyte exceedance is within method analytical variance of total analyte concentration.

Site Name	WBID	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	OrthoP (mg/L)	Total P (mg/L)	TSS (mg/L)
Black Bear Creek - 015	CCA12-015	122.0	32.2	479	0.056	< 0.02	< 0.02	1.25	1.973	2.087	86
Black Bear Creek - 074	CCA12-074	439.0	34.8	1028	< 0.015	< 0.02	< 0.02	2.87	0.037	0.243	30
Bois d'Arc Creek - 031	CCA12-031	133.0	396.5	941	0.064	0.07	< 0.02	0.61	0.145	0.163	< 10
Bug Creek - 052	CCA12-052	271.6	78.6	656	0.093	< 0.02	< 0.02	1.31	0.022	0.121	22
Camp Creek - 058	CCA12-058	68.8	1895.2	2779	0.019	< 0.02	< 0.02	1.67	0.296	0.423	64
Camp Creek - 068	CCA12-068	17.1	4.9	337	< 0.015	< 0.02	< 0.02	1.05	0.110	0.170	< 10
Canyon View Creek - 044	CCA12-044	44.1	581.2	1294	0.353	0.68	0.30	1.28	0.193	0.228	< 10
Chilocco Creek - 011	CCA12-011	56.8	18.8	422	0.120	0.04	< 0.02	0.92	0.253	0.307	< 10
Chilocco Creek - 039	CCA12-039	62.1	34.9	431	0.037	< 0.02	< 0.02	0.76	0.169	0.200	< 10
Cimarron River - 013	CCA12-013	1725.6	302.4	3540	< 0.015	< 0.02	< 0.02	5.31	0.036	0.388	< 10
Cimarron River - 016	CCA12-016	5687.8	638.2	8729	< 0.015	< 0.02	< 0.02	0.79	0.018	0.108	< 10
Cimarron River - 018	CCA12-018	1713.3	345.4	3080	0.300	1.26	< 0.02	2.25	0.777	0.892	40
Cimarron River - 046	CCA12-046	14567.5	1444.7	24980	< 0.015	0.20	2.00	0.45	< 0.005	0.013	< 10
Cimarron River - 050	CCA12-050	5090.4	625.7	8067	< 0.015	0.05	< 0.02	1.61	0.017	0.142	67

Site Name	WBID	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	OrthoP (mg/L)	Total P (mg/L)	TSS (mg/L)
Cimarron River - 056	CCA12-056	1756.2	338.5	3480	0.115	< 0.02	< 0.02	3.24	0.107	0.343	< 10
Cimarron River - 065	CCA12-065	1604.7	330.6	2880	0.189	0.63	< 0.02	2.3	0.744	0.882	30
Council Creek - 079	CCA12-079	99.8	2.1	472	0.202	< 0.02	< 0.02	1.14	0.080	0.137	< 10
Deer Creek - 063	CCA12-063	338.5	155.4	1040	< 0.015	< 0.02	< 0.02	1.01	0.105	0.174	< 10
Deer Creek - 070	CCA12-070	122.1	73.2	544	< 0.015	< 0.02	< 0.02	0.68	0.115	0.145	10
Doe Creek - 026	CCA12-026	210.5	2234.1	3419	0.387	< 0.02	< 0.02	1.73	0.085	0.110	< 10
Dry Creek - 022	CCA12-022	242.9	304.8	980	0.018	0.41	< 0.02	0.77	0.087	0.114	140
Kingfisher Creek - 060	CCA12-060	364.7	751.7	1713	0.026	< 0.02	< 0.02	0.81	0.252	0.265	< 10
Lariat Creek - 078	CCA12-078	26.0	32.2	385	< 0.015	< 0.02	< 0.02	0.65	0.154	0.186	10
Little Turkey Creek - 072	CCA12-072	118.4	94.5	580	0.433	0.06	< 0.02	1.14	0.710	0.721	< 10
Medicine Lodge River - 007	CCA12-007	112.6	326.0	807	< 0.015	< 0.02	< 0.02	0.39	0.034	0.048	< 10
Nash Creek - 084	CCA12-084	1075.9	911.3	3276	< 0.015	< 0.02	< 0.02	1.33	0.008	0.075	16
North Canadian River - 042	CCA12-042	261.7	435.9	1326	< 0.015	0.06	< 0.02	0.66	0.026	0.050	< 10
North Canadian River - 062	CCA12-062	287.8	481.9	1337	0.107	< 0.02	< 0.02	0.99	0.528	0.580	< 10
North Canadian River - 080	CCA12-080	342.9	485.6	1425	0.019	< 0.02	< 0.02	0.63	0.012	0.021	< 10
Palo Duro Creek - 057	CCA12-057	737.9	340.0	1770	< 0.015	< 0.02	< 0.02	0.63	< 0.005	0.016	< 10
Pond Creek - 059	CCA12-059	219.9	109.3	826	0.079	0.39	< 0.02	1.15	0.213	0.254	21
Red Rock Creek - 047	CCA12-047	265.6	178.9	952	0.043	< 0.02	< 0.02	1.09	0.256	0.342	55
Salt Creek - 024	CCA12-024	25.3	16.4	239	< 0.015	< 0.02	< 0.02	0.45	0.009	0.046	< 10
Salt Creek - 040	CCA12-040	4.5	7.4	222	< 0.015	< 0.02	< 0.02	0.76	0.015	0.089	38
Salt Fork Arkansas River - 076	CCA12-076	183.3	928.1	1640	0.018	0.05	< 0.02	0.4	0.011	0.021	< 10
Sand Creek - 035	CCA12-035	173.9	204.1	835	< 0.015	< 0.02	< 0.02	1.04	0.143	0.204	< 10
Skeleton Creek - 004	CCA12-004	270.5	202.1	1021	0.015	3.85	< 0.02	1.86	0.241	0.398	32
Skeleton Creek - 020	CCA12-020	304.0	195.8	856	< 0.015	0.11	< 0.02	3.5	0.071	0.307	176
Skeleton Creek - 034	CCA12-034	407.0	268.6	1152	0.016	2.14	< 0.02	1.38	0.122	0.246	59
Sleeping Bear Creek - 030	CCA12-030	68.4	144.7	533	0.017	0.94	< 0.02	0.59	0.057	0.077	19
Spring Creek - 023	CCA12-023	74.2	1060.5	1740	< 0.015	< 0.02	< 0.02	0.48	0.182	0.205	< 10
Spring Creek - 081	CCA12-081	233.2	164.6	800	0.051	< 0.02	< 0.02	0.82	0.258	0.323	22
Stillwater Creek - 073	CCA12-073	154.4	126.7	644	0.054	19.28	0.40	0.83	1.993*	1.875	11
Traders Creek - 077	CCA12-077	1263.0	2187.4	4632	< 0.015	0.02	0.10	0.47	0.006	0.014	< 10
Turkey Creek - 003	CCA12-003	435.0	185.4	1364	< 0.015	0.39	< 0.02	1.15	0.187	0.251	67
Turkey Creek - 014	CCA12-014	12.1	15.4	249	< 0.015	0.79	< 0.02	0.59	0.008	0.024	< 10
Turkey Creek - 036	CCA12-036	16.0	7.6	355	0.808	0.02	0.09	2.48	0.039	0.139	66
Turkey Creek - 082	CCA12-082	43.0	568.2	1026	< 0.015	< 0.02	< 0.02	0.45	0.026	0.047	< 10
Unnamed Trib of Salt Fork of Arkansas - 043	CCA12-043	214.4	126.3	818	< 0.015	< 0.02	< 0.02	0.8	0.205	0.235	10
Unnamed Trib. of Trail Creek - 064	CCA12-064	23.6	1918.5	2432	< 0.015	< 0.02	< 0.02	0.34	0.016	0.026	< 10

Of particular significance for discussion, multiple streams in the Upper North Canadian, Cimarron, and Upper Arkansas River basins exhibited markedly low dissolved oxygen concentrations. Table 11 (below) reflects the DO values¹ and their total percentage with the designated use criteria for each site. All but one of the fixed sites are designated as Warm Water Aquatic Communities (WWAC) and have a critical DO level of 5.0 mg/L most of the year (4.0 mg/L from June 16-October 15). Stillwater Creek (Upper) is designated as Habitat Limited Aquatic Community (HLAC) with a critical DO level of 4 mg/L from April 1 through June 15 and 3 mg/L during the remainder of the year. Seventeen sites exhibited dissolved oxygen levels which were always above criteria values: Bent, Clear (Harper), Cottonwood, Driftwood, Eagle Chief (Lower), Eagle Chief (Upper), Griever, Indian, Lagoon, Main, Persimmon, Salt (Middle), Sandy, Skeleton (Upper), Stillwater (Lower), Turkey (Wheat Capital), and Yellowstone. Fifteen sites were consistently above the criteria levels: Beaver (Logan), Black Bear (Upper), Buffalo (Lower), Crooked (Grant), Deer, Euchee, Kingfisher, Long, Medicine Lodge River, Otter, Salt (Kingfisher), Salt (Lower), Turkey (Lower), Uncle John's, and West Clay. The 18 sites (35% of the fixed sites) with more than 10% of the samples below the criteria are considered impaired and will be included on the state's next 303(d) list. Forty percent of the probabilistic sites had DO values (in Table 9) below the WWAC standard. These sites were monitored during a drought this cycle and often there was little or no flow. These conditions may be affecting the dissolved oxygen results.

¹ DO concentration is strongly dependent on time of day. Most ambient monitoring programs (OCC's included) collect DO data during the middle of daylight hours, which results in a bias toward higher means for a site than the true diurnal mean.

Table 11. Low dissolved oxygen values (based on OAC 785:46-15; OWRB 2013)

% Samples with Low DO	Site Name	WBID	FWP	Date	DO (mg/L)
10%	Beaver Creek (Logan)	OK620900-03-0230C	WWAC	8/7/2012	3.01
				8/20/2012	2.62
24%	Beaver Creek (Osage)	OK621210-00-0050L	WWAC	6/12/2012	3.77
				7/12/2012	3.34
				7/24/2012	3.51
				10/30/2012	3.44
				12/11/2012	4.87
24%	Bitter Creek	OK621100-00-0100G	WWAC	8/21/2012	3.91
				10/29/2012	4.41
				4/30/2013	3.76
				6/4/2013	4.23
				7/8/2013	3.75
5%	Black Bear Creek: Upper	OK621200-03-0260B	WWAC	8/9/2012	2.6
24%	Bois d'Arc Creek	OK621000-03-0010C	WWAC	6/12/2012	4.45
				7/23/2012	2.78
				8/21/2012	3.41
				6/4/2013	4.86
				7/8/2013	3.64
5%	Buffalo Creek: Lower	OK620920-05-0010G	WWAC	5/31/2012	4.33
24%	Clear Creek (Beaver)	OK720500-02-0300F	WWAC	6/7/2012	3.09
				6/19/2012	3
				10/2/2012	3.56
				6/11/2013	3.1
				5/6/2014	3.18
14%	Cooper Creek	OK620910-02-0040C	WWAC	7/12/2012	3.3
				7/24/2012	1.76

% Samples with Low DO	Site Name	WBID	FWP	Date	DO (mg/L)
	Cooper Creek Cont.			9/25/2012	3.85
19%	Council Creek	OK620900-02-0050H	WWAC	7/24/2012	1.86
				10/30/2012	3.5
				12/10/2012	3.3
				12/2/2013	4.83
33%	Crooked Creek (Beaver)	OK620930-00-0100G	WWAC	7/31/2012	1.31
				5/7/2013	3.87
				6/11/2013	1.9
				7/16/2013	2.9
				8/20/2013	1.13
				5/6/2014	2.5
10%	Crooked Creek (Grant)	OK621000-06-0010C	WWAC	6/11/2013	4.98
				5/6/2014	4.11
19%	Dead Indian Creek	OK620910-05-0080A	WWAC	7/17/2012	2.92
				7/24/2012	2.17
				8/21/2012	3.24
				9/25/2012	3.25
14%	Deep Creek	OK620910-02-0250C	WWAC	7/8/2013	3
				8/12/2013	1.12
				2/18/2014	4.89
5%	Deer Creek	OK621000-04-0010D	WWAC	6/11/2013	4.45
24%	Doga Creek	OK621200-02-0020C	WWAC	7/24/2012	3.64
				12/11/2012	4.51
				1/23/2013	3.64
				3/25/2013	4.49
				9/17/2013	3.35

% Samples with Low DO	Site Name	WBID	FWP	Date	DO (mg/L)
20%	Duck Pond Creek	OK720500-02-0250F	WWAC	6/5/2012	4.52
				10/2/2012	1.45
	Duck Pond Creek	(continued)		6/11/2013	3.78
				7/16/2013	2.27
10%	Euchee Creek	OK620900-01-0290D	WWAC	8/21/2012	1.15
				6/3/2013	4.45
10%	Kingfisher Creek	OK620910-05-0010J	WWAC	6/12/2012	3.58
				7/19/2012	3.26
13%	Kiowa Creek: Harper Co.	OK720500-02-0130C	WWAC	5/7/2013	4.8
				6/11/2013	4.3
5%	Long Creek	OK620920-02-0080D	WWAC	7/30/2012	0.63
5%	Medicine Lodge River	OK621010-03-0010D	WWAC	8/27/2012	3.27
5%	Otter Creek	OK620910-03-0040C	WWAC	8/6/2012	2.95
15%	Pond Creek	OK621000-05-0010D	WWAC	8/28/2012	2.59
				6/11/2013	4.34
				7/16/2013	1.6
26%	Red Rock Creek: Lower	OK621200-05-0010K	WWAC	7/24/2012	3.92
				8/21/2012	2.27
				7/1/2013	3.11
				9/17/2013	3.47
				4/28/2014	3.62
30%	Red Rock Creek: Upper	OK621200-05-0160G	WWAC	8/13/2012	3.66
				8/21/2012	3.48
				10/30/2012	1.71
				12/10/2012	2.22
				9/17/2013	2.53

% Samples with Low DO	Site Name	WBID	FWP	Date	DO (mg/L)
	Red Rock (Upper) Cont.			4/28/2014	2.69
5%	Salt Creek (Kingfisher)	OK620910-02-0100D	WWAC	7/23/2012	3.72
14%	Salt Creek (Payne)	OK620900-02-0020D	WWAC	7/9/2013	3.29
				9/16/2013	2.7
				4/28/2014	1.86
5%	Salt Creek: Lower	OK621200-04-0010F	WWAC	7/24/2012	3.87
50%	Stillwater Creek: Upper	OK620900-04-0070T	HLAC	6/12/2012	3.12
				8/16/2012	1.62
				9/24/2012	2.47
				12/10/2012	1.52
				6/3/2013	0.22
				7/1/2013	2
				9/17/2013	2.55
				12/3/2013	1.8
				4/28/2014	0.42
5%	Turkey Creek: Lower	OK620910-06-0010B	WWAC	7/24/2012	2.6
10%	Uncle John's Creek	OK620910-05-0030C	WWAC	6/12/2012	4.21
				9/25/2012	3.27
5%	West Clay Creek	OK621010-01-0130R	WWAC	7/15/2013	2.86
37%	Wildhorse Creek	OK621000-02-0040F	WWAC	6/26/2012	3.92
				8/28/2012	3.84
				10/2/2012	3.06
				11/6/2012	2.55
				12/17/2012	4.02
				6/11/2013	3.01
				5/6/2014	3.49

Table 12 shows the geometric mean of *E. coli* bacteria samples for each fixed site over the two-year monitoring period. Creeks highlighted in yellow are designated Secondary Body Contact Recreation (SBCR), which allows for a higher bacteria concentration: Salt Creek (Kingfisher) and Stillwater Creek (Upper). All other sites are designated Primary Body Contact Recreation (PBCR). Eight of the site creeks (16%) exceeded the geometric mean criterion of 126 colonies per 100 ml set for *E. coli*. Forty-two creeks did not exceed the *E. coli* criterion. To be listed on the state's 303(d) list, the geometric mean must exceed the set criteria for at least one of the bacteria types (OWRB 2013). While it is known that high salinity waters can negatively affect *E. coli*, that does not appear to be a significant issue.

Table 12. Geometric mean of bacteria values for Basin Group 2 fixed monitoring sites, 2012-2014 OCC data. An asterisk (*) indicates that the stream meets state standards for *E. coli*. Eight streams are impaired by bacteria, and these streams either will be added to the state 303(d) list, are currently on the 303(d) list, or have been moved to Category 4 for bacteria after a TMDL has been produced. Those highlighted in yellow have a SBCR designation, allowing higher bacteria concentrations.

Site Name	WBID	E. coli	Comments
Beaver Creek (Logan)	OK620900-03-0230C	24.65 *	Geometric Mean
Beaver Creek (Osage)	OK621210-00-0050L	56.33 *	Geometric Mean
Bent Creek	OK720500-01-0070D	136.45	Geometric Mean
Bitter Creek	OK621100-00-0100G	32.76 *	Geometric Mean
Black Bear Creek: Upper	OK621200-03-0260B	43.70 *	Geometric Mean
Bois d'Arc Creek	OK621000-03-0010C	45.12 *	Geometric Mean
Buffalo Creek: Lower	OK620920-05-0010G	21.58 *	Geometric Mean
Clear Creek (Beaver)	OK720500-02-0300F	52.25 *	Geometric Mean
Clear Creek (Harper)	OK720500-02-0070G	22.84 *	Geometric Mean
Cooper Creek	OK620910-02-0040C	53.19 *	Geometric Mean
Cottonwood Creek	OK620910-04-0010E	330.12	Geometric Mean
Council Creek	OK620900-02-0050H	105.11 *	Geometric Mean
Crooked Creek (Beaver)	OK620930-00-0100G	76.28 *	Geometric Mean
Crooked Creek (Grant)	OK621000-06-0010C	62.53 *	Geometric Mean
Dead Indian Creek	OK620910-05-0080A	104.00 *	Geometric Mean
Deep Creek	OK620910-02-0250C	121.70 *	Geometric Mean

Site Name	WBID	E. coli	Comments
Deer Creek	OK621000-04-0010D	48.25 *	Geometric Mean
Doga Creek	OK621200-02-0020C	30.85 *	Geometric Mean
Driftwood Creek	OK621010-03-0030C	110.21 *	Geometric Mean
Duck Pond Creek	OK720500-02-0250F	181.05	Geometric Mean
Eagle Chief Creek: Lower	OK620920-04-0010C	26.63 *	Geometric Mean
Eagle Chief Creek: Upper	OK620920-04-0010G	74.43 *	Geometric Mean
Euchee Creek	OK620900-01-0290D	28.30 *	Geometric Mean
Griever Creek	OK620920-01-0130G	72.54 *	Geometric Mean
Indian Creek	OK620910-02-0310C	53.65 *	Geometric Mean
Kingfisher Creek	OK620910-05-0010J	142.27	Geometric Mean
Kiowa Creek: Harper Co.	OK720500-02-0130C	66.98 *	Geometric Mean
Lagoon Creek	OK620900-01-0180J	29.20 *	Geometric Mean
Long Creek	OK620920-02-0080D	100.66 *	Geometric Mean
Main Creek	OK620920-01-0180F	77.66 *	Geometric Mean
Medicine Lodge River	OK621010-03-0010D	32.91 *	Geometric Mean
Otter Creek	OK620910-03-0040C	56.49 *	Geometric Mean

Site Name	WBID	E. coli	Comments
Persimmon Creek	OK720500-01-0150G	69.46 *	Geometric Mean
Pond Creek	OK621000-05-0010D	52.62 *	Geometric Mean
Red Rock Creek: Lower	OK621200-05-0010K	86.50 *	Geometric Mean
Red Rock Creek: Upper	OK621200-05-0160G	71.59 *	Geometric Mean
Salt Creek (Kingfisher)	OK620910-02-0100D	82.47 *	Geometric Mean
Salt Creek (Payne)	OK620900-02-0020D	207.52	Geometric Mean
Salt Creek: Lower	OK621200-04-0010F	33.19 *	Geometric Mean
Salt Creek: Middle	OK621200-04-0010K	21.93 *	Geometric Mean
Sandy Creek	OK621010-02-0010D	18.47 *	Geometric Mean

Site Name	WBID	E. coli	Comments
Skeleton Creek: Upper	OK620910-03-0010S	43.49 *	Geometric Mean
Stillwater Creek: Upper	OK620900-04-0070T	82.02 *	Geometric Mean
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	159.45	Geometric Mean
Turkey Creek: Lower	OK620910-06-0010B	106.42 *	Geometric Mean
Uncle John's Creek	OK620910-05-0030C	368.93	Geometric Mean
West Clay Creek	OK621010-01-0130R	15.40 *	Geometric Mean
Wildhorse Creek	OK621000-02-0040F	220.69	Geometric Mean
Yellowstone Creek	OK621010-01-0270C	18.84 *	Geometric Mean

Based on a single grab sample at each of the probabilistic sites (results in Table 13, below), the geometric mean of the probabilistic sites is 33.37 colonies per 100 mL for *E. coli*. This indicates that streams in this basin are attaining for *E. coli* bacteria (standard is 126 colonies/100 mL). It should be noted that all the probabilistic samples were taken at base flow, whereas samples at fixed sites are taken regardless of flow, which could result in higher bacteria levels being observed at the fixed sites.

Table 13. Bacteria values for probabilistic sites.

Site Name	WBID	E. coli	Comments
Black Bear Creek - 015	CCA12-015	5 *	One-time sample
Black Bear Creek - 074	CCA12-074	5 *	One-time sample
Bois d'Arc Creek - 031	CCA12-031	35 *	One-time sample
Bug Creek - 052	CCA12-052	5 *	One-time sample
Camp Creek - 058	CCA12-058	20 *	One-time sample
Camp Creek - 068	CCA12-068	5 *	One-time sample

Site Name	WBID	E. coli	Comments
Canyon View Creek - 044	CCA12-044	2900	One-time sample
Chilocco Creek - 011	CCA12-011	720	One-time sample
Chilocco Creek - 039	CCA12-039	5 *	One-time sample
Cimarron River - 013	CCA12-013	< 5 *	One-time sample
Cimarron River - 016	CCA12-016	35 *	One-time sample
Cimarron River - 018	CCA12-018	< 5 *	One-time sample

Site Name	WBID	E. coli	Comments
Cimarron River - 046	CCA12-046	< 5 *	One-time sample
Cimarron River - 050	CCA12-050	10 *	One-time sample
Cimarron River - 056	CCA12-056	10 *	One-time sample
Cimarron River - 065	CCA12-065	15 *	One-time sample
Council Creek - 079	CCA12-079	930	One-time sample
Deer Creek - 063	CCA12-063	5 *	One-time sample
Deer Creek - 070	CCA12-070	25 *	One-time sample
Doe Creek - 026	CCA12-026	3000	One-time sample
Dry Creek - 022	CCA12-022	25 *	One-time sample
Kingfisher Creek - 060	CCA12-060	15 *	One-time sample
Lariat Creek - 078	CCA12-078	35 *	One-time sample
Little Turkey Creek - 072	CCA12-072	305	One-time sample
Medicine Lodge River - 007	CCA12-007	15 *	One-time sample
Nash Creek - 084	CCA12-084	10 *	One-time sample
North Canadian River - 042	CCA12-042	20 *	One-time sample
North Canadian River - 062	CCA12-062	130	One-time sample
North Canadian River - 080	CCA12-080	15 *	One-time sample
Palo Duro Creek - 057	CCA12-057	10 *	One-time sample
Pond Creek - 059	CCA12-059	150	One-time sample

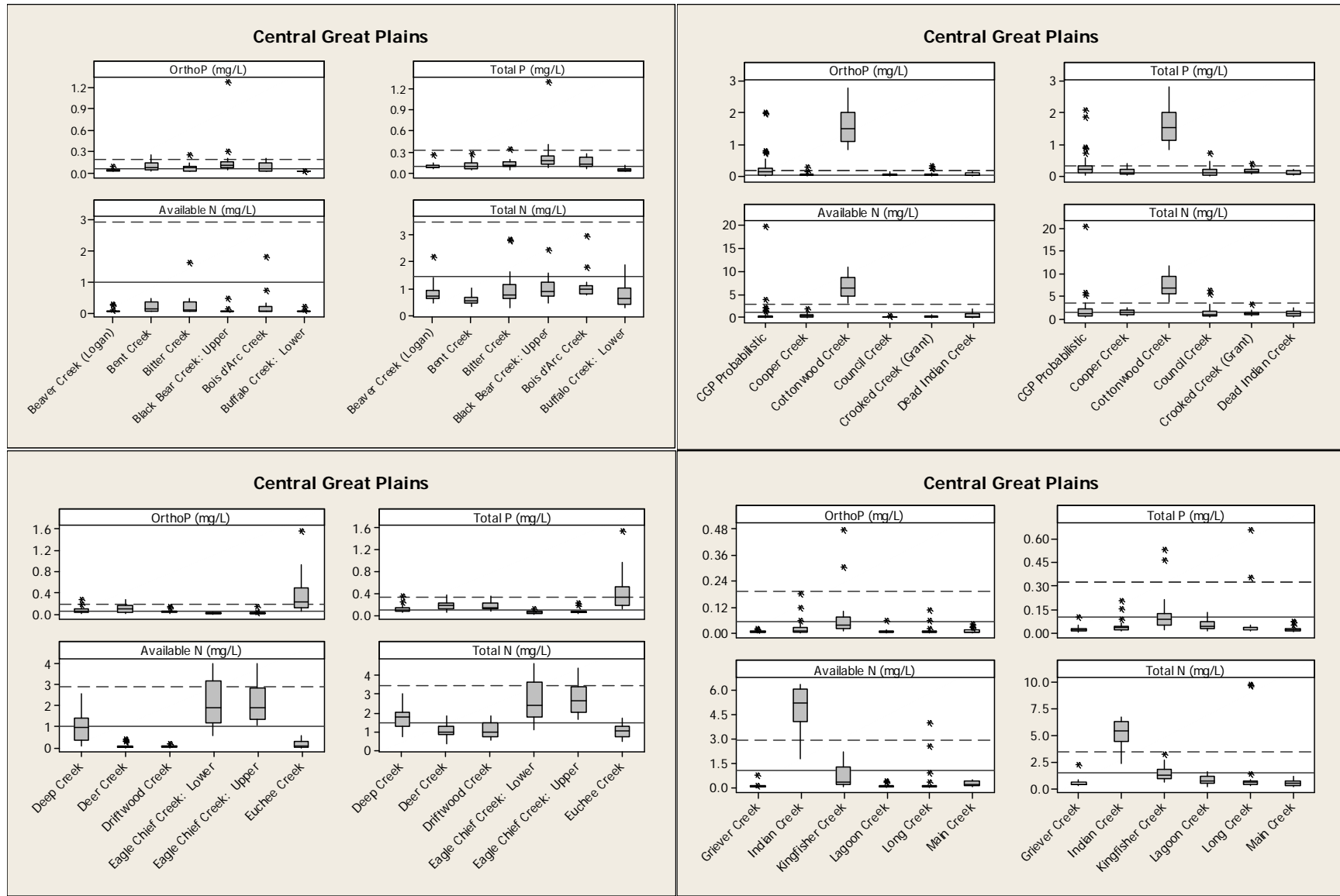
Site Name	WBID	E. coli	Comments
Red Rock Creek - 047	CCA12-047	< 5 *	One-time sample
Salt Creek - 024	CCA12-024	< 5 *	One-time sample
Salt Creek - 040	CCA12-040	1140	One-time sample
Salt Fork Arkansas River - 076	CCA12-076	360	One-time sample
Sand Creek - 035	CCA12-035	185	One-time sample
Skeleton Creek - 004	CCA12-004	5 *	One-time sample
Skeleton Creek - 020	CCA12-020	235	One-time sample
Skeleton Creek - 034	CCA12-034	< 5 *	One-time sample
Sleeping Bear Creek - 030	CCA12-030	15 *	One-time sample
Spring Creek - 023	CCA12-023	15 *	One-time sample
Spring Creek - 081	CCA12-081	< 5 *	One-time sample
Stillwater Creek - 073	CCA12-073	145	One-time sample
Traders Creek - 077	CCA12-077	< 5 *	One-time sample
Turkey Creek - 003	CCA12-003	90 *	One-time sample
Turkey Creek - 014	CCA12-014	140	One-time sample
Turkey Creek - 036	CCA12-036	500	One-time sample
Turkey Creek - 082	CCA12-082	120 *	One-time sample
Unnamed Trib of Salt Fork of Arkansas - 043	CCA12-043	45 *	One-time sample
Unnamed Trib. of Trail Creek - 064	CCA12-064	130	One-time sample

Select water quality parameters are summarized by box plots in Figures 2 and 3, below. To account for natural differences, sites were collated and analyzed by Level III ecoregions (Woods et al. 2005). Additionally, sites were compared to streams determined to be “high quality” sites in each ecoregion to determine general stream condition. Figure 2 shows interquartile range plots by site for four important nutrients as indicators of pollution: orthophosphorus, total phosphorus, estimated available nitrogen (ammonia plus nitrate/nitrite), and estimated total nitrogen (TKN plus nitrate/nitrite). All elevated flow data were omitted in these analyses in order to standardize the results. The probabilistic samples were composited by ecoregion as if they were samples from a single site in order to show the range and mean of those sites. These values are shown in each boxplot labeled “probabilistic.” The values for the descriptive statistics for all of the parameters are shown in Appendix A.3.

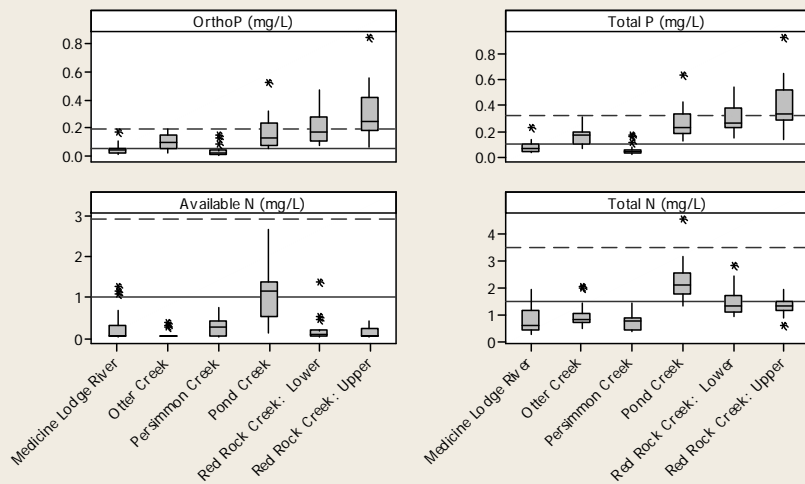
Regarding boxplot composition, the median of each site is shown by a line within the box with most outliers denoted by asterisks. The extreme outliers are denoted by values within a box on the graph. The mean of the high quality stream sites in a particular ecoregion is represented by a solid horizontal line, while dashed lines indicate +/- two standard deviations (representing 95% of the high quality data) for high quality site parameters. In instances where only one dashed line is present, the lower value was below zero or the upper value was above the graph.

Two sites in the Central Great Plains (Cottonwood Creek and Skeleton Creek: Upper) had considerably higher values for all of the nutrients than the high quality sites. Both of these sites have multiple NPDES permits and total retention lagoons in their watersheds; Cottonwood Creek did not have significant decrease in the flow volume, even with severe drought. Euchee Creek and Red Rock Creek: Upper had high values for orthophosphate phosphorus and total phosphorus; Indian Creek had high available nitrogen and total nitrogen values. While there are high outliers, the rest of the streams were well within 95% of the high quality sites.

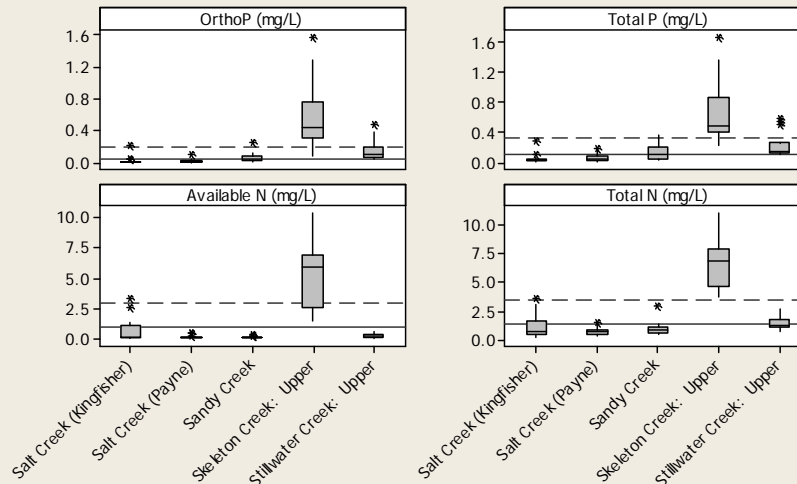
Figure 2. Select nutrients for each site by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations (if only one dashed line, the lower standard deviation was below zero).



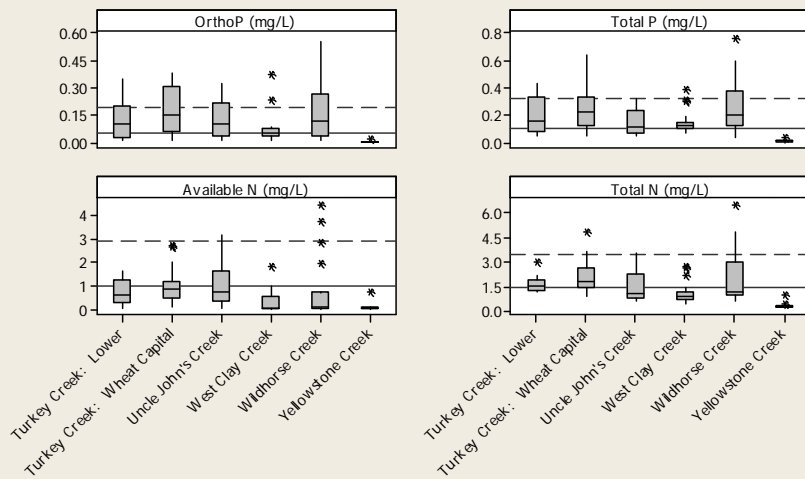
Central Great Plains



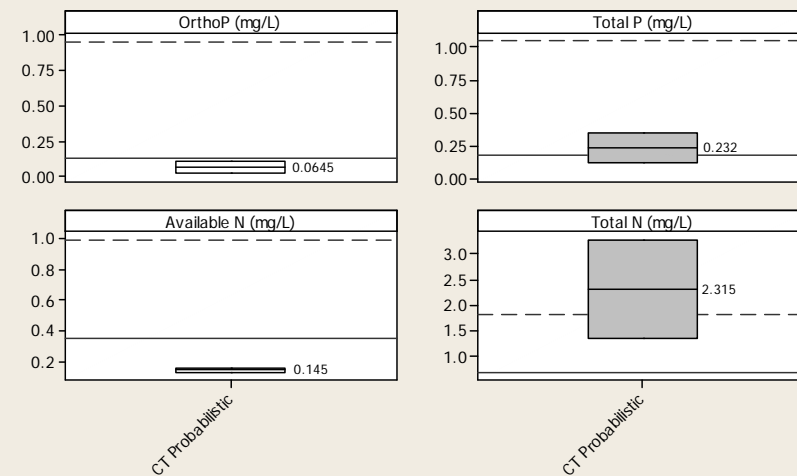
Central Great Plains



Central Great Plains



Cross Timbers



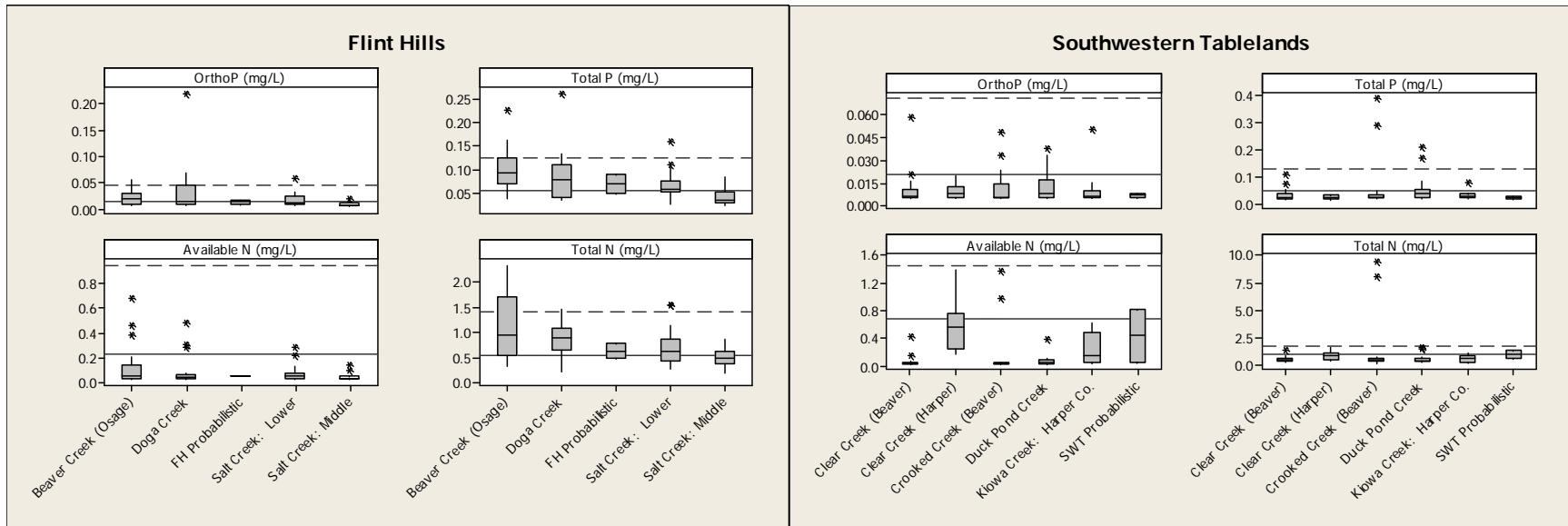


Figure 3 shows interquartile range plots for four physical parameters: dissolved oxygen (percent saturation), pH, turbidity, and total suspended solids. The Cross Timbers ecoregion has high quality sites with oxygen saturations lower than the other ecoregions included in these basins. In this ecoregion the charts show both the “rule of thumb” reference lines and the lines marking +/- two standard deviations from the high quality mean. On the dissolved oxygen % saturation charts a green line indicates 80% or 130% saturation and a red line indicates 50% or 150% saturation.

This helps show that while the oxygen saturation in the sites in these ecoregions is slightly low, they still fall within 95% of the high quality sites. The Cross Timbers Probabilistic sites have a mean oxygen saturation of 46%, but that is still within 95% of the high quality sites. Wildhorse Creek in the Central Great Plains ecoregion has oxygen saturation values that are on the low side with a mean value of 58%. Turkey Creek: Wheat Capital Road has values on the high side with a mean value of 145.8%.

Figure 3. Select physical parameters by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations (if only one dashed line, the lower standard deviation was below zero). Oxygen charts use a green line to indicate 80% and a red line to indicate 50% DO saturation.

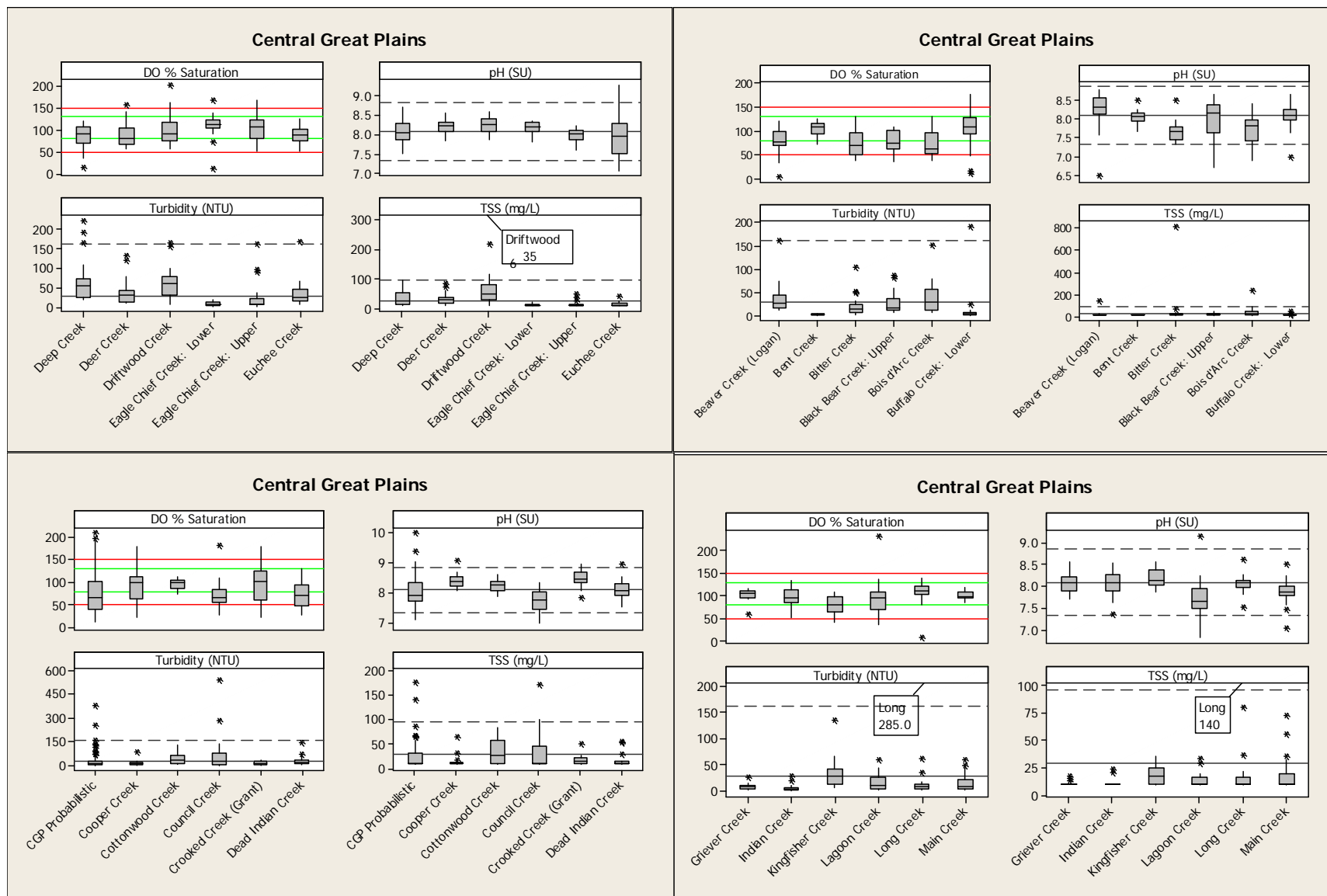


Figure 3, cont. Select parameters by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations (if only one dashed line, the lower standard deviation was below zero). Oxygen saturation charts use a green line to indicate 80% and a red line to indicate 50% DO saturation.

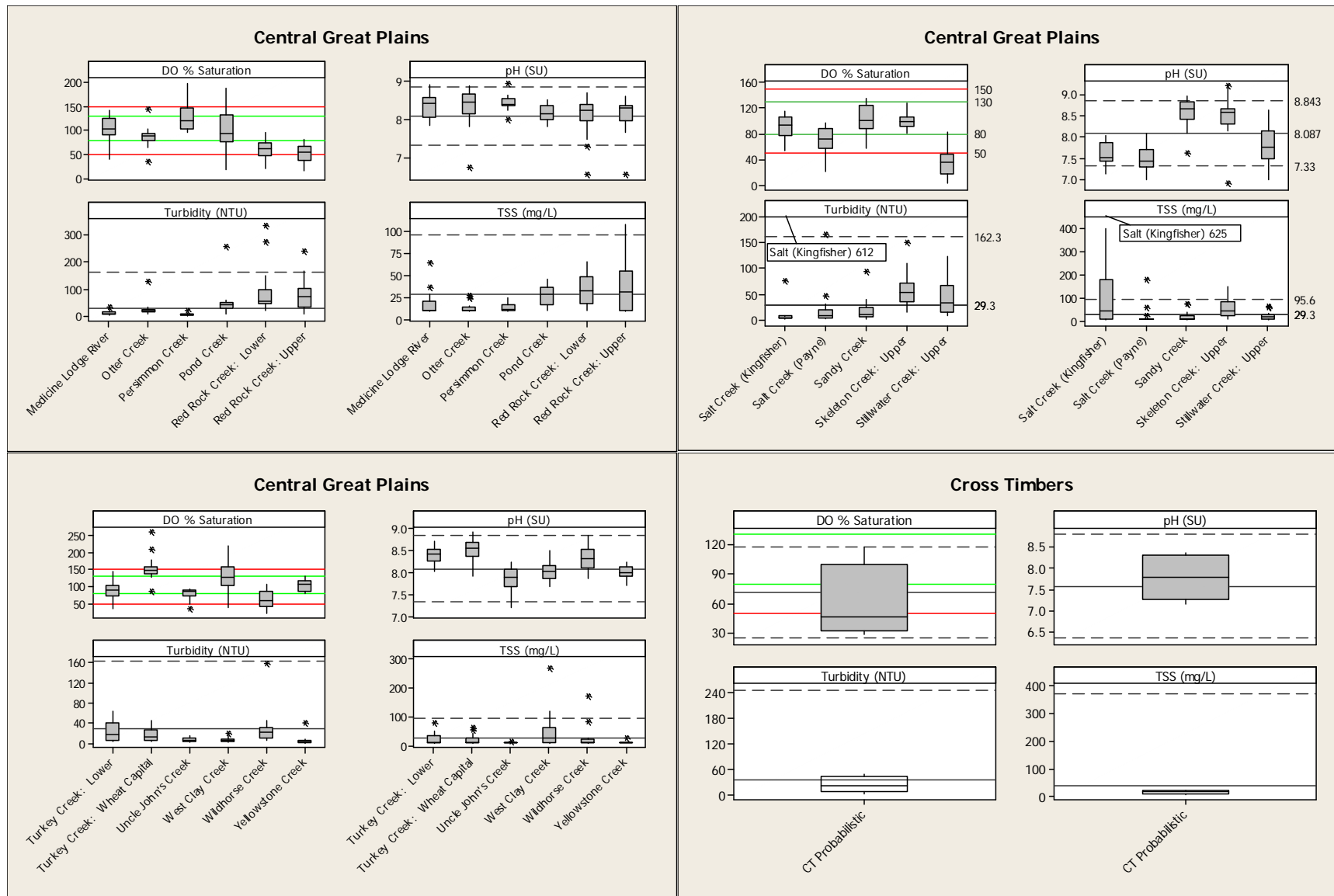


Figure 3 , cont. Select parameters by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations (if only one dashed line, the lower standard deviation was below zero). Oxygen saturation charts use a green line to indicate 80% and a red line to indicate 50% DO saturation.

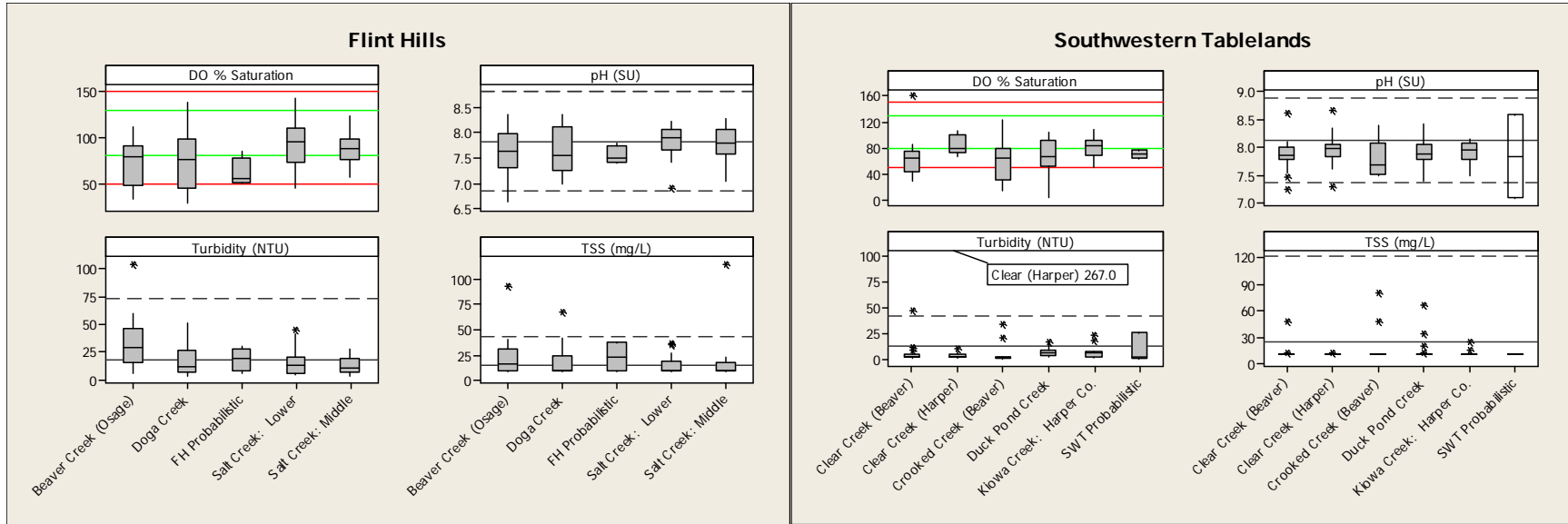


Table 14 shows an example of a comparison between base flow water quality data collected for the same site in the previous rotating basin cycles and the third cycle in order to examine whether water conditions have improved, worsened, or remained the same at a particular site. One-way ANOVAs were performed for each set of data. Only statistically significant differences between the means of each parameter in all three cycles or between cycle 2 and cycle 3 are shown in the table. Level of significance is indicated by p-values, with any $p < 0.050$ considered significant and $0.050 < p < 0.100$ considered marginally significant. To give a visual indication of the changes across the cycles, mini-graphs, called sparklines, have been added to the table. Since the table is more than 30 pages long, it is included in this document as Appendix A.4.

Forty-seven sites had significant changes in parameter values this cycle. The basin was in a drought during this cycle, and 35 of the sites had significantly lower flows. Two streams had significantly higher levels of dissolved oxygen (DO), but six streams had reduced DO. Ammonia was increased in 25 streams and other forms of nitrogen were significantly increased in nine streams. Thirteen streams showed significant decreases in nitrogen. Many streams showed increases in total Kjeldahl nitrogen (TKN) and decreases in nitrate/nitrite nitrogen. Phosphorus increased in four streams and decreased in two streams. Turbidity and/or total suspended solids (TSS) was significantly lower in four streams; alkalinity and/or hardness was significantly higher in nine streams and reduced in eight streams; nine streams exhibited increased salt concentrations (sulfate, chloride, or total dissolved solids) while seven show lower salt concentrations.

Table 14. (on the next page) Example of statistical comparisons of cycles one (2002-2004), two (2007-2009) and three (2012-2014) of Rotating Basin Project water quality data. "N" is the number of base flow samples included in the analyses. * indicates significant. Sparklines show the change. The entire table can be found in Appendix A 4.

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
Beaver Creek (Logan)	OK620900-03-0230C	Alkalinity (CaCO3)	1	18	225.89	64.47		0.213	0.051
			2	16	282.94	61.51			
			3	19	254.11	71.18			
		DO	1	18	9.221	2.329		0.097	0.157
			2	15	9.542	2.798			
			3	19	7.911	2.74			
		DO % Saturation	1	17	100.01	20.28		0.008 *	0.004 *
			2	16	99.68	21.99			
			3	19	76.13	26.28			
		Nitrate	1	17	0.2259	0.2428		0.001 *	0.002 *
			2	15	0.2526	0.258			
			3	18	0.02	0			
		TKN	1	17	0.6387	0.3192		0.062	0.133
			2	15	0.544	0.2452			
			3	18	0.7906	0.4385			
		Available Nitrogen	1	17	0.2848	0.233		0.002 *	0.003 *
			2	15	0.3056	0.2783			
			3	18	0.0744	0.0752			
		Sulfate	1	17	56.88	17.11		0.358	0.055
			2	15	72.31	22.91			
			3	18	85.26	49.44			
Flow	1	17	4.028	4.637		0.017 *	0.026 *		
	2	10	2.995	2.954					
	3	17	0.841	1.453					
Beaver Creek (Osage)	OK621210-00-0050L	Alkalinity (CaCO3)	1	18	159.61	46.14		0.644	0.031 *
			2	12	191.33	51.64			
			3	19	199.11	40.71			
		Chloride	1	17	7.632	3.06		0.698	0.011 *
			2	12	10.45	2.56			
			3	18	10.944	3.83			
		Conductivity	1	18	409.52	92.89		0.009 *	0.048 *
			2	12	463.84	71.34			
			3	19	387.79	75.42			
		DO	1	18	6.313	2.94		0.263	0.089
			2	12	8.917	3.01			
			3	19	7.564	3.33			
		DO % Saturation	1	17	61.49	25.26		0.019 *	0.007 *
			2	12	89.68	15.84			
			3	19	70.56	23.44			
		Hardness (CaCO3)	1	17	195.11	44.90		0.337	0.037 *
			2	6	217.45	34.11			
			3	19	249.95	77.89			
		TKN	1	17	0.4465	0.24		0.000 *	0.000 *
			2	12	0.2424	0.19			
			3	18	0.9689	0.56			
		Total Nitrogen	1	17	0.6965	0.38		0.002 *	0.001 *
			2	12	0.4282	0.25			
			3	18	1.0933	0.62			
		pH	1	17	8.0371	0.56		0.330	0.042 *
			2	12	7.7775	0.33			
			3	18	7.6272	0.45			
		Total P	1	17	0.09171	0.05		0.003 *	0.009 *
			2	12	0.05183	0.02			
			3	18	0.09844	0.05			

3.2 Biological Monitoring

3.2.1 Habitat Assessment

Total habitat scores for each site and computed metric scores are listed below (Table 15). Clear Creek (Harper) and Salt Creek: Lower had the highest habitat scores, while Yellowstone and Driftwood Creeks had the lowest habitat scores. Table 16 presents the habitat scores for the probabilistic sites.

Table 15. Habitat assessment metric values for fixed monitoring sites in the Rotating Basin Group 2, Cycle 3.

Site Name	WBID	Instream Cover	Pool Bottom Substrate	Pool Variability	Canopy Cover Shading	Presence of Rocky Runs or Riffles	Flow	Channel Alteration	Channel Sinuosity	Bank Stability	Bank Vegetation Stability	Streamside Cover	Total Points
Beaver Creek (Logan)	OK620900-03-0230C	2.5	2.4	20	6.4	0	0	15	5	9.4	7.2	9.6	78
Beaver Creek (Osage)	OK621210-00-0050L	8	12	16	9.6	0	0	9.9	2.7	5.2	5.8	9.6	79
Bent Creek	OK720500-01-0070D	1.6	0.4	0	20	0	5.9	4.2	6.7	9.9	3.7	5	57
Bitter Creek	OK621100-00-0100G	8.4	0.8	19	20	0	0	17	5.4	8.9	4.9	6.4	90
Black Bear Creek: Upper	OK621200-03-0260B	2.2	4.6	19	5.3	2.2	0.5	14	0.8	8.6	5.4	8.8	71
Bois d'Arc Creek	OK621000-03-0010C	4.8	3.1	19	7.7	4.1	7.8	6.7	2	5.3	3.9	8.9	73
Buffalo Creek: Lower	OK620920-05-0010G	3.8	0.5	15	8.1	0	0	15	1.1	10	7.9	9.9	72
Clear Creek (Beaver)	OK720500-02-0300F	5.4	3.1	13	6.4	0	0	17	1.2	10	6.5	4.2	67
Clear Creek (Harper)	OK720500-02-0070G	14	1.3	6.1	20	0	11	17	3.8	10	7.9	9.2	99
Cooper Creek	OK620910-02-0040C	0.7	0.7	4.1	7.7	0	0.1	8.7	2.8	9.9	7.2	8.9	51
Cottonwood Creek	OK620910-04-0010E	0.9	0.7	15	5.3	0	20	15	3.6	8.7	6.1	9.2	84
Council Creek	OK620900-02-0050H	2	2.1	8.3	18	0	0	1	0.8	5.8	5.8	9.6	53
Crooked Creek (Beaver)	OK620930-00-0100G	15	2.5	17	6.6	0	0	17	0.5	10	6.9	9.6	84
Crooked Creek (Grant)	OK621000-06-0010C	5.3	0.8	13	5.7	2.2	0.3	1	2.3	6.4	3.1	8.9	49
Dead Indian Creek	OK620910-05-0080A	0.8	1.6	17	3.4	2.2	0	11	1.2	8.1	4.6	9.9	60
Deep Creek	OK620910-02-0250C	0.6	0.4	18	2.5	0	4.6	14	1	9.7	5.1	10	66
Deer Creek	OK621000-04-0010D	2.8	2	18	2.3	0	15	9.9	2.4	8.1	4.9	8.8	74
Doga Creek	OK621200-02-0020C	3.5	3.9	19	17	0	0	17	1.9	5.6	5	9.9	82
Driftwood Creek	OK621010-03-0030C	4	0.6	3	1.1	0	0	7.7	2.4	5.9	3.9	5	34
Duck Pond Creek	OK720500-02-0250F	14	0.4	20	11	0	0	17	2	10	7.9	9.1	90
Eagle Chief Creek: Lower	OK620920-04-0010C	1.8	0.6	18	6.6	0	16	1.4	1.1	9.6	6.4	10	72
Eagle Chief Creek: Upper	OK620920-04-0010G	7.4	1.7	0	12	0	4.8	0.7	0.8	7.1	5.9	3.8	44
Euchee Creek	OK620900-01-0290D	3.3	2.4	14	9.3	0	0	8.7	2	8	6.7	8.9	63
Griever Creek	OK620920-01-0130G	1.1	4.3	0	6.4	0	0.8	5.8	2.6	5.2	3.2	9.3	39
Indian Creek	OK620910-02-0310C	1.8	2	17	6.2	0	9.1	0.4	0.8	9.9	8.7	10	66

Site Name	WBID	Instream Cover	Pool Bottom Substrate	Pool Variability	Canopy Cover Shading	Presence of Rocky Runs or Riffles	Flow	Channel Alteration	Channel Sinuosity	Bank Stability	Bank Vegetation Stability	Streamside Cover	Total Points
Kingfisher Creek	OK620910-05-0010J	1.9	1.4	20	13	4.1	0	15	2.2	9.9	7	10	84
Kiowa Creek: Harper Co.	OK720500-02-0130C	1	2.4	0	6.4	0	4	1.4	1.7	10	6.5	9.5	43
Lagoon Creek	OK620900-01-0180J	12	8.3	5	7	9	0.7	3.5	2.4	7.2	4.7	10	69
Long Creek	OK620920-02-0080D	1.3	4.3	0	1.9	10	1.4	9.9	4.8	8.1	3.1	10	55
Main Creek	OK620920-01-0180F	1.4	0.4	0	16	0	9.7	6.7	0.8	10	7.6	10	62
Medicine Lodge River	OK621010-03-0010D	5.7	1.6	0	13	0	0	0.4	0.9	6.2	5.5	8.7	42
Otter Creek	OK620910-03-0040C	1	4.3	3	2.1	0	0	11	1.9	9.3	7.3	4	44
Persimmon Creek	OK720500-01-0150G	0.8	0.4	0	12	0	3.9	2.8	4.5	9.8	6.4	9.7	51
Pond Creek	OK621000-05-0010D	5.9	0.5	13	8.6	0	3.8	8.7	1.6	7.2	4.1	9.5	63
Red Rock Creek: Lower	OK621200-05-0010K	12	6.7	14	2.7	2.2	12	5.8	1.5	9.3	2.7	9.1	78
Red Rock Creek: Upper	OK621200-05-0160G	0.9	1.5	6.6	15	0	0	9.9	3.1	9.4	6.7	10	63
Salt Creek (Kingfisher)	OK620910-02-0100D	0.5	2.4	0	5.1	0	17	0.4	0.4	9.9	6.7	9.9	52
Salt Creek (Payne)	OK620900-02-0020D	6.9	4.6	18	14	0	0	3.5	0.8	8.7	5.8	9.7	71
Salt Creek: Lower	OK621200-04-0010F	13	14	14	8.9	9	16	0.5	0.8	5.6	3.7	9.6	95
Salt Creek: Middle	OK621200-04-0010K	13	13	14	10	0	0	7.7	0.5	6.4	3.9	9.2	78
Sandy Creek	OK621010-02-0010D	6	1	20	2.5	0	4.4	0.4	1.9	8.2	5.8	5	55
Skeleton Creek: Upper	OK620910-03-0010S	2.6	1.3	20	3	0	16	6.7	6.5	3.4	2.2	8.8	70
Stillwater Creek: Upper	OK620900-04-0070T	3.6	4.7	20	17	2.2	2.7	11	4.9	5.5	5.1	9.2	86
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	5	0.6	20	7.7	0	10	1.8	1.6	4.1	4.1	4.2	59
Turkey Creek: Lower	OK620910-06-0010B	1	0.7	20	6.6	0	0.5	12	2.4	9.8	7.6	8.8	69
Uncle John's Creek	OK620910-05-0030C	1.7	1.2	0	9.9	0	0	0.4	2.5	10	6	9.9	42
West Clay Creek	OK621010-01-0130R	3.8	1.4	11	1.6	0	0.9	6.7	0.9	6.4	5.6	5	43
Wildhorse Creek	OK621000-02-0040F	8.7	1.8	3.5	13	0	1.1	1	3.4	5.3	3.6	8.8	50
Yellowstone Creek	OK621010-01-0270C	5.9	2.2	0	1.3	4.1	2.6	1	1.2	4.4	8.1	4.2	35

Table 16. Habitat assessment metric values for probabilistic monitoring sites in the Rotating Basin Group 2, Cycle 3.

Site Name	WBID	Instream Cover	Pool Bottom Substrate	Pool Variability	Canopy Cover Shading	Presence of Rocky Runs or Riffles	Flow	Channel Alteration	Channel Sinuosity	Bank Stability	Bank Vegetation Stability	Streamside Cover	Total Points
Black Bear Creek - 015	CCA12-015	2.7	5.7	2	7	0	0.5	1.8	0.3	6	6.5	8.7	41
Black Bear Creek - 074	CCA12-074	7.4	4.5	13	9.3	5.9	20	8.7	1.3	7.2	6.7	8.9	93
Bois d'Arc Creek - 031	CCA12-031	3.3	4	20	11	0	0.5	7.7	1.6	4.8	5	5	63
Bug Creek - 052	CCA12-052	9.5	9.9	13	13	0	0	1.8	0.8	4.8	5	9.6	67
Camp Creek - 058	CCA12-058	15	2.4	19	13	0	0.4	17	0.5	10	9	5	91
Camp Creek - 068	CCA12-068	6.5	2.6	15	17	2.2	0	9.9	0.2	8.5	6	9.6	77
Canyon View Creek - 044	CCA12-044	2.1	7.6	7.7	19	0	2.5	17	1.3	4.3	6.6	8.9	77
Chilocco Creek - 011	CCA12-011	2.9	1.7	17	19	0	0	5.8	4	2.7	6.3	8.7	68
Chilocco Creek - 039	CCA12-039	5.6	4.2	19	19	5.9	0.5	0.5	6.1	3.7	2.1	6	73
Cimarron River - 013	CCA12-013	1.3	0.4	0	1.4	0	20	0.4	0.3	9.4	7.2	10	50
Cimarron River - 016	CCA12-016	0.1	0.4	0	0	0	20	0.4	0.6	9.9	7.2	10	49
Cimarron River - 018	CCA12-018	0.7	0.7	20	3.4	0	20	0.4	0	7.2	3.6	10	66
Cimarron River - 046	CCA12-046	0.2	0.7	0	0	0	12	0.4	3.2	10	7.9	10	44
Cimarron River - 050	CCA12-050	2.3	0.4	0	1.9	0	19	0.4	2	6.5	1.9	3.2	38
Cimarron River - 056	CCA12-056	0.1	0.4	15	0	0	20	0.4	0	8.1	3.9	10	57
Cimarron River - 065	CCA12-065	1.4	0.9	15	1.4	0	20	2.3	0	7.3	3.9	10	62
Clear Creek - 009	CCA12-009	14	1.2	5	20	0	11	17	3.8	10	7.9	9.2	98
Council Creek - 079	CCA12-079	2.1	3.6	5.5	16	0	0	0.5	0.7	4.5	6.1	9.6	49
Deer Creek - 063	CCA12-063	6	2.6	14	4.6	0	0.1	14	1.6	6.4	4.9	4.6	58
Deer Creek - 070	CCA12-070	14	3.8	20	18	4.1	0.1	1.8	11	5.8	4.2	8.7	92
Doe Creek - 026	CCA12-026	4.1	2.7	0	16	0	0	17	2	8	4.4	4.2	58
Dry Creek - 022	CCA12-022	7.9	2.2	19	18	0	4.8	0.4	11	2.1	3.5	8.7	78
Kingfisher Creek - 060	CCA12-060	1.6	0.4	0	15	0	0	3.5	0.8	9.6	7.9	8.7	47
Lariat Creek - 078	CCA12-078	19	2.4	0	9.5	0	0	2.3	4.9	9.2	6.4	3.4	57
Little Turkey Creek - 072	CCA12-072	1.5	0.7	5	18	0	0	14	4.1	9.4	5.3	10	67
Nash Creek - 084	CCA12-084	14	3.2	2.2	8.4	2.2	0	7.7	1.4	3.3	4.3	9.1	56
North Canadian River - 042	CCA12-042	0.8	-	0	12	0	20	5	0.5	9.9	4.9	10	62
North Canadian River - 062	CCA12-062	9.6	1.5	14	4.5	0	20	0.4	0.3	10	8.3	5	74
North Canadian River - 080	CCA12-080	0.9	0.7	0	1.4	0	8.9	1.8	2	9.6	6.3	10	42
Palo Duro Creek - 057	CCA12-057	19	0.4	20	5.1	0	0	17	0.4	10	5.7	5	82
Pond Creek - 059	CCA12-059	7.2	0.4	20	15	0	1	2.8	3.2	7.6	7.8	9.1	74

Site Name	WBID	Instream Cover	Pool Bottom Substrate	Pool Variability	Canopy Cover Shading	Presence of Rocky Runs or Riffles	Flow	Channel Alteration	Channel Sinuosity	Bank Stability	Bank Vegetation Stability	Streamside Cover	Total Points
Red Rock Creek - 047	CCA12-047	2.2	3	20	5.5	0	0	14	2.4	5.8	4.6	8.8	66
Salt Creek - 024	CCA12-024	12	15	13	4.6	4.1	16	6.7	1.6	7.8	3.5	9.1	94
Salt Creek - 040	CCA12-040	18	15	20	7.4	0	0	3.5	0	7	5.4	10	86
Salt Fork Arkansas River - 076	CCA12-076	1.2	4.5	0	0.3	0	0	0.4	1.4	10	7.4	4.8	30
Sand Creek - 035	CCA12-035	2.9	0.4	0	16	0	15	4.2	0.8	5.3	4	4.4	53
Skeleton Creek - 004	CCA12-004	5.6	6.9	14	2.8	2.2	12	9.9	7.9	5.2	5.7	4.4	77
Skeleton Creek - 020	CCA12-020	0.6	0.4	15	9.5	0	2	15	2.8	8.5	5.6	8.8	68
Skeleton Creek - 034	CCA12-034	6.4	3.6	15	3.4	10	16	5	3.2	6.5	4.5	9.5	84
Sleeping Bear Creek - 030	CCA12-030	4	0.4	13	13	0	0	17	3.2	10	10	3.4	73
Spring Creek - 023	CCA12-023	18	1.4	1.8	18	0	9.7	5	1.5	5.2	5.6	5	71
Spring Creek - 081	CCA12-081	4.8	2.9	15	18	0	0	11	0.5	5.4	7.5	10	76
Stillwater Creek - 073	CCA12-073	2.7	0.8	13	12	0	15	8.7	5.2	4.4	6	9.5	78
Traders Creek - 077	CCA12-077	2.3	6.2	0	7.5	4.1	7.9	6.7	2.1	10	7.1	9.6	64
Turkey Creek - 003	CCA12-003	9.7	2.7	15	19	0	11	17	4.7	5.5	4.3	9.2	97
Turkey Creek - 014	CCA12-014	6.7	0.4	0	15	0	0	7.7	2.1	10	7.3	10	59
Turkey Creek - 036	CCA12-036	6.1	8.4	12	14	0	0	5	4.5	5.2	4.3	9.7	70
Turkey Creek - 082	CCA12-082	18	2.8	0	19	0	0.1	3.5	3.9	4.9	7.7	8.8	69
Unnamed Creek - 064	CCA12-064	7.7	0.6	9.9	19	4.1	2.4	0.4	3.7	6.1	3.5	3.2	61
Unnamed Trib of Cimarron River - 006	CCA12-006	3.7	5	3.5	20	0	1	4.2	3.2	5.6	6.7	9.7	63
Unnamed Trib of Salt Fork of Arkansas - 043	CCA12-043	5	0.7	19	19	0	0	0.7	3.1	6.1	2.8	8.7	65

Sites were compared relative to the mean total habitat score of high quality sites in the respective ecoregion and a range determined by +/- two standard deviations (Figure 4). Sites with scores that are within +/- two standard deviations of the mean of the high quality sites do not necessarily have “reference” conditions; rather, sites outside of these values have either extremely good or extremely poor conditions which merit further investigation. Low habitat scores could be the result of anthropogenic activities, could be naturally occurring, or could indicate an unrepresentative reach. During the monitoring period Oklahoma experienced a severe drought which most likely resulted in lower habitat scores. Parameters like pool variability and flow would be particularly affected by lack of water or low water conditions.

Fixed sites (Figure 4): Habitat scores for sites in all of the ecoregions were within two standard deviations of the high quality sites with the exception of Driftwood Creek, Griever Creek, and Yellowstone Creek in the Central Great Plains ecoregion.

Probabilistic sites (Figure 5): Black Bear Creek – 015, Cimarron River – 050, and Salt Fork Arkansas River – 076 in the Central Great Plains were below two standard deviations of the high quality sites. The rest of the sites were within two standard deviations of the high quality sites.

Figure 4. Total habitat score for each fixed site by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.

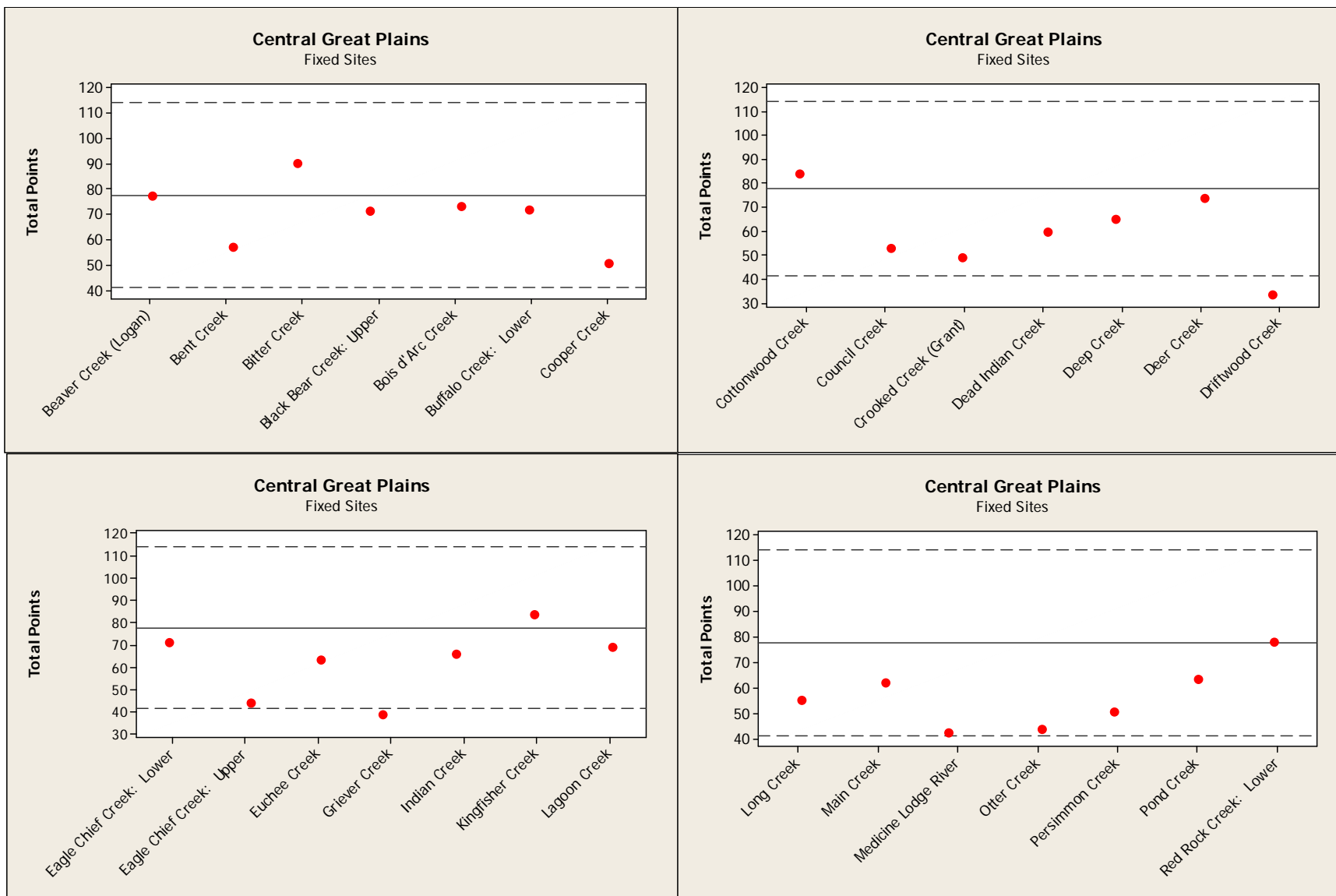


Figure 4 cont. Total habitat score for each fixed site by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.

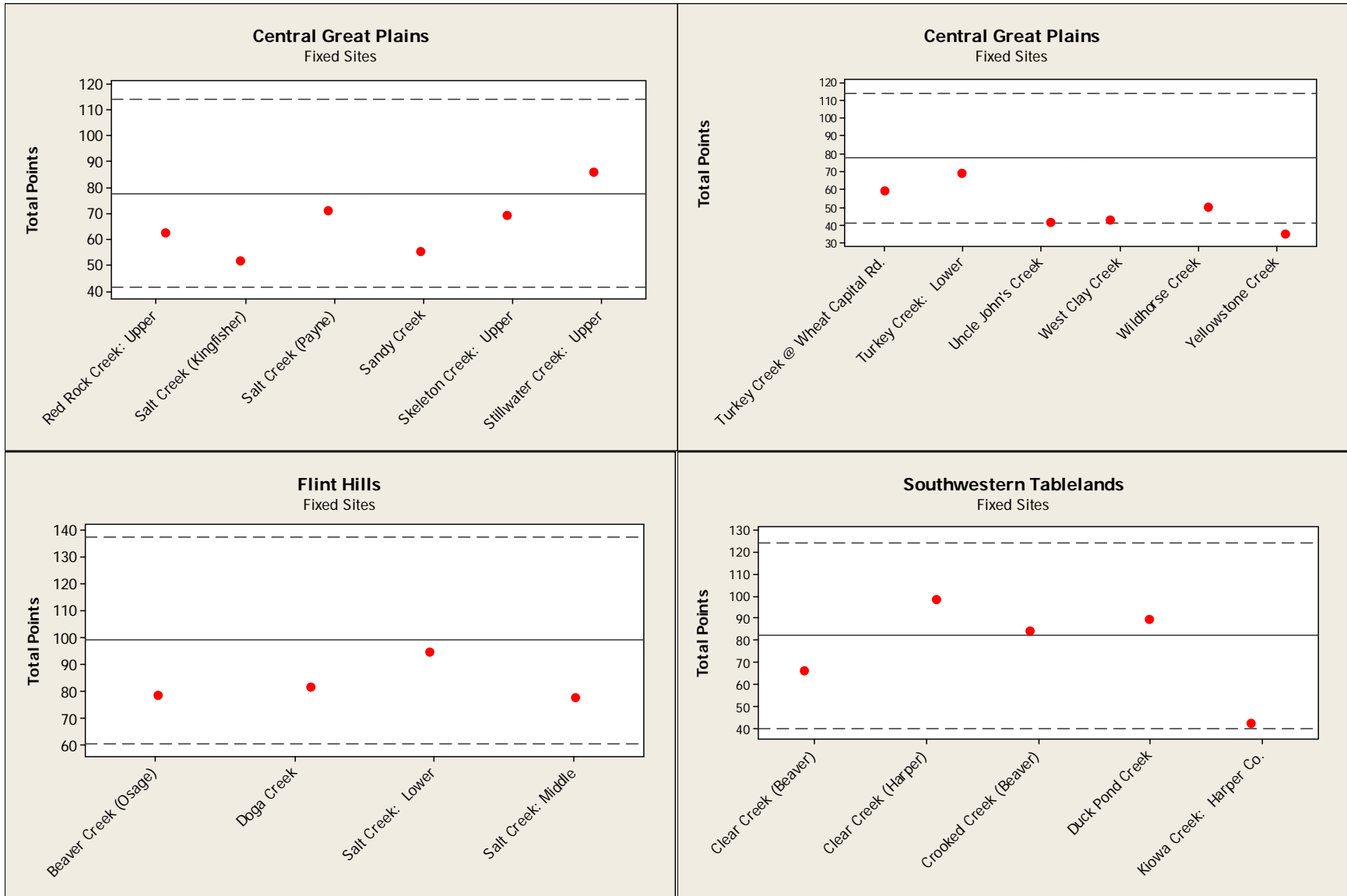


Figure 5. Total habitat score for each probabilistic site by Level III ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.

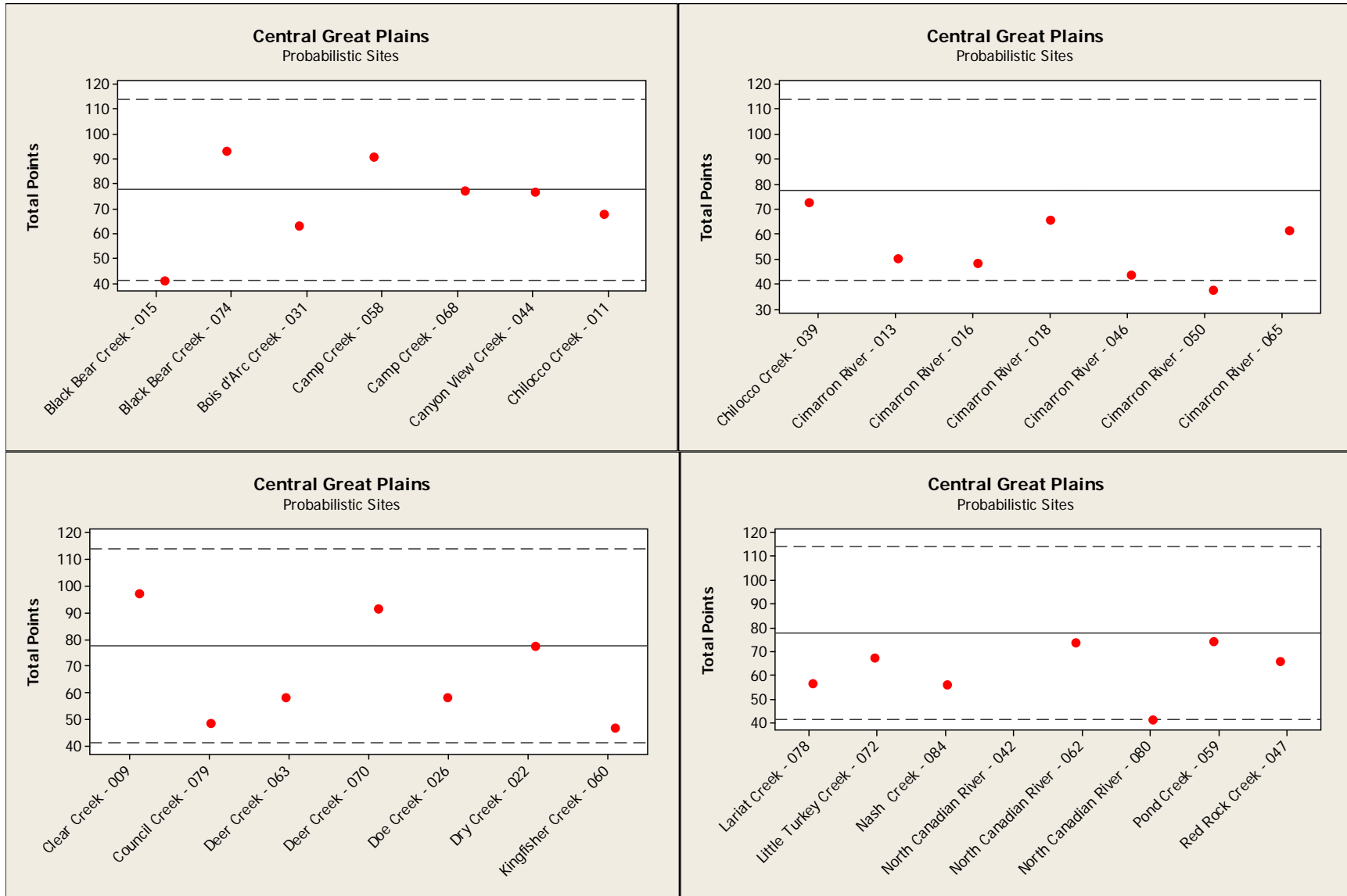
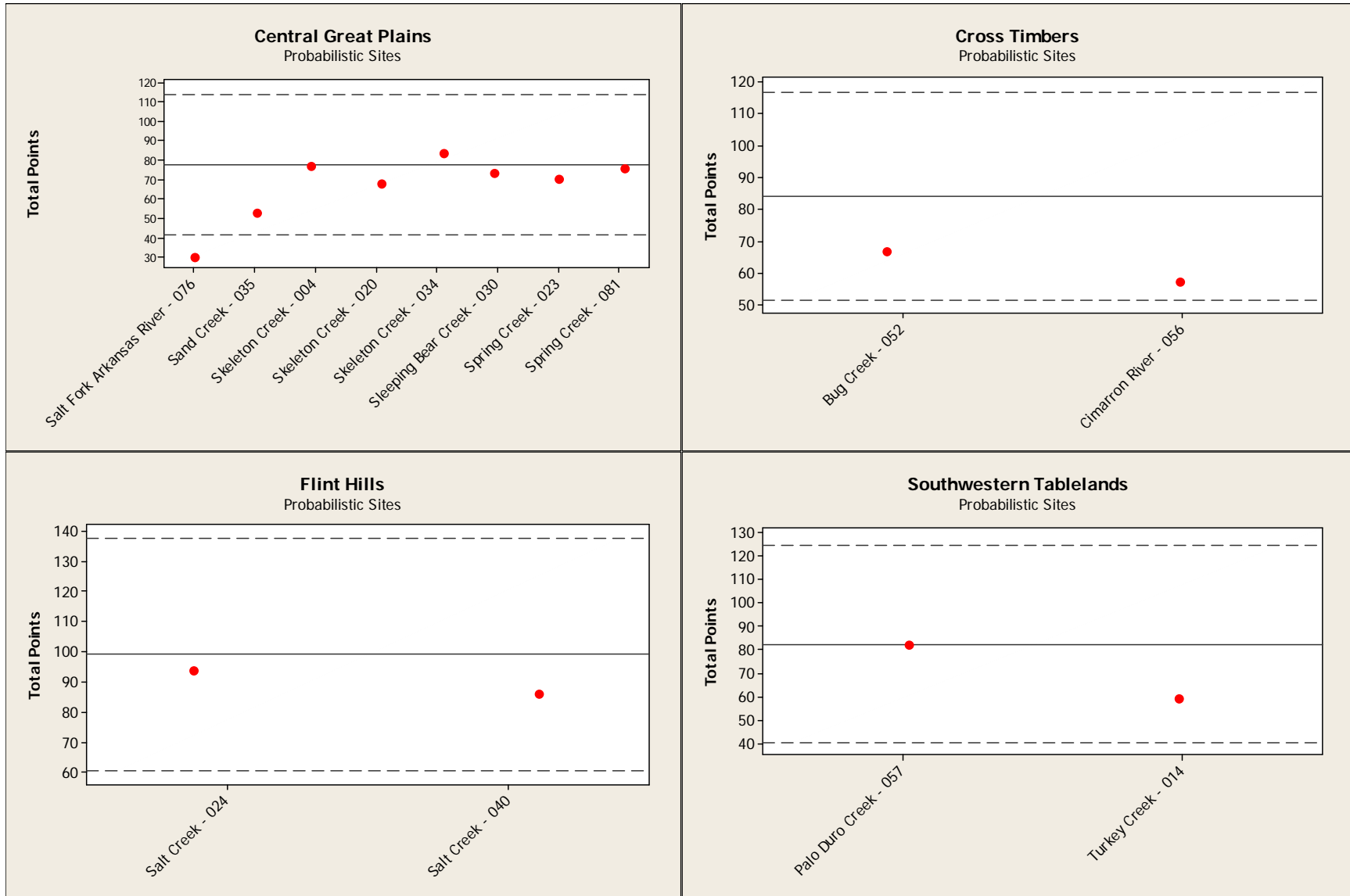


Figure 5, cont. Total habitat score for each probabilistic site by Level III ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.



3.2.2 Fish Collections

Fish metrics used to compute IBI scores for the Rotating Basin sites using the OCC method are listed in Tables 17 (fixed sites) and 18 (probabilistic sites). Use of this IBI method allows assessment of streams which lack definite support assignment using the state biocriteria method. For a complete listing of fish collection data, including species and numbers caught, consult Appendix B. All data was compared relative to the same mean of the high quality sites for the respective ecoregion in order to obtain the IBI score (OCC method). Although, ideally, one would use collections from the same years for comparison, multiyear collections at sites deemed “high quality” were not available.

Table 17. Metric values for calculation of fish IBI scores (OCC method) for fixed sites in Rotating Basin Year 2, Cycle 3.

Site Name	WBID	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	percent insect. Cyprinid	Percent lithophylic spawners
Beaver Creek (Logan)	OK620900-03-0230C	582	19	1	1	6	1	0.900	0.081	0.00
Beaver Creek (Osage)	OK621210-00-0050L	400	27	3	2	5	2	0.748	0.060	0.10
Bent Creek	OK720500-01-0070D	865	10	0	0	2	1	0.613	0.387	0.00
Bitter Creek	OK621100-00-0100G	690	17	1	1	5	3	0.945	0.046	0.01
Black Bear Creek: Upper	OK621200-03-0260B	341	19	1	1	6	2	0.891	0.100	0.01
Bois d'Arc Creek	OK621000-03-0010C	819	14	2	1	5	2	0.921	0.056	0.02
Buffalo Creek: Lower	OK620920-05-0010G	327	9	0	1	4	0	0.988	0.012	0.00
Clear Creek (Beaver)	OK720500-02-0300F	775	11	0	0	6	0	0.797	0.000	0.01
Clear Creek (Harper)	OK720500-02-0070G	368	10	0	1	4	1	0.943	0.057	0.00
Cooper Creek	OK620910-02-0040C	702	14	0	0	4	0	0.943	0.293	0.00
Cottonwood Creek	OK620910-04-0010E	557	14	0	1	3	1	0.998	0.639	0.00
Council Creek	OK620900-02-0050H	440	20	0	2	5	1	0.984	0.239	0.00
Crooked Creek (Beaver)	OK620930-00-0100G	116	11	1	1	5	1	0.940	0.000	0.04
Crooked Creek (Grant)	OK621000-06-0010C	975	16	0	1	3	1	0.539	0.497	0.00
Dead Indian Creek	OK620910-05-0080A	853	21	0	1	5	1	0.909	0.130	0.00
Deep Creek	OK620910-02-0250C	455	19	0	0	5	0	1.000	0.007	0.00
Deer Creek	OK621000-04-0010D	3371	27	2	2	8	4	0.817	0.160	0.02
Doga Creek	OK621200-02-0020C	495	19	0	1	6	1	0.869	0.121	0.00
Driftwood Creek	OK621010-03-0030C	1374	17	0	1	4	1	0.831	0.096	0.00
Duck Pond Creek	OK720500-02-0250F	201	7	0	0	4	0	1.000	0.000	0.00
Eagle Chief Creek: Lower	OK620920-04-0010C	569	18	0	1	5	1	0.954	0.077	0.00
Eagle Chief Creek: Upper	OK620920-04-0010G	2396	14	0	1	3	2	0.506	0.494	0.00
Euchee Creek	OK620900-01-0290D	375	16	0	1	6	0	0.960	0.029	0.00
Griever Creek	OK620920-01-0130G	1056	8	0	0	0	0	0.999	0.900	0.00

Site Name	WBID	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	percent insect. Cyprinid	Percent lithophytic spawners
Indian Creek	OK620910-02-0310C	1572	21	0	2	6	1	0.677	0.373	0.20
Kingfisher Creek	OK620910-05-0010J	1662	18	0	1	4	1	0.835	0.168	0.00
Kiowa Creek: Harper Co.	OK720500-02-0130C	402	5	0	0	0	0	0.975	0.025	0.00
Lagoon Creek	OK620900-01-0180J	361	17	1	0	8	0	0.972	0.000	0.01
Long Creek	OK620920-02-0080D	269	10	0	0	2	1	0.591	0.454	0.00
Main Creek	OK620920-01-0180F	459	6	0	0	0	0	0.338	0.660	0.00
Medicine Lodge River	OK621010-03-0010D	1914	16	0	2	2	1	0.926	0.060	0.00
Otter Creek	OK620910-03-0040C	660	21	1	2	5	1	0.885	0.111	0.00
Persimmon Creek	OK720500-01-0150G	643	11	0	2	4	1	0.627	0.373	0.00
Pond Creek	OK621000-05-0010D	1417	21	1	1	6	1	0.848	0.162	0.00
Red Rock Creek: Lower	OK621200-05-0010K	478	18	1	1	5	3	0.931	0.029	0.04
Red Rock Creek: Upper	OK621200-05-0160G	752	15	1	1	5	2	0.652	0.344	0.00
Salt Creek (Kingfisher)	OK620910-02-0100D	654	5	0	0	0	0	0.621	0.286	0.00
Salt Creek (Payne)	OK620900-02-0020D	465	22	1	0	9	0	0.972	0.028	0.00
Salt Creek: Lower	OK621200-04-0010F	1058	23	4	2	5	3	0.876	0.057	0.06
Salt Creek: Middle	OK621200-04-0010K	366	19	3	3	5	3	0.519	0.033	0.12
Sandy Creek	OK621010-02-0010D	1124	19	0	1	6	2	0.863	0.130	0.00
Skeleton Creek: Upper	OK620910-03-0010S	266	12	0	0	1	0	0.996	0.124	0.00
Stillwater Creek: Upper	OK620900-04-0070T	250	12	0	0	6	0	0.996	0.020	0.00
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	5912	25	0	2	5	1	0.725	0.290	0.00
Turkey Creek: Lower	OK620910-06-0010B	479	18	0	1	3	1	0.994	0.125	0.00
Uncle John's Creek	OK620910-05-0030C	952	13	0	1	3	1	0.785	0.215	0.00
West Clay Creek	OK621010-01-0130R	1299	8	0	1	2	1	0.988	0.001	0.00
Wildhorse Creek	OK621000-02-0040F	1915	15	0	0	3	1	0.798	0.167	0.00
Yellowstone Creek	OK621010-01-0270C	1280	8	0	2	2	1	0.633	0.333	0.03

Table 18. Metric values for calculation of fish IBI scores (OCC method) for probabilistic sites in Rotating Basin Year2, Cycle 3.

Site Name	WBID	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	percent insect. Cyprinid	Percent lithophytic spawners
Black Bear Creek - 015	CCA12-015	555	15	1	0	3	1	0.955	0.043	0.00
Black Bear Creek - 074	CCA12-074	555	15	1	1	3	3	0.903	0.067	0.01
Bois d'Arc Creek - 031	CCA12-031	597	19	2	3	4	3	0.817	0.075	0.10
Bug Creek - 052	CCA12-052	542	21	1	2	8	3	0.810	0.030	0.08
Camp Creek - 058	CCA12-058	100	8	0	0	5	0	1.000	0.000	0.00
Camp Creek - 068	CCA12-068	245	14	0	0	8	0	0.976	0.000	0.02
Canyon View Creek - 044	CCA12-044	319	4	0	0	2	0	1.000	0.000	0.00
Chilocco Creek - 011	CCA12-011	209	14	0	1	5	1	0.967	0.024	0.01
Chilocco Creek - 039	CCA12-039	399	25	3	3	6	3	0.845	0.128	0.05
Cimarron River - 013	CCA12-013	973	13	0	0	0	0	0.945	0.613	0.00
Cimarron River - 016	CCA12-016	851	13	0	0	0	0	0.699	0.644	0.00
Cimarron River - 018	CCA12-018	986	13	0	0	0	0	0.962	0.148	0.02
Cimarron River - 046	CCA12-046	763	5	0	0	0	0	0.881	0.283	0.00
Cimarron River - 050	CCA12-050	1607	16	0	0	1	0	0.479	0.164	0.00
Cimarron River - 056	CCA12-056	290	11	0	0	0	0	0.859	0.193	0.00
Cimarron River - 065	CCA12-065	615	14	0	0	1	0	0.940	0.698	0.00
Clear Creek - 009	CCA12-009	368	10	0	1	4	1	0.943	0.057	0.00
Council Creek - 079	CCA12-079	1069	24	1	2	8	1	0.980	0.026	0.01
Deer Creek - 063	CCA12-063	688	17	2	2	6	3	0.884	0.109	0.01
Deer Creek - 070	CCA12-070	1157	20	1	2	6	2	0.581	0.392	0.03
Doe Creek - 026	CCA12-026	25	4	0	0	1	0	1.000	0.000	0.00
Dry Creek - 022	CCA12-022	944	12	0	1	7	0	0.807	0.145	0.05
Kingfisher Creek - 060	CCA12-060	548	10	0	1	2	1	0.465	0.535	0.00
Lariat Creek - 078	CCA12-078	832	11	0	1	4	0	0.865	0.004	0.00
Little Turkey Creek - 072	CCA12-072	879	12	0	0	5	0	0.998	0.002	0.00
Nash Creek - 084	CCA12-084	1149	10	0	1	2	1	0.832	0.168	0.00
North Canadian River - 042	CCA12-042	902	15	0	1	3	1	0.963	0.033	0.00
North Canadian River - 062	CCA12-062	393	10	0	0	2	0	0.980	0.000	0.00
North Canadian River - 080	CCA12-080	554	14	0	2	3	1	0.839	0.588	0.11
Palo Duro Creek - 057	CCA12-057	130	9	0	0	4	0	1.000	0.000	0.00
Pond Creek - 059	CCA12-059	1348	19	1	1	4	2	0.876	0.119	0.00
Red Rock Creek - 047	CCA12-047	223	16	0	1	7	2	0.933	0.063	0.00
Salt Creek - 024	CCA12-024	438	27	3	3	5	3	0.710	0.126	0.21

Site Name	WBID	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	percent insect. Cyprinid	Percent lithophylic spawners
Salt Creek - 040	CCA12-040	615	24	1	4	6	3	0.478	0.031	0.27
Salt Fork Arkansas River - 076	CCA12-076	379	7	0	1	0	1	0.639	0.351	0.01
Sand Creek - 035	CCA12-035	882	12	0	1	4	1	0.649	0.351	0.00
Skeleton Creek - 004	CCA12-004	2700	18	0	1	5	2	0.950	0.047	0.00
Skeleton Creek - 020	CCA12-020	594	12	0	1	0	1	0.939	0.061	0.00
Skeleton Creek - 034	CCA12-034	919	12	0	1	2	1	0.998	0.003	0.00
Sleeping Bear Creek - 030	CCA12-030	235	8	0	1	4	0	0.557	0.043	0.35
Spring Creek - 023	CCA12-023	101	6	0	0	3	0	1.000	0.000	0.00
Spring Creek - 081	CCA12-081	263	14	1	3	3	2	0.840	0.030	0.08
Stillwater Creek - 073	CCA12-073	805	17	0	1	5	1	0.994	0.048	0.00
Traders Creek - 077	CCA12-077	93	6	0	1	1	0	0.505	0.000	0.49
Turkey Creek - 003	CCA12-003	524	20	0	0	8	0	0.990	0.019	0.00
Turkey Creek - 014	CCA12-014	97	8	0	0	4	0	1.000	0.000	0.00
Turkey Creek - 036	CCA12-036	220	9	0	0	6	0	1.000	0.000	0.00
Turkey Creek - 082	CCA12-082	308	9	0	1	4	1	0.984	0.010	0.00
Unnamed Creek - 064	CCA12-064	261	8	0	0	3	0	0.904	0.096	0.00
Unnamed Trib of Cimarron River - 006	CCA12-006	63	7	0	0	2	0	1.000	0.000	0.00
Unnamed Trib of Salt Fork of Arkansas - 043	CCA12-043	470	16	0	0	5	0	0.991	0.009	0.00

Table 19 presents the results of the fixed site fish assessment based on the OCC's modified RBP method. At this time, the fish assessment based on Oklahoma state biocriteria (as described in Oklahoma Water Resource Board, *Implementation of Oklahoma's Water Quality Standards, Subchapter 15: Use Support Assessment Protocols* (USAP), OAC 785:46-15) is not complete. The state biocriteria are based on older delineations of the level 3 ecoregions, so there were some differences in scoring based on the differences in grouping of sites. Not all data was available at the time of analysis so the USAP results will be compared in the next report. The OCC method allows greater discrimination of the biological condition among sites. Of the 50 sites, 28 were "excellent" when compared with high quality sites in the same ecoregion, 2 were "good," 13 were "fair," 5 were "poor," and 1 was "very poor."

Table 19. IBI scores for fixed sites based on OCC's modified RBP method.

Ecoregion	Site Name	WBID	OCC IBI	% of Reference	Condition
CGP	Beaver Creek (Logan)	OK620900-03-0230C	21	0.91	Excellent
CGP	Bent Creek	OK720500-01-0070D	19	0.83	Good
CGP	Bitter Creek	OK621100-00-0100G	21	0.91	Excellent
CGP	Black Bear Creek: Upper	OK621200-03-0260B	21	0.91	Excellent
CGP	Bois d'Arc Creek	OK621000-03-0010C	21	0.91	Excellent
CGP	Buffalo Creek: Lower	OK620920-05-0010G	17	0.74	Fair
CGP	Cooper Creek	OK620910-02-0040C	17	0.74	Fair
CGP	Cottonwood Creek	OK620910-04-0010E	25	1.09	Excellent
CGP	Council Creek	OK620900-02-0050H	25	1.09	Excellent
CGP	Crooked Creek (Grant)	OK621000-06-0010C	25	1.09	Excellent
CGP	Dead Indian Creek	OK620910-05-0080A	21	0.91	Excellent
CGP	Deep Creek	OK620910-02-0250C	15	0.65	Fair
CGP	Deer Creek	OK621000-04-0010D	23	1.00	Excellent
CGP	Driftwood Creek	OK621010-03-0030C	21	0.91	Excellent
CGP	Eagle Chief Creek: Lower	OK620920-04-0010C	21	0.91	Excellent
CGP	Eagle Chief Creek: Upper	OK620920-04-0010G	25	1.09	Excellent
CGP	Euchee Creek	OK620900-01-0290D	17	0.74	Fair
CGP	Griever Creek	OK620920-01-0130G	13	0.57	Poor
CGP	Indian Creek	OK620910-02-0310C	27	1.17	Excellent
CGP	Kingfisher Creek	OK620910-05-0010J	21	0.91	Excellent
CGP	Lagoon Creek	OK620900-01-0180J	15	0.65	Fair
CGP	Long Creek	OK620920-02-0080D	21	0.91	Excellent
CGP	Main Creek	OK620920-01-0180F	13	0.57	Poor
CGP	Medicine Lodge River	OK621010-03-0010D	21	0.91	Excellent
CGP	Otter Creek	OK620910-03-0040C	23	1.00	Excellent
CGP	Persimmon Creek	OK720500-01-0150G	25	1.09	Excellent
CGP	Pond Creek	OK621000-05-0010D	21	0.91	Excellent
CGP	Red Rock Creek: Lower	OK621200-05-0010K	21	0.91	Excellent
CGP	Red Rock Creek: Upper	OK621200-05-0160G	23	1.00	Excellent
CGP	Salt Creek (Kingfisher)	OK620910-02-0100D	11	0.48	Poor
CGP	Salt Creek (Payne)	OK620900-02-0020D	15	0.65	Fair
CGP	Sandy Creek	OK621010-02-0010D	21	0.91	Excellent
CGP	Skeleton Creek: Upper	OK620910-03-0010S	11	0.48	Poor
CGP	Stillwater Creek: Upper	OK620900-04-0070T	15	0.65	Fair
CGP	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	25	1.09	Excellent

Ecoregion	Site Name	WBID	OCC IBI	% of Reference	Condition
CGP	Turkey Creek: Lower	OK620910-06-0010B	21	0.91	Excellent
CGP	Uncle John's Creek	OK620910-05-0030C	23	1.00	Excellent
CGP	West Clay Creek	OK621010-01-0130R	17	0.74	Fair
CGP	Wildhorse Creek	OK621000-02-0040F	19	0.83	Good
CGP	Yellowstone Creek	OK621010-01-0270C	21	0.91	Excellent
FH	Beaver Creek (Osage)	OK621210-00-0050L	21	0.78	Fair
FH	Doga Creek	OK621200-02-0020C	17	0.63	Fair
FH	Salt Creek: Lower	OK621200-04-0010F	21	0.78	Fair
FH	Salt Creek: Middle	OK621200-04-0010K	21	0.78	Fair
SWT	Clear Creek (Beaver)	OK720500-02-0300F	15	0.65	Fair
SWT	Clear Creek (Harper)	OK720500-02-0070G	23	1.00	Excellent
SWT	Crooked Creek (Beaver)	OK620930-00-0100G	23	1.00	Excellent
SWT	Duck Pond Creek	OK720500-02-0250F	13	0.57	Poor
SWT	Kiowa Creek: Harper Co.	OK720500-02-0130C	9	0.39	Very Poor

Table 20 presents the results of the probabilistic site fish assessment based on the OCC's modified RBP method. Of the 51 sites, 18 rated "excellent," 6 were "good," 16 were "fair," 8 were "poor," and 3 were "very poor."

Table 20. IBI scores for probabilistic sites based on OCC's modified RBP method.

Ecoregion	Site Name	WBID	OCC IBI	% of Reference	Condition
CGP	Black Bear Creek - 015	CCA12-015	19	0.83	Good
CGP	Black Bear Creek - 074	CCA12-074	21	0.91	Excellent
CGP	Bois d'Arc Creek - 031	CCA12-031	23	1.00	Excellent
CGP	Camp Creek - 058	CCA12-058	13	0.57	Poor
CGP	Camp Creek - 068	CCA12-068	15	0.65	Fair
CGP	Canyon View Creek - 044	CCA12-044	9	0.39	Very Poor
CGP	Chilocco Creek - 011	CCA12-011	21	0.91	Excellent
CGP	Chilocco Creek - 039	CCA12-039	23	1.00	Excellent
CGP	Cimarron River - 013	CCA12-013	15	0.65	Fair
CGP	Cimarron River - 016	CCA12-016	15	0.65	Fair
CGP	Cimarron River - 018	CCA12-018	11	0.48	Poor

Ecoregion	Site Name	WBID	OCC IBI	% of Reference	Condition
CGP	Cimarron River - 046	CCA12-046	11	0.48	Poor
CGP	Cimarron River - 050	CCA12-050	11	0.48	Poor
CGP	Cimarron River - 065	CCA12-065	15	0.65	Fair
CGP	Clear Creek - 009	CCA12-009	21	0.91	Excellent
CGP	Council Creek - 079	CCA12-079	23	1.00	Excellent
CGP	Deer Creek - 063	CCA12-063	23	1.00	Excellent
CGP	Deer Creek - 070	CCA12-070	25	1.09	Excellent
CGP	Doe Creek - 026	CCA12-026	7	0.30	Very Poor
CGP	Dry Creek - 022	CCA12-022	17	0.74	Fair
CGP	Kingfisher Creek - 060	CCA12-060	23	1.00	Excellent
CGP	Lariat Creek - 078	CCA12-078	17	0.74	Fair
CGP	Little Turkey Creek - 072	CCA12-072	15	0.65	Fair
CGP	Nash Creek - 084	CCA12-084	19	0.83	Good
CGP	North Canadian River - 042	CCA12-042	21	0.91	Excellent
CGP	North Canadian River - 062	CCA12-062	13	0.57	Poor
CGP	North Canadian River - 080	CCA12-080	27	1.17	Excellent
CGP	Pond Creek - 059	CCA12-059	21	0.91	Excellent
CGP	Red Rock Creek - 047	CCA12-047	21	0.91	Excellent
CGP	Salt Fork Arkansas River - 076	CCA12-076	17	0.74	Fair
CGP	Sand Creek - 035	CCA12-035	23	1.00	Excellent
CGP	Skeleton Creek - 004	CCA12-004	21	0.91	Excellent
CGP	Skeleton Creek - 020	CCA12-020	17	0.74	Fair
CGP	Skeleton Creek - 034	CCA12-034	19	0.83	Good
CGP	Sleeping Bear Creek - 030	CCA12-030	17	0.74	Fair
CGP	Spring Creek - 023	CCA12-023	13	0.57	Poor
CGP	Spring Creek - 081	CCA12-081	23	1.00	Excellent
CGP	Stillwater Creek - 073	CCA12-073	21	0.91	Excellent
CGP	Traders Creek - 077	CCA12-077	15	0.65	Fair
CGP	Turkey Creek - 003	CCA12-003	15	0.65	Fair
CGP	Turkey Creek - 036	CCA12-036	15	0.65	Fair
CGP	Turkey Creek - 082	CCA12-082	21	0.91	Excellent
CGP	Unnamed Creek - 064	CCA12-064	13	0.57	Poor
CGP	Unnamed Trib of Cimarron River - 006	CCA12-006	11	0.48	Poor
CGP	Unnamed Trib of Salt Fork of Arkansas - 043	CCA12-043	15	0.65	Fair
CT	Bug Creek - 052	CCA12-052	21	0.84	Good
CT	Cimarron River - 056	CCA12-056	9	0.36	Very Poor

Ecoregion	Site Name	WBID	OCC IBI	% of Reference	Condition
FH	Salt Creek - 024	CCA12-024	23	0.85	Good
FH	Salt Creek - 040	CCA12-040	23	0.85	Good
SWT	Palo Duro Creek - 057	CCA12-057	15	0.65	Fair
SWT	Turkey Creek - 014	CCA12-014	15	0.65	Fair

Overall, when looking at fish communities, the streams in the Central Great Plains ecoregion were most likely to score in the “excellent” and “fair” range. Combining all of the ecoregions, the fish communities in the fixed sites were 57% “excellent,” 4% “good,” 27% “fair,” 10% “poor,” 2% “very poor;” the fish in the probabilistic sites were 37% “excellent,” 14% “good,” 33% “fair,” 18% “poor,” and 8% “very poor” sites. In the entire basin approximately 55% of the sites have at least good fish communities, 29% have fair communities, and 17% have poor communities relative to high quality sites in the ecoregions of this basin.

Figure 6 shows the IBI score for each fixed site (indicated by a red dot) relative to the mean value for the high quality sites in that ecoregion (indicated by a solid line). Figure 7 shows the probabilistic site scores. The dashed lines in each graph represent +/- two standard deviations of the mean IBI score of the high quality sites in that ecoregion. Any sites with IBI scores equal to or better than the mean of the high quality streams will be examined for possible inclusion in the high quality sites list.

Figure 6. IBI score (fish) for each fixed site plotted by ecoregion. Solid lines indicate the mean value of high quality sites within the ecoregion; dashed lines represent +/- two standard deviations.

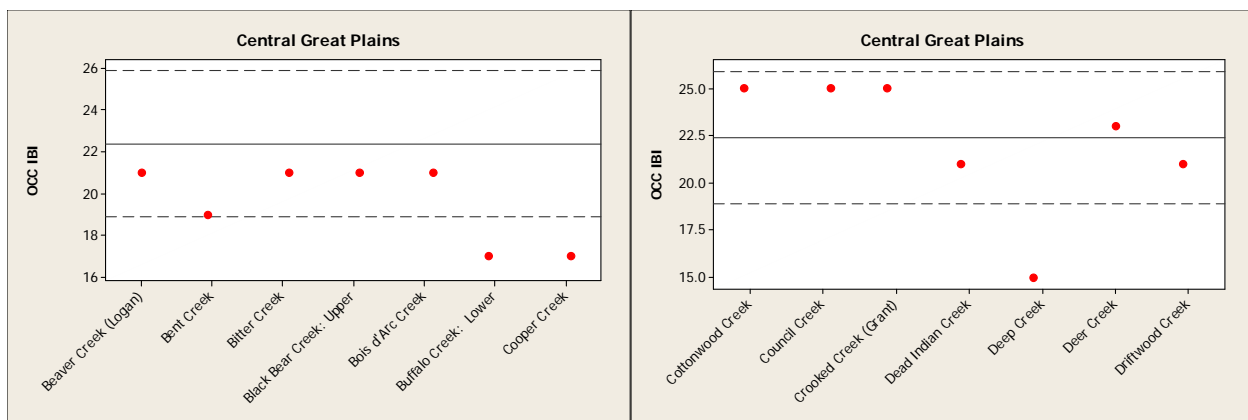


Figure 6 (cont.) IBI score (fish) for each fixed site by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.

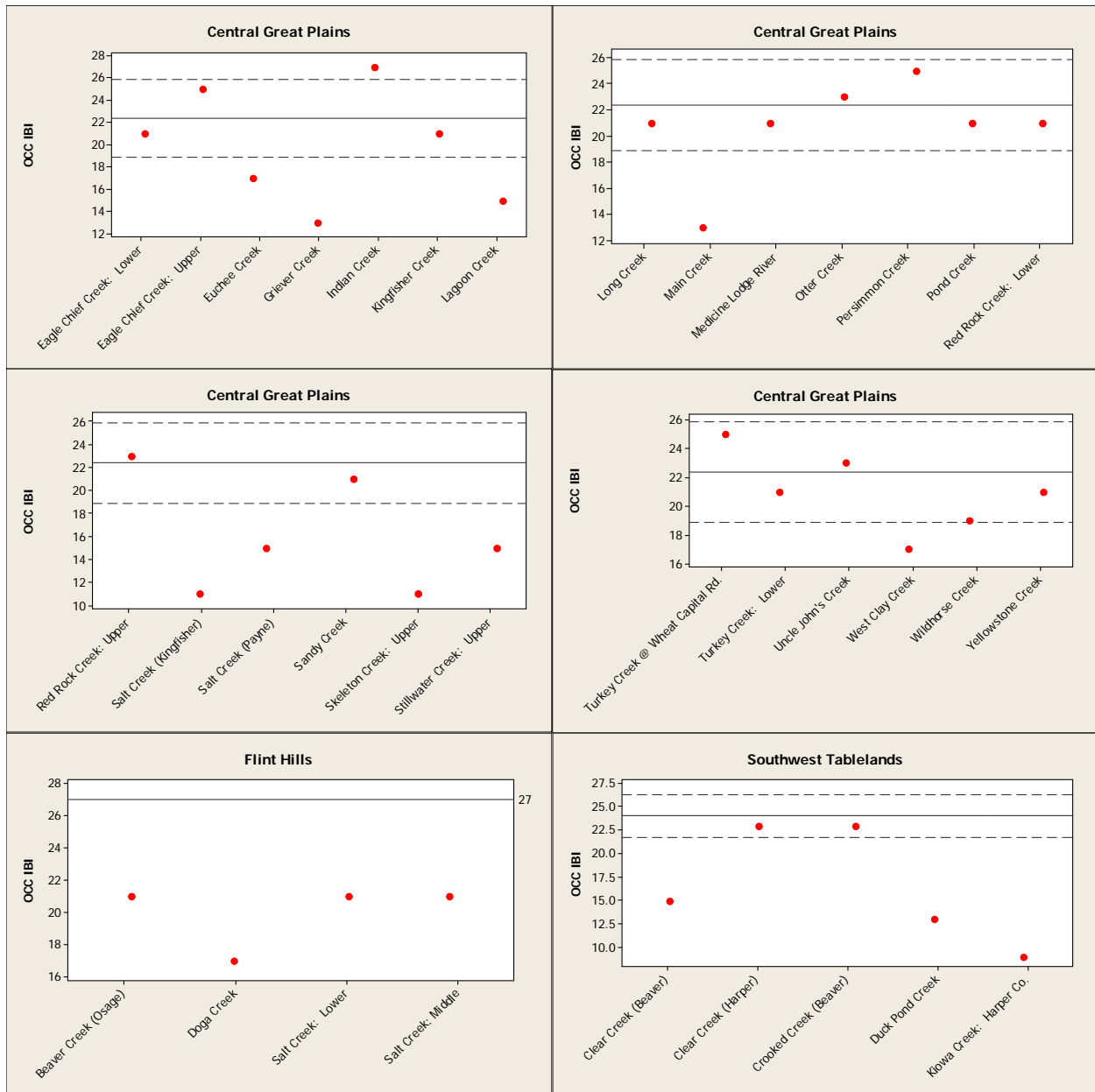


Figure 7. IBI score (fish) for each probabilistic site plotted by ecoregion. Solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.

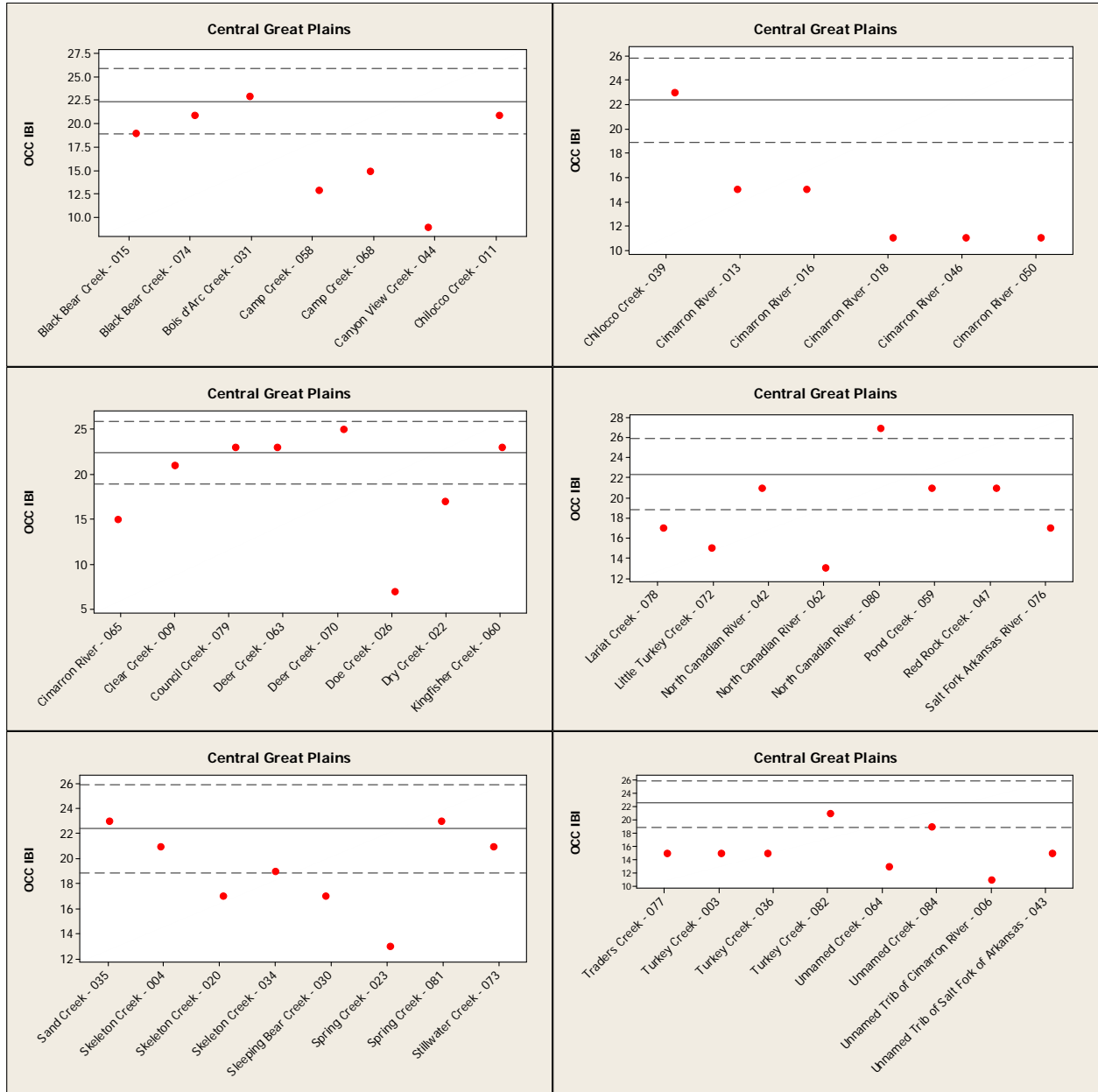
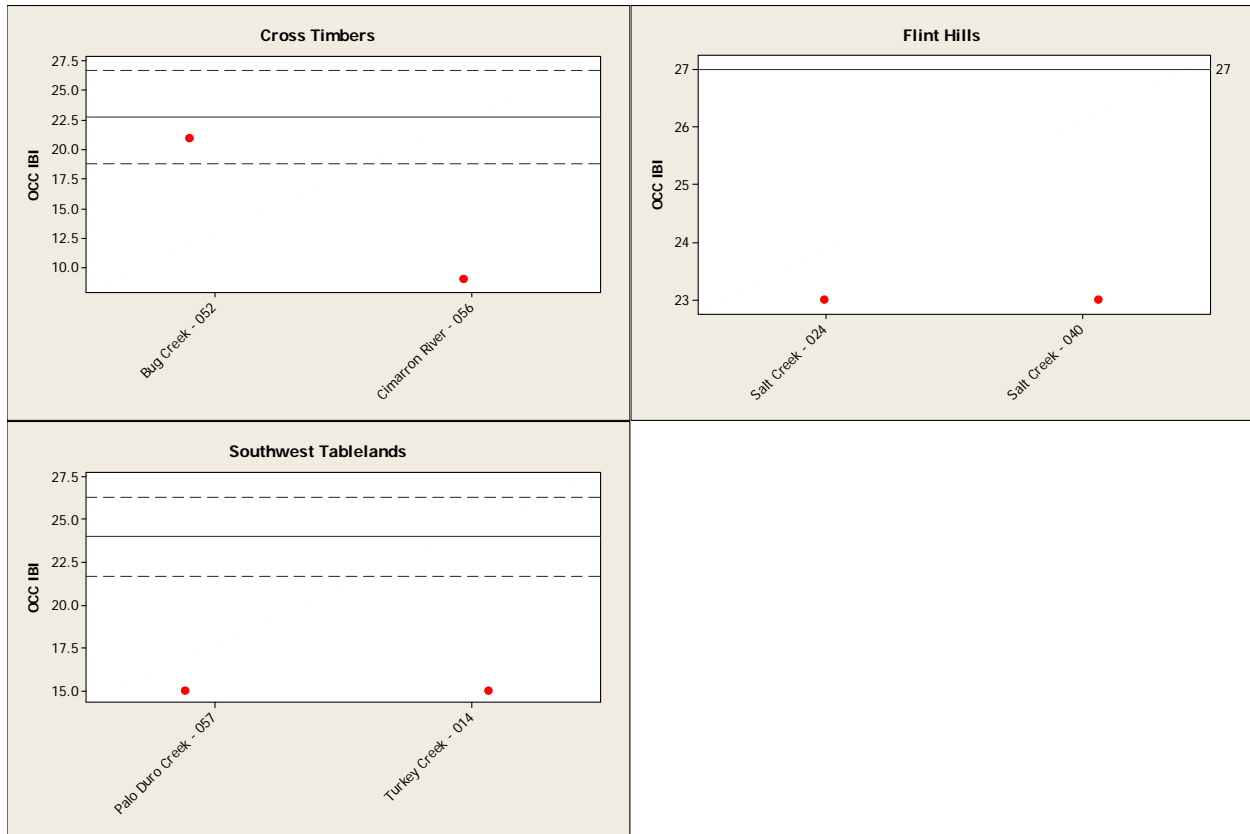


Figure 7 (cont.) IBI score (fish) for each probabilistic site by ecoregion. solid lines indicate the mean value of high quality sites in each ecoregion; dashed lines represent +/- two standard deviations.



Fifty-nine percent of the probabilistic sites and 31% of the fixed sites had significantly lower IBI scores than the high quality sites, as indicated by an IBI score below the bottom dashed line in Figures 6 and 7. These sites were rated “good,” “fair,” or “poor” using the OCC IBI method (Tables 19 – 21). Conditions have been quite dry during this monitoring cycle, so it is possible that this contributed to low fish scores relative to the high quality site scores, which were collected in previous years. There tended to be more variability among the probabilistic sites than among the fixed sites. This could be an artifact of the selection process for the fixed sites; only sites with consistent flow have been maintained as part of the regular rotation, while probabilistic sites were included if there was water present at the time of the initial visit.

Table 21 shows a comparison between fish data collected in cycle 1 (2002-2004), cycle 2 (2007-2009), and cycle 3 (2012-2014) of the rotating basin project in order to examine whether biological conditions have improved, worsened, or remained the same at a particular site. Slightly different metrics were used for the cycle 1 analysis so there are no results for sensitive benthic species and percent of lithophylic spawners shown in Table 21. IBI scores were calculated relative to the same high quality sites data for all cycles, so any change in condition is due only to a change in the rotating basin cycle 3 collection, not to a change in the high quality sites. The fish community remained in the same condition as cycle 2 for 30 of the 50 sites with IBI scores to be compared. Thirteen streams had worse fish community conditions in cycle 3 relative to cycle 2, while seven streams had improved fish communities.

Table 21. Comparison of fish data from fixed sites in cycles one (2002-2004), two (2007-2009) and three (2012-2014) of the Rotating Basin Project.

Modified Ecoregion	Site Name	WBID	Cycle	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	Percent insect. Cyprinid	Percent lithophilic spawners	IBI Score	Percent of Reference	Condition
CGP	Beaver Creek (Logan)	OK620900-03-0230C	1	304	13	0		3	0	0.89	0.14		28	0.78	good
CGP	Beaver Creek (Logan)	OK620900-03-0230C	2	247	14	1	1	4	0	0.92	0.07	0.00	17	0.77	good
CGP	Beaver Creek (Logan)	OK620900-03-0230C	3	582	19	1	1	6	1	0.90	0.08	0.00	21	0.91	excellent
CGP	Bent Creek	OK720500-01-0070D	1	182	6	0		0	1	0.52	0.48		28	0.78	good
CGP	Bent Creek	OK720500-01-0070D	2	283	9	0	1	2	2	0.57	0.43	0.00	19	0.86	good
CGP	Bent Creek	OK720500-01-0070D	3	865	10	0	0	2	1	0.61	0.39	0.00	19	0.83	good
CGP	Bitter Creek	OK621100-00-0100G	1	361	12	0		1	0	0.99	0.00		16	0.42	poor
CGP	Bitter Creek	OK621100-00-0100G	2	218	11	0	0	3	0	1.00	0.00	0.00	15	0.68	fair
CGP	Bitter Creek	OK621100-00-0100G	3	690	17	1	1	5	3	0.94	0.05	0.01	21	0.91	excellent
CGP	Black Bear Creek: Upper	OK621200-03-0010W	1	1032	12	1		4	1	0.99	0.01		34	0.94	excellent
CGP	Black Bear Creek: Upper	OK621200-03-0010W	2	1640	13	0	2	3	2	1.00	0.00	0.00	23	1.04	excellent
CGP	Black Bear Creek: Upper	OK621200-03-0260B	3	341	19	1	1	6	2	0.89	0.10	0.01	21	0.91	excellent
CGP	Bois d'Arc Creek	OK621000-03-0010C	1	52	7	0		2	0	1.00	0.00		26	0.72	fair
CGP	Bois d'Arc Creek	OK621000-03-0010C	2	665	27	2	5	6	3	0.91	0.07	0.03	23	1.04	excellent
CGP	Bois d'Arc Creek	OK621000-03-0010C	3	819	14	2	1	5	2	0.92	0.06	0.02	21	0.91	excellent
CGP	Buffalo Creek: Lower	OK620920-05-0010G	1	1212	26	0		4	2	0.57	0.43		40	1.11	excellent
CGP	Buffalo Creek: Lower	OK620920-05-0010G	2	425	10	0	2	2	1	0.76	0.22	0.02	23	1.04	excellent
CGP	Buffalo Creek: Lower	OK620920-05-0010G	3	327	9	0	1	4	0	0.99	0.01	0.00	17	0.74	fair
CGP	Cooper Creek	OK620910-02-0040C	1	1208	16	0		3	1	0.93	0.19		30	0.83	good
CGP	Cooper Creek	OK620910-02-0040C	2	583	15	0	1	3	1	0.96	0.04	0.00	21	0.95	excellent
CGP	Cooper Creek	OK620910-02-0040C	3	702	14	0	0	4	0	0.94	0.29	0.00	17	0.74	fair
CGP	Cottonwood Creek	OK620910-04-0010D	1	224	12	0		2	0	1.00	0.12		24	0.67	fair
CGP	Cottonwood Creek	OK620910-04-0010D	2	154	14	0	1	4	1	0.97	0.03	0.00	21	0.95	excellent
CGP	Cottonwood Creek	OK620910-04-0010E	3	557	14	0	1	3	1	1.00	0.64	0.00	25	1.09	excellent
CGP	Council Creek	OK620900-02-0050H	1	235	14	0		5	1	0.84	0.13		30	0.83	good
CGP	Council Creek	OK620900-02-0050H	2	219	11	0	0	5	0	1.00	0.00	0.00	15	0.68	fair
CGP	Council Creek	OK620900-02-0050H	3	440	20	0	2	5	1	0.98	0.24	0.00	25	1.09	excellent
CGP	Crooked Creek (Grant)	OK621000-06-0010C	1	255	18	1		2	1	0.84	0.15		32	0.89	good
CGP	Crooked Creek (Grant)	OK621000-06-0010C	2	1131	19	0	1	4	1	0.75	0.19	0.00	21	0.95	excellent
CGP	Crooked Creek (Grant)	OK621000-06-0010C	3	975	16	0	1	3	1	0.54	0.50	0.00	25	1.09	excellent

Modified Ecoregion	Site Name	WBID	Cycle	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	Percent insect. Cyprinid	Percent lithophilic spawners	IBI Score	Percent of Reference	Condition
CGP	Dead Indian Creek	OK620910-05-0080D	1	1635	13	0		3	1	0.70	0.30		32	0.89	good
CGP	Dead Indian Creek	OK620910-05-0080D	2	819	13	0	1	5	1	0.85	0.15	0.00	21	0.95	excellent
CGP	Dead Indian Creek	OK620910-05-0080A	3	853	21	0	1	5	1	0.91	0.13	0.00	21	0.91	excellent
CGP	Deep Creek	OK620910-02-0250C	1	1555	17	0		5	1	0.97	0.22		34	0.94	excellent
CGP	Deep Creek	OK620910-02-0250C	2	451	17	0	1	6	1	0.96	0.06	0.00	21	0.95	excellent
CGP	Deep Creek	OK620910-02-0250C	3	455	19	0	0	5	0	1.00	0.01	0.00	15	0.65	fair
CGP	Deer Creek	OK621000-04-0010D	1	1364	18	2		5	1	0.90	0.09		36	1.00	excellent
CGP	Deer Creek	OK621000-04-0010D	2	467	19	2	4	5	3	0.87	0.07	0.00	23	1.04	excellent
CGP	Deer Creek	OK621000-04-0010D	3	3371	27	2	2	8	4	0.82	0.16	0.02	23	1.00	excellent
CGP	Driftwood Creek	OK621010-03-0030C	1	808	17	0		4	1	0.69	0.31		34	0.94	excellent
CGP	Driftwood Creek	OK621010-03-0030C	2	519	20	0	2	5	1	0.82	0.10	0.01	23	1.04	excellent
CGP	Driftwood Creek	OK621010-03-0030C	3	1374	17	0	1	4	1	0.83	0.10	0.00	21	0.91	excellent
CGP	Eagle Chief Creek: Lower	OK620920-04-0010C	1	397	14	0		3	1	0.96	0.11		28	0.78	good
CGP	Eagle Chief Creek: Lower	OK620920-04-0010C	2	643	12	0	0	4	0	0.89	0.11	0.00	15	0.68	fair
CGP	Eagle Chief Creek: Lower	OK620920-04-0010C	3	569	18	0	1	5	1	0.95	0.08	0.00	21	0.91	excellent
CGP	Eagle Chief Creek: Upper	OK620920-04-0010G	1	518	14	0		3	1	0.56	0.53		40	1.11	excellent
CGP	Eagle Chief Creek: Upper	OK620920-04-0010G	2	515	11	0	1	3	1	0.95	0.06	0.00	21	0.95	excellent
CGP	Eagle Chief Creek: Upper	OK620920-04-0010G	3	2396	14	0	1	3	2	0.51	0.49	0.00	25	1.09	excellent
CGP	Euchee Creek	OK620900-01-0290D	1	671	15	0		7	1	0.99	0.01		32	0.89	good
CGP	Euchee Creek	OK620900-01-0290D	2	115	16	0	0	5	0	0.58	0.10	0.00	15	0.68	fair
CGP	Euchee Creek	OK620900-01-0290D	3	375	16	0	1	6	0	0.96	0.03	0.00	17	0.74	fair
CGP	Griever Creek	OK620920-01-0130G	1	377	11	0		5	1	0.72	0.28		30	0.83	good
CGP	Griever Creek	OK620920-01-0130G	2	590	11	0	2	3	1	0.81	0.20	0.00	23	1.04	excellent
CGP	Griever Creek	OK620920-01-0130G	3	1056	8	0	0	0	0	1.00	0.90	0.00	13	0.57	poor
CGP	Indian Creek	OK620910-02-0310C	1	501	10	0		1	0	0.75	0.71		30	0.83	good
CGP	Indian Creek	OK620910-02-0310C	2	919	17	0	2	4	1	0.61	0.38	0.22	27	1.22	excellent
CGP	Indian Creek	OK620910-02-0310C	3	1572	21	0	2	6	1	0.68	0.37	0.20	27	1.17	excellent
CGP	Kingfisher Creek	OK620910-05-0010J	1	665	12	1		2	1	0.97	0.05		34	0.94	excellent
CGP	Kingfisher Creek	OK620910-05-0010J	2	349	15	0	1	3	1	0.95	0.05	0.00	21	0.95	excellent
CGP	Kingfisher Creek	OK620910-05-0010J	3	1662	18	0	1	4	1	0.84	0.17	0.00	21	0.91	excellent
CGP	Lagoon Creek	OK620900-01-0180J	1	210	13	1		5	1	0.81	0.05		34	0.94	excellent
CGP	Lagoon Creek	OK620900-01-0180J	2	294	15	1	1	8	0	0.96	0.00	0.01	17	0.77	good
CGP	Lagoon Creek	OK620900-01-0180J	3	361	17	1	0	8	0	0.97	0.00	0.01	15	0.65	fair

Modified Ecoregion	Site Name	WBID	Cycle	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	Percent insect. Cyprinid	Percent lithophytic spawners	IBI Score	Percent of Reference	Condition
CGP	Long Creek	OK620920-02-0080D	1	440	12	0		3	1	0.49	0.43		38	1.06	excellent
CGP	Long Creek	OK620920-02-0080D	2	588	16	0	2	6	1	0.75	0.17	0.08	23	1.04	excellent
CGP	Long Creek	OK620920-02-0080D	3	269	10	0	0	2	1	0.59	0.45	0.00	21	0.91	excellent
CGP	Main Creek	OK620920-01-0180F	1	204	10	0		1	1	0.64	0.42		30	0.83	good
CGP	Main Creek	OK620920-01-0180F	2	229	8	0	1	1	1	0.55	0.46	0.00	19	0.86	good
CGP	Main Creek	OK620920-01-0180F	3	459	6	0	0	0	0	0.34	0.66	0.00	13	0.57	poor
CGP	Medicine Lodge River	OK621010-03-0010D	1	787	9	0		0	1	0.87	0.18		28	0.78	good
CGP	Medicine Lodge River	OK621010-03-0010D	2	609	18	0	1	4	1	0.82	0.13	0.00	21	0.95	excellent
CGP	Medicine Lodge River	OK621010-03-0010D	3	1914	16	0	2	2	1	0.93	0.06	0.00	21	0.91	excellent
CGP	Otter Creek	OK620910-03-0040C	1	1043	21	1		5	1	0.93	0.07		36	1.00	excellent
CGP	Otter Creek	OK620910-03-0040C	2	725	15	0	1	3	1	0.98	0.17	0.00	21	0.95	excellent
CGP	Otter Creek	OK620910-03-0040C	3	660	21	1	2	5	1	0.88	0.11	0.00	23	1.00	excellent
CGP	Persimmon Creek	OK720500-01-0150G	1	375	14	0		3	1	0.79	0.21		34	0.94	excellent
CGP	Persimmon Creek	OK720500-01-0150G	2	852	17	0	1	4	1	0.80	0.20	0.00	21	0.95	excellent
CGP	Persimmon Creek	OK720500-01-0150G	3	643	11	0	2	4	1	0.63	0.37	0.00	25	1.09	excellent
CGP	Pond Creek	OK621000-05-0010D	1	233	12	0		2	0	0.31	0.69		32	0.89	good
CGP	Pond Creek	OK621000-05-0010D	2	367	18	0	1	5	1	0.84	0.14	0.00	21	0.95	excellent
CGP	Pond Creek	OK621000-05-0010D	3	1417	21	1	1	6	1	0.85	0.16	0.00	21	0.91	excellent
CGP	Red Rock Creek: Lower	OK621200-05-0010K	1	226	14	1		5	1	0.83	0.14		40	1.11	excellent
CGP	Red Rock Creek: Lower	OK621200-05-0010K	2	152	18	1	3	6	3	0.93	0.04	0.02	23	1.04	excellent
CGP	Red Rock Creek: Lower	OK621200-05-0010K	3	478	18	1	1	5	3	0.93	0.03	0.04	21	0.91	excellent
CGP	Red Rock Creek: Upper	OK621200-05-0160G	1	384	9	1		4	1	0.97	0.01		34	0.94	excellent
CGP	Red Rock Creek: Upper	OK621200-05-0160G	3	752	15	1	1	5	2	0.65	0.34	0.00	23	1.00	excellent
CGP	Salt Creek (Kingfisher)	OK620910-02-0100D	1	674	29	3		7	2	0.67	0.14		38	1.06	excellent
CGP	Salt Creek (Kingfisher)	OK620910-02-0100D	2	337	11	0	1	3	1	0.63	0.40	0.00	23	1.04	excellent
CGP	Salt Creek (Kingfisher)	OK620910-02-0100D	3	654	5	0	0	0	0	0.62	0.29	0.00	11	0.48	poor
CGP	Salt Creek (Payne)	OK620900-02-0020D	1	1087	13	0		2	0	0.65	0.03		28	0.78	good
CGP	Salt Creek (Payne)	OK620900-02-0020D	2	64	13	0	0	6	0	0.81	0.02	0.00	15	0.68	fair
CGP	Salt Creek (Payne)	OK620900-02-0020D	3	465	22	1	0	9	0	0.97	0.03	0.00	15	0.65	fair
CGP	Sandy Creek	OK621010-02-0010D	1	733	8	0		2	0	0.82	0.18		22	0.61	poor
CGP	Sandy Creek	OK621010-02-0010D	2	624	15	0	1	3	1	0.91	0.10	0.00	21	0.95	excellent
CGP	Sandy Creek	OK621010-02-0010D	3	1124	19	0	1	6	2	0.86	0.13	0.00	21	0.91	excellent

Modified Ecoregion	Site Name	WBID	Cycle	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	Percent insect. Cyprinid	Percent lithophylic spawners	IBI Score	Percent of Reference	Condition
CGP	Skeleton Creek: Upper	OK620910-03-0010S	1	597	16	0		3	0	0.93	0.23		30	0.83	good
CGP	Skeleton Creek: Upper	OK620910-03-0010S	2	120	11	0	1	3	1	0.96	0.20	0.00	21	0.95	excellent
CGP	Skeleton Creek: Upper	OK620910-03-0010S	3	266	12	0	0	1	0	1.00	0.12	0.00	11	0.48	poor
CGP	Stillwater Creek: Upper	OK620900-04-0070T	1	312	18	0		5	1	0.99	0.00		32	0.89	good
CGP	Stillwater Creek: Upper	OK620900-04-0070T	2	76	10	0	0	4	0	0.99	0.00	0.00	15	0.68	fair
CGP	Stillwater Creek: Upper	OK620900-04-0070T	3	250	12	0	0	6	0	1.00	0.02	0.00	15	0.65	fair
CGP	Turkey Creek: Lower	OK620910-06-0010B	1	400	14	0		5	0	1.00	0.02		26	0.72	fair
CGP	Turkey Creek: Lower	OK620910-06-0010B	2	906	21	0	1	3	2	0.98	0.03	0.00	21	0.95	excellent
CGP	Turkey Creek: Lower	OK620910-06-0010B	3	479	18	0	1	3	1	0.99	0.13	0.00	21	0.91	excellent
CGP	Turkey Creek: Upper	OK620910-06-0010T	1	1217	14	0		3	1	0.57	0.43		32	0.89	good
CGP	Turkey Creek: Upper	OK620910-06-0010T	2	413	12	0	1	2	1	0.90	0.10	0.00	19	0.86	good
CGP	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	3	5912	25	0	2	5	1	0.72	0.29	0.00	25	1.09	excellent
CGP	Uncle John's Creek	OK620910-05-0030C	1	1134	11	0		2	1	0.87	0.13		30	0.83	good
CGP	Uncle John's Creek	OK620910-05-0030C	2	283	11	0	1	5	1	0.95	0.05	0.00	21	0.95	excellent
CGP	Uncle John's Creek	OK620910-05-0030C	3	952	13	0	1	3	1	0.78	0.22	0.00	23	1.00	excellent
CGP	West Clay Creek	OK621010-01-0090R	1	330	8	0		1	0	0.86	0.14		22	0.61	poor
CGP	West Clay Creek	OK621010-01-0090R	2	442	14	0	0	4	0	0.77	0.19	0.00	15	0.68	fair
CGP	West Clay Creek	OK621010-01-0130R	3	1299	8	0	1	2	1	0.99	0.00	0.00	17	0.74	fair
CGP	Wildhorse Creek	OK621000-02-0040F	1	210	11	0		3	1	0.93	0.05		30	0.83	good
CGP	Wildhorse Creek	OK621000-02-0040F	3	1915	15	0	0	3	1	0.80	0.17	0.00	19	0.83	good
CGP	Yellowstone Creek	OK621010-01-0270C	1	1040	11	0		3	1	0.48	0.45		34	0.94	excellent
CGP	Yellowstone Creek	OK621010-01-0270C	2	417	11	0	1	4	1	0.68	0.32	0.00	23	1.04	excellent
CGP	Yellowstone Creek	OK621010-01-0270C	3	1280	8	0	2	2	1	0.63	0.33	0.03	21	0.91	excellent
FH	Beaver Creek (Osage)	OK621210-00-0050L	1	144	18	2		5	1	0.89	0.03		24	0.63	fair
FH	Beaver Creek (Osage)	OK621210-00-0050L	2	680	29	2	4	7	3	0.83	0.04	0.07	21	0.78	good
FH	Beaver Creek (Osage)	OK621210-00-0050L	3	400	27	3	2	5	2	0.75	0.06	0.10	21	0.78	fair
FH	Doga Creek	OK621200-02-0020C	1	565	24	0		6	1	0.80	0.04		36	1.00	excellent
FH	Doga Creek	OK621200-02-0020C	2	441	23	1	1	8	0	0.75	0.01	0.06	15	0.56	poor
FH	Doga Creek	OK621200-02-0020C	3	495	19	0	1	6	1	0.87	0.12	0.00	17	0.63	fair
FH	Salt Creek: Lower	OK621200-04-0010F	1	244	24	3		7	1	0.61	0.09		34	0.89	good
FH	Salt Creek: Lower	OK621200-04-0010F	2	526	24	3	5	6	2	0.56	0.05	0.14	23	0.85	good
FH	Salt Creek: Lower	OK621200-04-0010F	3	1058	23	4	2	5	3	0.88	0.06	0.06	21	0.78	fair

Modified Ecoregion	Site Name	WBID	Cycle	Total Number	Total Spp	Darter Spp	Sensitive Benthic Spp	Sunfish Spp	Intolerant Spp	Percent tolerant	Percent insect. Cyprinid	Percent lithophylic spawners	IBI Score	Percent of Reference	Condition
FH	Salt Creek: Upper	OK621200-04-0010P	1	143	16	0		6	1	0.63	0.01		24	0.63	fair
FH	Salt Creek: Upper	OK621200-04-0010P	2	123	20	1	1	7	0	0.80	0.01	0.17	15	0.56	poor
FH	Salt Creek: Middle	OK621200-04-0010K	3	366	19	3	3	5	3	0.52	0.03	0.12	21	0.78	fair
SWT	Clear Creek (Beaver)	OK720500-02-0300F	1	98	9	0		4	0	0.99	0.00		34	0.85	good
SWT	Clear Creek (Beaver)	OK720500-02-0300F	2	276	9	0	0	4	0	0.80	0.00	0.00	15	0.63	fair
SWT	Clear Creek (Beaver)	OK720500-02-0300F	3	775	11	0	0	6	0	0.80	0.00	0.01	15	0.65	fair
SWT	Clear Creek (Harper)	OK720500-02-0070G	1	317	10	0		3	1	0.90	0.10		40	1.00	excellent
SWT	Clear Creek (Harper)	OK720500-02-0070G	2	144	9	0	1	4	1	0.92	0.08	0.00	23	0.96	excellent
SWT	Clear Creek (Harper)	OK720500-02-0070G	3	368	10	0	1	4	1	0.94	0.06	0.00	23	1.00	excellent
SWT	Crooked Creek (Beaver)	OK620930-00-0100G	1	616	8	1		0	2	0.87	0.12		34	0.85	good
SWT	Crooked Creek (Beaver)	OK620930-00-0100G	2	2226	19	1	2	5	2	0.50	0.20	0.30	27	1.13	excellent
SWT	Crooked Creek (Beaver)	OK620930-00-0100G	3	116	11	1	1	5	1	0.94	0.00	0.04	23	1.00	excellent
SWT	Duck Pond Creek	OK720500-02-0250F	1	1016	7	0		4	0	1.00	0.00		34	0.85	good
SWT	Duck Pond Creek	OK720500-02-0250F	2	478	9	0	0	5	0	1.00	0.00	0.00	15	0.63	fair
SWT	Duck Pond Creek	OK720500-02-0250F	3	201	7	0	0	4	0	1.00	0.00	0.00	13	0.57	poor
SWT	Kiowa Creek: Harper Co.	OK720500-02-0130C	1	575	9	0		1	1	0.89	0.11		30	0.75	fair
SWT	Kiowa Creek: Harper Co.	OK720500-02-0130C	2	1320	16	0	1	5	1	0.57	0.43	0.00	25	1.04	excellent
SWT	Kiowa Creek: Harper Co.	OK720500-02-0130C	3	402	5	0	0	0	0	0.98	0.02	0.00	9	0.39	very poor

3.2.3 Macroinvertebrate Collections

The complete macroinvertebrate dataset, including species and numbers captured per site, can be found in Appendix C. Macroinvertebrates were collected for most sites at least once during the project period. Lack of flow during the collections periods prevented collection of all planned samples over the cycle. Due to contracting issues, not all of the results were back from the taxonomist in time for inclusion in this report. The missing results will be added as an addendum in the future.

Tables 22 and 23 present the mean values, by season and sample type, for each metric at each site for the two-year cycle 3 monitoring period. Riffle samples were collected at most sites and, generally, best reflect the macroinvertebrate community as a single habitat (Plafkin et al. 1989). Summer samples, as opposed to winter samples, represent the harshest time for macroinvertebrates; thus their use constitutes a more conservative approach in assessing the communities.

Table 22. Macroinvertebrate metric values determined for each fixed monitoring site, averaged per season and habitat. NI = non-impaired, SI = slightly impaired, MI = moderately impaired, Svl = severely impaired.

Site Name	WBID	# of Samples	Habitat	Season	Total Species	EPT Taxa	Percent EPT	Shannon Diversity	HBI	Percent Dominant 2 Taxa	Total Points	% of Reference	Condition	Average Condition
Bent Creek	OK720500-01-0070D	1	Riffle	S	22	5	0.37	2.65	5.82	0.33	30	0.94	NI	NI
		2	SVeg	S	25	4	0.24	2.73	5.94	0.31	32	1.07	NI	
		1	SVeg	W	10	3	0.08	0.84	5.81	0.88	18	0.82	NI	
		2	Woody	S	26	6	0.32	2.44	6.23	0.46	32	1.00	NI	
		1	Woody	W	7	1	0.04	0.51	6.06	0.92	8	0.36	MI	
Bitter Creek	OK621100-00-0100G	1	Woody	S	10	3	0.23	1.33	6.76	0.78	14	0.44	MI	MI
Black Bear Creek: Upper	OK621200-03-0260B	1	Woody	S	14	3	0.12	2.01	6.40	0.51	22	0.69	SI	SI
Bois d'Arc Creek	OK621000-03-0010C	1	Riffle	S	18	5	0.58	1.87	4.97	0.62	28	0.88	NI	SI
		1	Riffle	W	9	0	0.00	1.26	5.08	0.84	10	0.45	MI	
Clear Creek	OK720500-02-0070G	2	SVeg	S	26	5	0.28	2.91	5.72	0.24	32	1.00	NI	NI
		1	SVeg	W	12	4	0.83	1.37	4.24	0.81	16	0.57	SI	
Cooper Creek	OK620910-02-0040C	1	Riffle	S	10	4	0.23	1.75	6.09	0.62	20	0.63	SI	NI
		1	Riffle	W	9	3	0.29	1.87	5.58	0.50	28	1.27	NI	
		1	SVeg	W	16	4	0.17	2.09	6.03	0.52	28	1.27	NI	
Cottonwood Creek	OK620910-04-0010E	1	Riffle	S	12	5	0.88	1.82	4.39	0.63	26	0.81	NI	NI
		1	Riffle	W	16	3	0.42	1.88	5.34	0.63	30	1.36	NI	
		1	Woody	S	9	5	0.91	1.54	4.36	0.70	26	0.81	NI	
		1	Woody	W	10	5	0.35	1.50	5.48	0.66	28	1.27	NI	
Crooked Creek	OK621000-06-0010C	1	Riffle	S	13	5	0.40	2.20	6.11	0.39	28	0.88	NI	NI
Dead Indian Creek	OK620910-05-0080A	2	Riffle	S	16	5	0.38	2.04	6.05	0.53	28	0.88	SI	SI
		1	Riffle	W	12	1	0.24	1.76	6.19	0.58	24	1.09	NI	
		1	Woody	S	12	3	0.14	1.68	6.60	0.68	18	0.56	SI	
Deep Creek	OK620910-02-0250C	2	Riffle	S	17	6	0.58	2.28	5.08	0.40	32	1.00	NI	NI
		1	Riffle	W	14	1	0.13	2.18	6.73	0.44	20	0.91	NI	
		1	SVeg	W	11	0	0.02	1.79	7.57	0.55	18	0.82	NI	
		1	Woody	S	20	5	0.29	2.13	6.76	0.49	28	0.88	NI	
Deer Creek	OK621000-04-0010D	1	Riffle	S	16	4	0.43	1.78	5.80	0.68	24	0.75	SI	SI
		1	Woody	S	9	2	0.34	1.04	6.52	0.91	16	0.50	MI	
		1	Woody	W	16	2	0.11	2.08	7.04	0.56	20	0.91	NI	
Eagle Chief Creek: Lower	OK620920-04-0010C	1	Riffle	S	17	5	0.45	2.20	6.00	0.48	28	0.88	NI	NI
		1	SVeg	S	24	6	0.29	2.86	6.18	0.20	32	1.07	NI	
		2	Woody	S	21	6	0.41	2.41	5.98	0.42	32	1.00	NI	
		1	Woody	W	8	1	0.01	0.74	6.08	0.89	10	0.45	MI	

Site Name	WBID	# of Samples	Habitat	Season	Total Species	EPT Taxa	Percent EPT	Shannon Diversity	HBI	Percent Dominant 2 Taxa	Total Points	% of Reference	Condition	Average Condition
Eagle Chief Creek: Upper	OK620920-04-0010G	1	SVeg	S	21	5	0.38	2.62	5.87	0.35	34	1.13	NI	NI
		2	Woody	S	22	6	0.41	2.52	5.91	0.42	34	1.06	NI	
Griever Creek	OK620920-01-0130G	1	Riffle	W	11	2	0.25	1.24	5.66	0.82	18	0.82	NI	NI
Indian Creek	OK620910-02-0310C	1	Riffle	S	13	5	0.59	1.85	5.13	0.55	30	0.94	NI	NI
		1	Riffle	W	9	2	0.19	1.14	5.41	0.84	14	0.64	SI	
		2	SVeg	S	24	6	0.19	2.45	6.57	0.44	28	0.93	NI	
		1	SVeg	W	18	2	0.21	2.17	6.13	0.53	24	1.09	NI	
		1	Woody	S	19	6	0.24	2.08	6.39	0.57	30	0.94	NI	
Kingfisher Creek	OK620910-05-0010J	1	Riffle	S	13	1	0.27	1.96	6.03	0.51	22	0.69	SI	NI
		1	Riffle	W	8	1	0.63	1.24	5.06	0.77	18	0.82	NI	
		1	SVeg	S	17	5	0.14	2.09	7.00	0.55	28	0.93	NI	
Kiowa Creek: Harper Co.	OK720500-02-0130C	1	SVeg	S	7	3	0.13	0.66	7.52	0.91	8	0.25	MI	SI
		1	SVeg	W	13	6	0.42	1.51	5.32	0.79	28	1.00	NI	
Long Creek	OK620920-02-0080D	2	Riffle	S	21	3	0.18	2.31	6.61	0.48	18	0.56	SI	SI
		1	SVeg	S	18	3	0.47	2.02	6.60	0.59	30	1.00	NI	
Main Creek	OK620920-01-0180F	1	Riffle	S	17	5	0.33	2.47	4.08	0.28	30	0.94	NI	NI
		2	SVeg	S	22	5	0.38	2.53	5.23	0.39	34	1.13	NI	
		1	SVeg	W	16	3	0.16	1.56	6.18	0.75	24	1.09	NI	
Medicine Lodge River	OK621010-03-0010D	1	SVeg	S	17	4	0.41	2.00	5.55	0.63	30	1.00	NI	NI
		2	Woody	S	17	5	0.21	1.81	5.88	0.65	28	0.88	NI	
		1	Woody	W	8	2	0.02	0.47	5.84	0.94	10	0.45	MI	
Persimmon Creek	OK720500-01-0150G	2	SVeg	S	24	6	0.42	2.56	5.28	0.39	34	1.13	NI	NI
		1	SVeg	W	10	3	0.05	0.61	5.94	0.90	18	0.82	NI	
		1	Woody	S	22	5	0.22	2.35	4.86	0.49	30	0.94	NI	
Pond Creek	OK621000-05-0010D	2	Woody	S	13	1	0.03	0.87	7.72	0.86	10	0.31	MI	MI
		1	Woody	W	5	0	0.00	0.92	6.74	0.92	8	0.36	MI	
Red Rock Creek: Lower	OK621200-05-0010K	1	Riffle	S	14	5	0.65	1.45	4.80	0.73	24	0.75	SI	SI
		1	Woody	S	8	3	0.51	1.28	5.68	0.84	14	0.44	MI	
Red Rock Creek: Upper	OK621200-05-0160G	1	Riffle	S	10	3	0.57	1.60	4.66	0.64	22	0.69	SI	SI
		1	Woody	S	12	2	0.22	1.64	6.28	0.65	22	0.69	SI	
Salt Creek	OK620910-02-0100D	2	Riffle	S	6	0	0.00	1.04	7.15	0.88	2	0.06	Svl	MI
		1	Riffle	W	5	0	0.00	0.91	6.81	0.94	4	0.18	Svl	
		1	SVeg	S	10	0	0.00	1.20	6.15	0.80	12	0.40	MI	
		2	Woody	S	9	0	0.00	0.72	6.20	0.90	10	0.31	MI	
Salt Creek: Lower	OK621200-04-0010F	2	Riffle	S	14	7	0.84	1.59	4.75	0.67	26	0.81	SI	SI

Site Name	WBID	# of Samples	Habitat	Season	Total Species	EPT Taxa	Percent EPT	Shannon Diversity	HBI	Percent Dominant 2 Taxa	Total Points	% of Reference	Condition	Average Condition
Salt Creek: Middle	OK621200-04-0010K	1	Riffle	S	12	8	0.84	1.46	4.70	0.72	22	0.69	SI	SI
Sandy Creek	OK621010-02-0010D	1	Riffle	S	16	4	0.51	1.84	5.38	0.65	24	0.75	SI	SI
Skeleton Creek: Upper	OK620910-03-0010S	1	Woody	S	11	4	0.19	0.92	7.17	0.89	12	0.38	MI	SI
		1	Woody	W	9	2	0.37	1.49	5.55	0.65	20	0.91	NI	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	2	Riffle	S	18	6	0.18	1.79	6.66	0.63	22	0.69	SI	SI
		1	Riffle	W	15	0	0.51	1.76	5.53	0.69	24	1.09	NI	
		1	SVeg	S	28	5	0.11	2.64	7.26	0.42	28	0.93	NI	
		1	Woody	S	13	2	0.11	1.21	7.26	0.80	12	0.38	MI	
Turkey Creek: Lower	OK620910-06-0010B	1	Woody	S	14	3	0.05	1.16	7.66	0.85	10	0.31	MI	MI
		1	Woody	W	7	0	0.01	1.00	6.90	0.93	8	0.36	MI	
Uncle John's Creek	OK620910-05-0030C	2	Riffle	S	14	5	0.75	1.86	5.86	0.61	26	0.81	NI	NI
		1	Woody	S	16	6	0.24	1.79	6.96	0.63	26	0.81	NI	
		1	Woody	W	14	4	0.18	1.68	6.00	0.69	26	1.18	NI	
West Clay Creek	OK621010-01-0130R	1	Riffle	S	9	0	0.00	1.42	7.34	0.72	6	0.19	Svl	Svl
Wildhorse Creek	OK621000-02-0040F	1	Riffle	S	11	4	0.34	1.44	6.54	0.78	16	0.50	MI	MI

Most fixed sites had either non-impaired or slightly impaired macroinvertebrate communities overall (when averaging the scores across sample types). The following sites were moderately impaired overall: Bitter, Pond, Salt, Turkey: Lower, and Wildhorse Creeks. West Clay Creek was severely impaired. Results indicate fixed sites had non-impaired macroinvertebrate communities in 43% of the sites, slightly impaired communities in 40% of the sites, moderately impaired communities in 14% of the sites, and severely impaired communities in 3% of the sites.

The overall results for the probabilistic sites are shown in Table 23. Most of the probabilistic sites were scored using only one macroinvertebrate collection. Most of the seventeen sites indicated non-impaired (53%) or slightly impaired communities (29%). Three sites (18%) indicated moderately impaired macroinvertebrate communities: Camp (058), Lariat (078) and Pond (059) Creeks. None of the probabilistic sites indicated severely impaired communities, though collections were not made in many sites because of the drought and results from some of the collections are not yet back from the taxonomist.

Table 23. Macroinvertebrate metric values determined for each probabilistic monitoring site, averaged per season and habitat. NI = non-impaired, SI = slightly impaired, MI = moderately impaired.

Site Name	WBID	# of Samples	Habitat	Season	Total Species	EPT Taxa	Percent EPT	Shannon Diversity	HBI	Percent dominant 2 taxa	Total Points	% of Reference	Condition	Average Condition
Camp Creek - 058	CCA12-058	1	SVeg	S	11	2	0.10	1.34	1.34	0.77	14	0.47	MI	MI
Deer Creek - 063	CCA12-063	1	Riffle	S	18	5	0.58	1.91	5.17	0.64	28	0.88	NI	SI
		1	Woody	S	16	2	0.07	1.66	7.35	0.70	16	0.50	MI	
Lariat Creek - 078	CCA12-078	1	SVeg	S	16	2	0.15	1.30	1.30	0.81	14	0.47	MI	MI
Medicine Lodge River - 007	CCA12-007	1	SVeg	S	16	8	0.58	1.84	1.84	0.65	30	1.00	NI	NI
		1	Woody	S	19	7	0.54	1.96	6.48	0.58	32	1.00	NI	
North Canadian River - 042	CCA12-042	1	Woody	S	13	6	0.58	1.72	6.44	0.62	30	0.94	NI	NI
North Canadian River - 062	CCA12-062	1	SVeg	S	9	1	0.35	1.61	1.61	0.64	20	0.67	SI	SI
		1	Woody	S	18	2	0.20	2.15	6.59	0.45	22	0.69	SI	
North Canadian River - 080	CCA12-080	1	SVeg	S	18	5	0.38	2.12	2.12	0.56	32	1.07	NI	NI
Pond Creek - 059	CCA12-059	1	Woody	S	8	1	0.66	1.21	5.18	0.83	14	0.44	MI	MI
Salt Creek - 024	CCA12-024	1	Riffle	S	18	7	0.72	2.01	4.88	0.56	28	0.88	NI	NI
Salt Fork Arkansas River - 076	CCA12-076	1	SVeg	S	21	7	0.71	2.49	2.49	0.32	32	1.07	NI	NI
		1	Woody	S	16	8	0.59	2.23	5.24	0.49	32	1.00	NI	
Skeleton Creek - 004	CCA12-004	1	SVeg	S	13	3	0.21	1.67	1.67	0.64	26	0.87	NI	NI
		1	Woody	S	13	4	0.32	1.52	6.44	0.71	24	0.75	SI	
Skeleton Creek - 020	CCA12-020	1	Riffle	S	13	4	0.25	1.84	6.18	0.63	22	0.69	SI	SI
Sleeping Bear Creek - 030	CCA12-030	1	SVeg	S	14	3	0.21	2.12	2.12	0.37	28	0.93	NI	NI
Spring Creek - 023	CCA12-023	1	SVeg	S	17	1	0.09	2.44	2.44	0.37	20	0.67	SI	SI
Traders Creek - 077	CCA12-077	1	Riffle	S	14	3	0.75	1.46	4.91	0.73	20	0.63	SI	SI
Turkey Creek - 082	CCA12-082	1	SVeg	S	20	3	0.11	2.18	2.18	0.53	26	0.87	NI	NI
Unnamed Trib. of Trail Creek - 064	CCA12-064	1	SVeg	S	23	2	0.43	2.54	2.54	0.02	28	0.93	NI	NI
		1	Woody	S	18	3	0.53	2.20	5.32	0.22	26	0.81	NI	

Poor macroinvertebrate scores could indicate water quality problems where habitat scores are acceptable; however, it is possible that the macroinvertebrate collection was not taken at a time which would best represent the community there (i.e., drought influences). Hence, the macroinvertebrate scores should be examined in conjunction with habitat and fish scores to better represent the general health of the stream.

3.2.4 Overall Biological Assessment

In order to synthesize the biological findings into a meaningful representation of the overall quality of each site, the biological assessments were compared with the habitat and water chemistry results. For the fixed sites, a water quality score was computed similarly to the other index scores by comparing rotating basin

site values relative to high quality site values. The parameters included in this score were phosphorus, nitrogen, DO, turbidity, and salts (TDS, chloride, and sulfate). Then, the habitat, fish, macroinvertebrate, and water quality scores (relative to the mean of high quality sites in the respective ecoregions) were examined in concert with one another (Figure 8). The water quality index score was calculated for the probabilistic sites, but often only a single sample was obtained; Figure 9 shows the habitat, fish, and macroinvertebrate scores for each probabilistic site relative to the average score of high quality sites in that ecoregion.

A determination of “good” or “excellent” stream health is indicated by a relatively high score for all categories. Most streams had relatively good agreement among the categories, but there are instances where one score is quite different than the others. It is generally recognized that fish communities are especially sensitive to habitat degradation and that macroinvertebrates more quickly integrate effects of water quality decline. Thus, sites with a high habitat and fish score yet a low macroinvertebrate and water chemistry score could indicate potential water quality impairment. Low habitat scores correlated with low fish scores yet high bug scores could indicate habitat impairments despite good water quality.

Many of the sites sampled during this rotation have macroinvertebrate collections that indicate poorer conditions than the rest of the parameters, most likely due to extreme drought conditions, or the macroinvertebrate identification and enumeration are not yet complete. Many of the probabilistic sites did not have macroinvertebrate collections at all due to lack of flowing water during the summer.

These generalizations will be reassessed each cycle of the Rotating Basin project. It is possible that the reach examined for these assessments is not representative of the whole stream, so that habitat is better at other areas of the stream than the area sampled. Also, the drought conditions under which most of the fish and habitat collections were obtained do not represent typical Oklahoma conditions. Habitat scores, in particular, may have been skewed lower during this sampling period relative to the reference sampling period due to the drought.

Figure 8. Comparison of habitat, fish, macroinvertebrate, and chemistry scores for fixed sites relative to the average high quality site in each ecoregion.

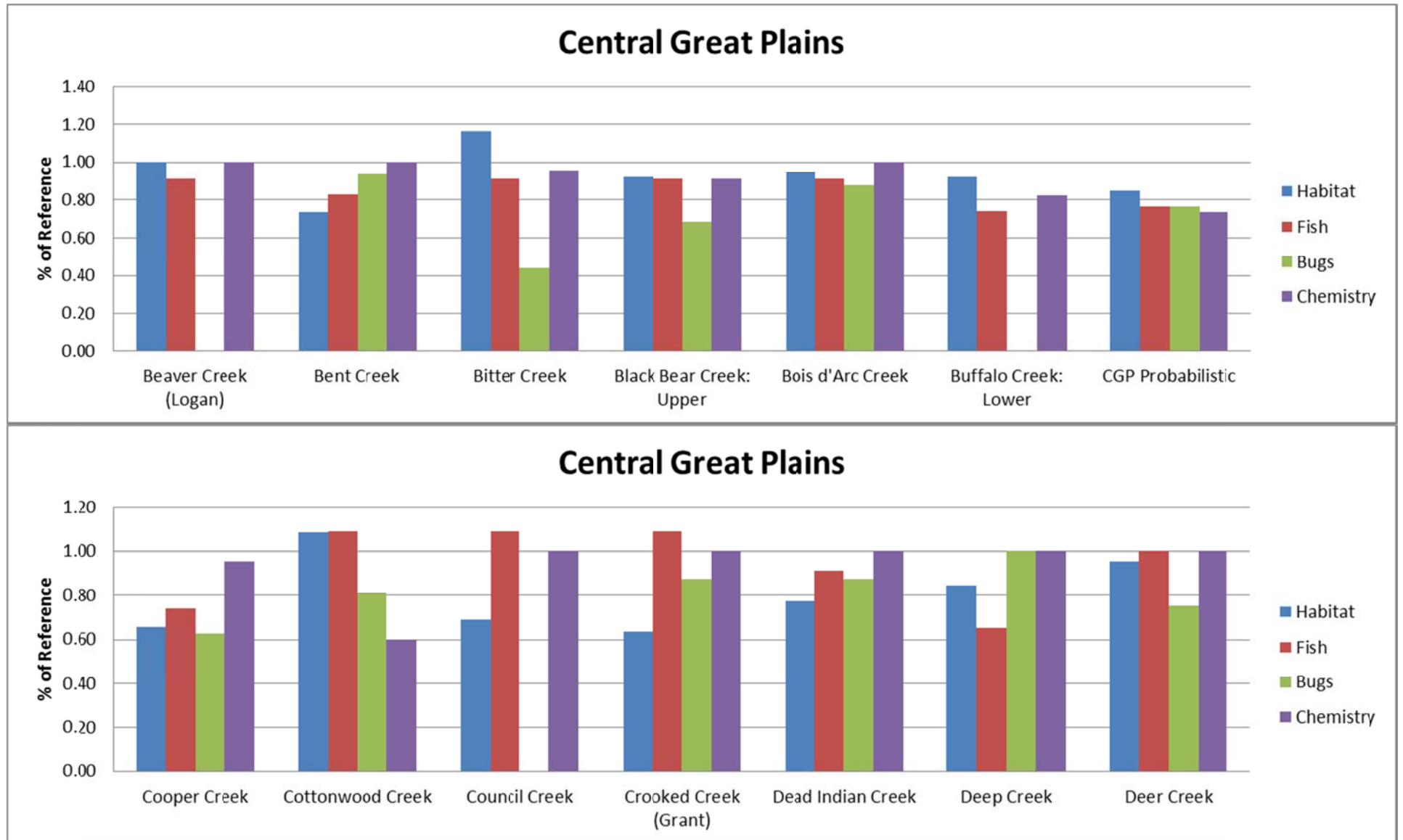


Figure 8 (cont.) Comparison of habitat, fish, macroinvertebrate, and chemistry scores for fixed sites relative to the average high quality site in each ecoregion.

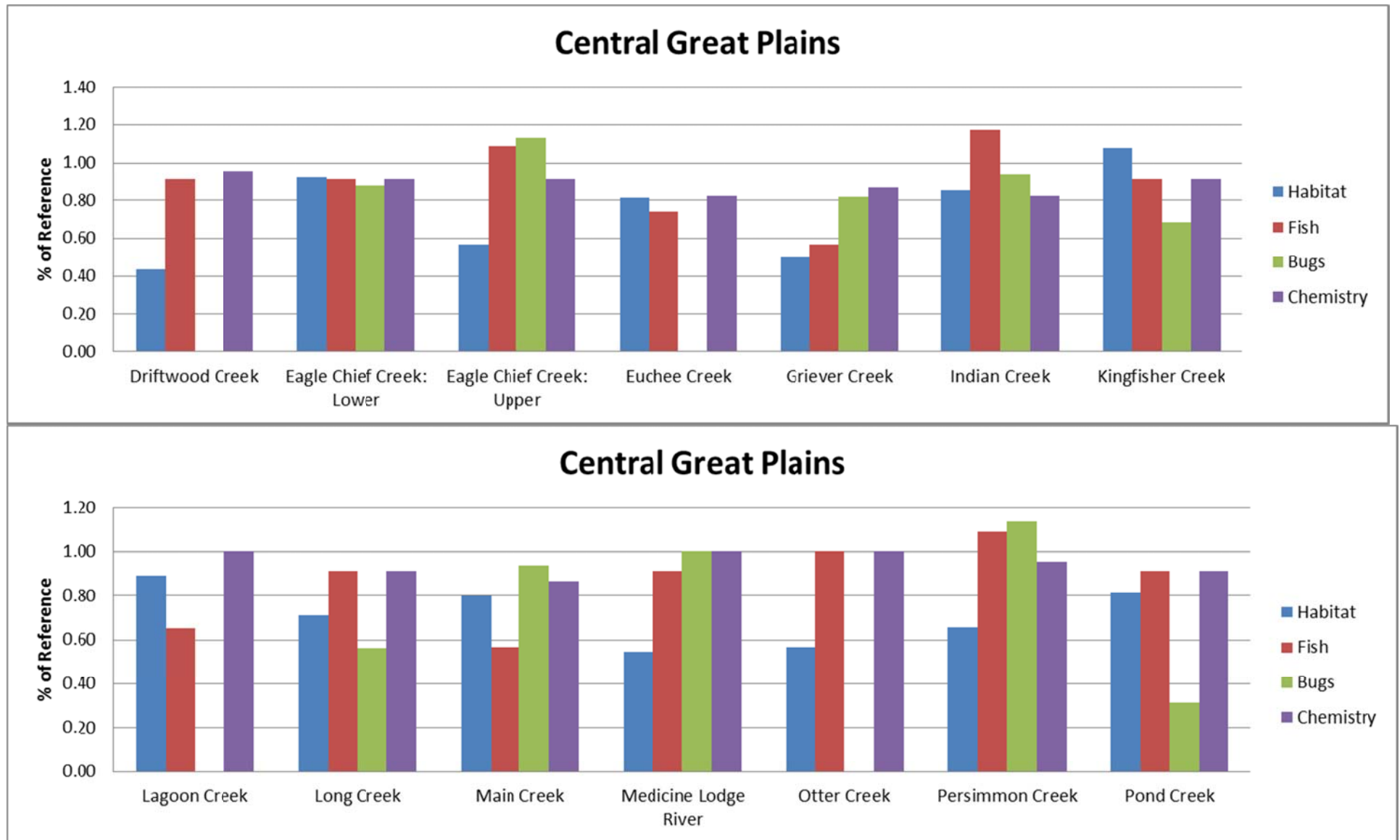


Figure 8 (cont.) Comparison of habitat, fish, macroinvertebrate, and chemistry scores for fixed sites relative to the average high quality site in each ecoregion.

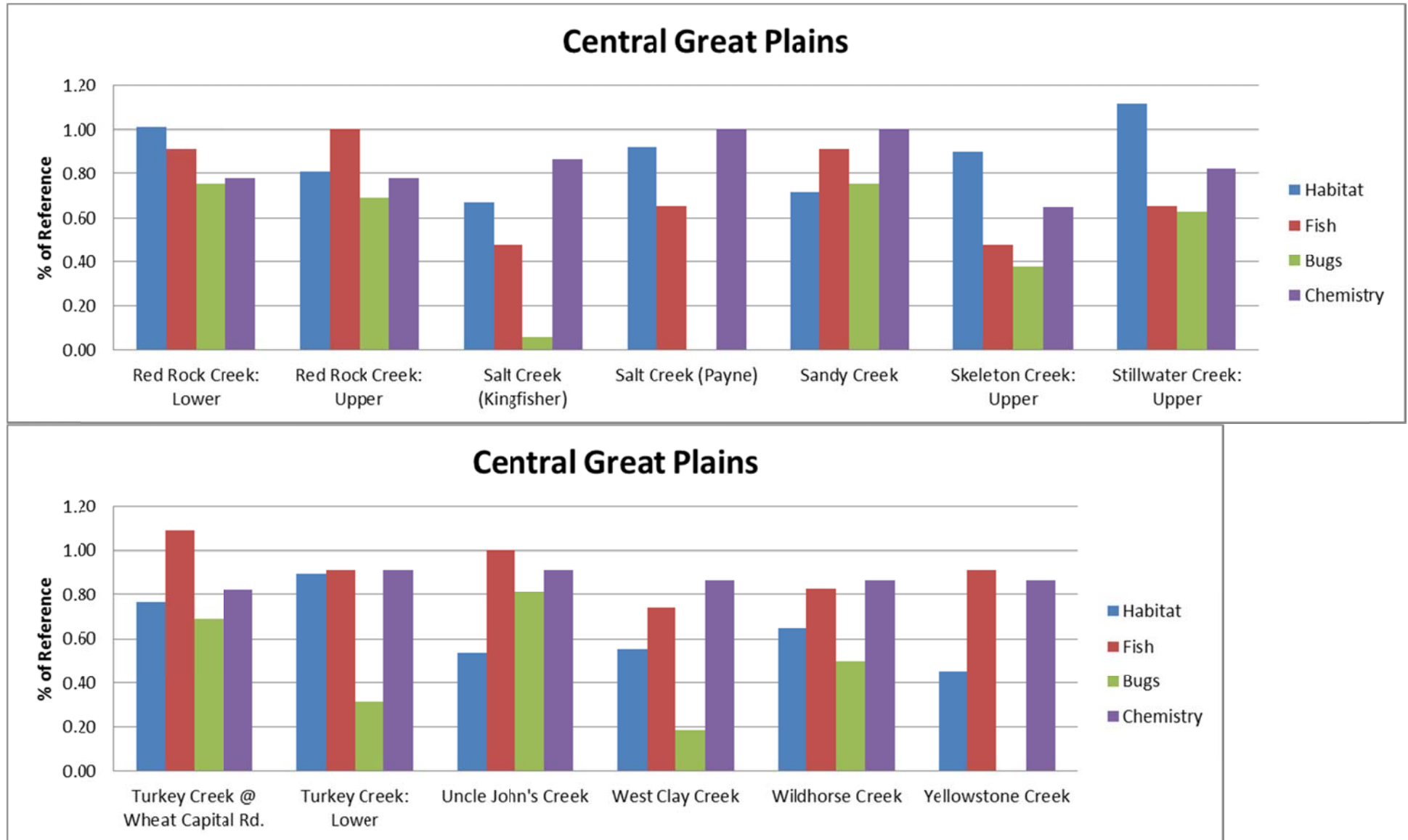


Figure 8 (cont.) Comparison of habitat, fish, macroinvertebrate, and chemistry scores for fixed sites relative to the average high quality site in each ecoregion.

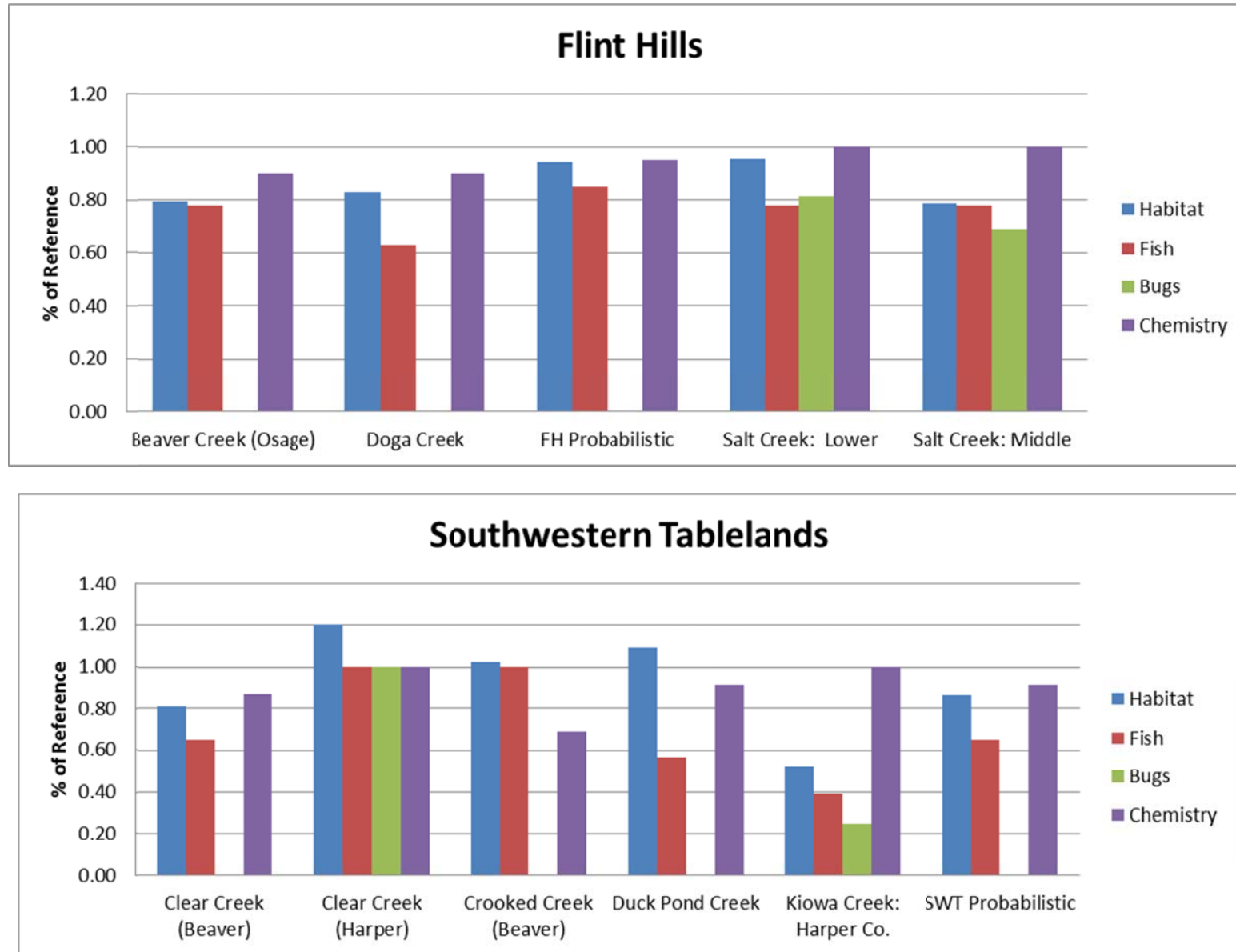


Figure 9. Comparison of habitat, fish, macroinvertebrate and chemistry scores for probabilistic sites relative to the average high quality sites in each ecoregion.

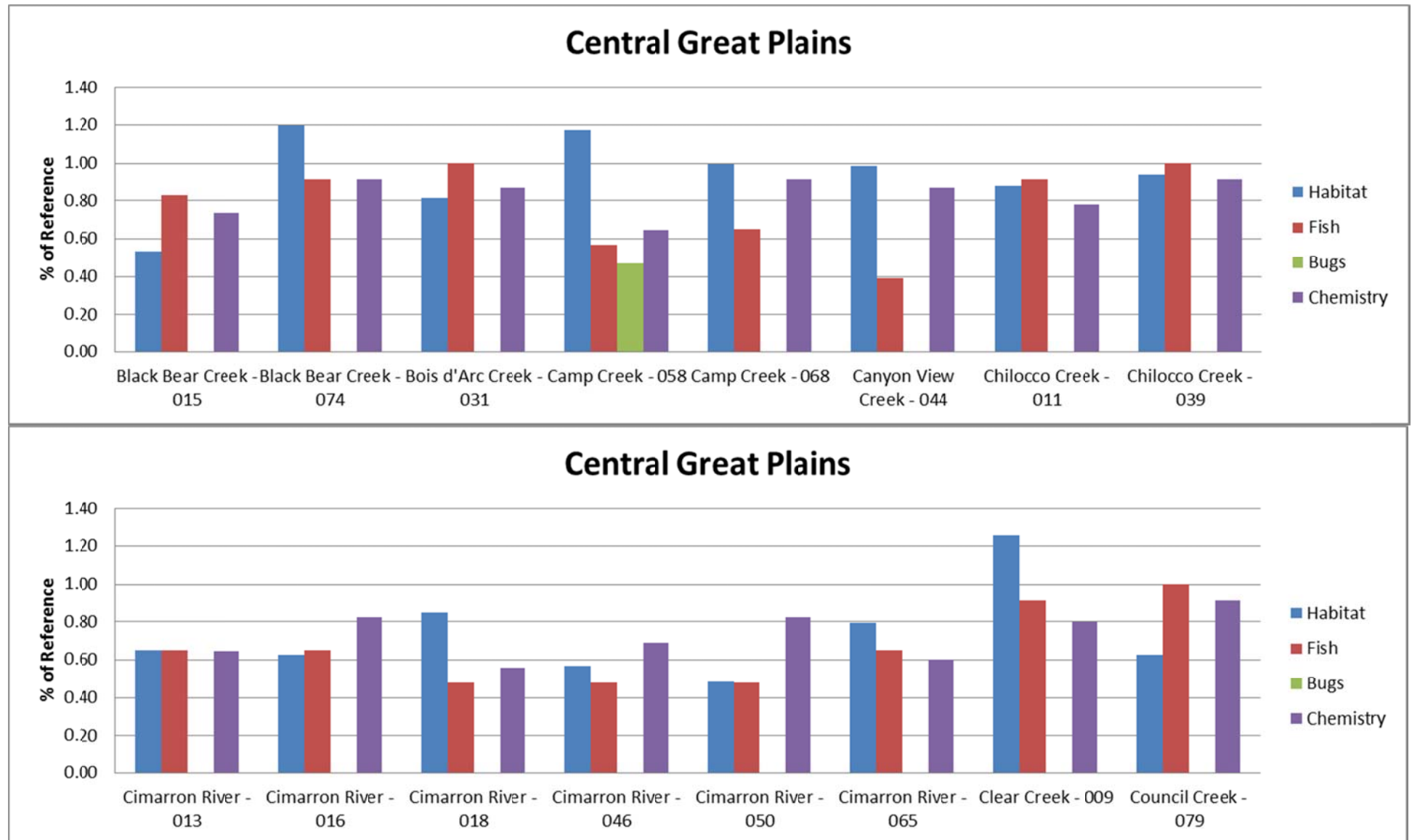


Figure (9 cont.) Comparison of habitat, fish, macroinvertebrate and chemistry scores for probabilistic sites relative to the average high quality sites in each ecoregion.

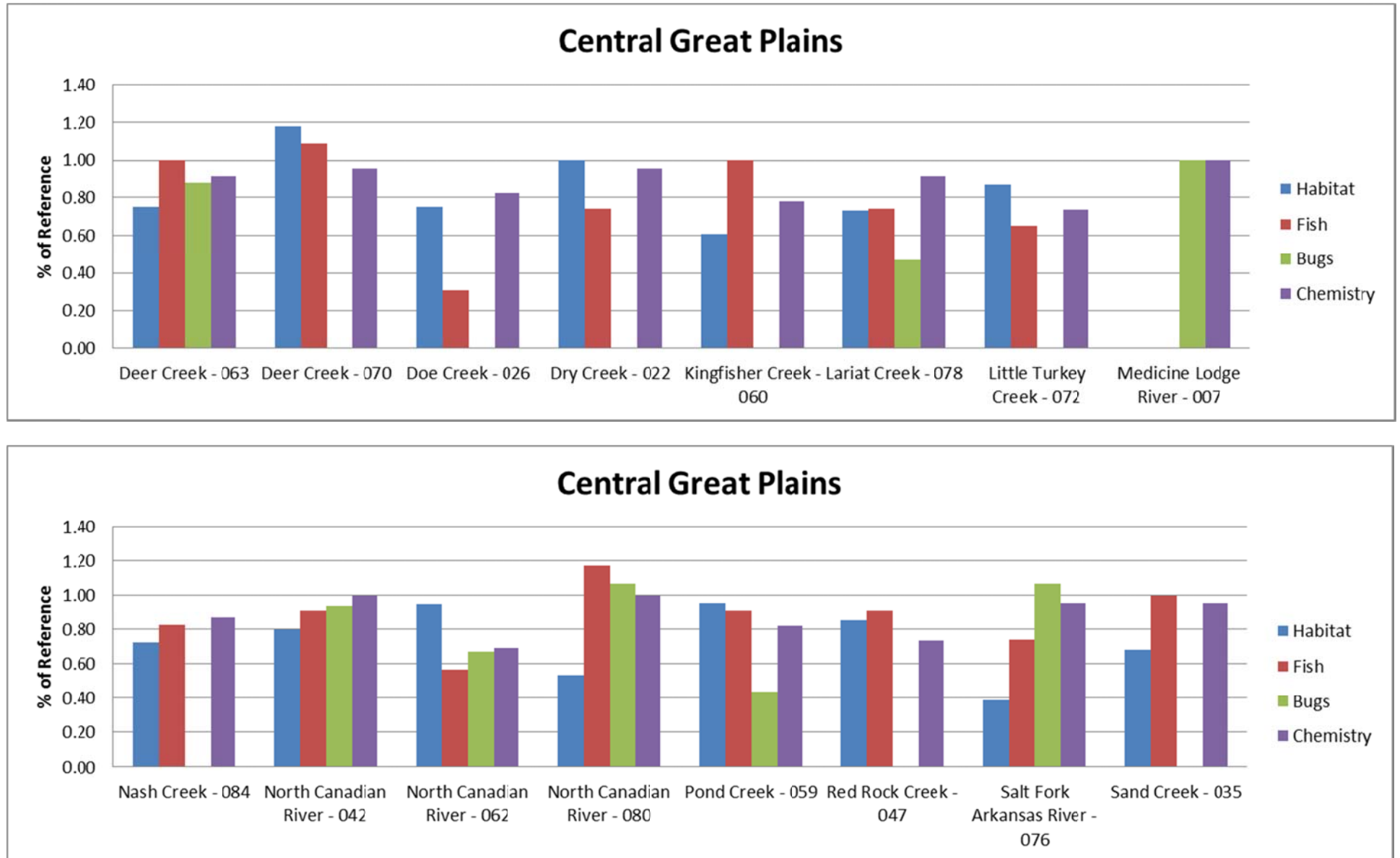


Figure 9 (cont.) Comparison of habitat, fish, macroinvertebrate and chemistry scores for probabilistic sites relative to the average high quality sites in each ecoregion.

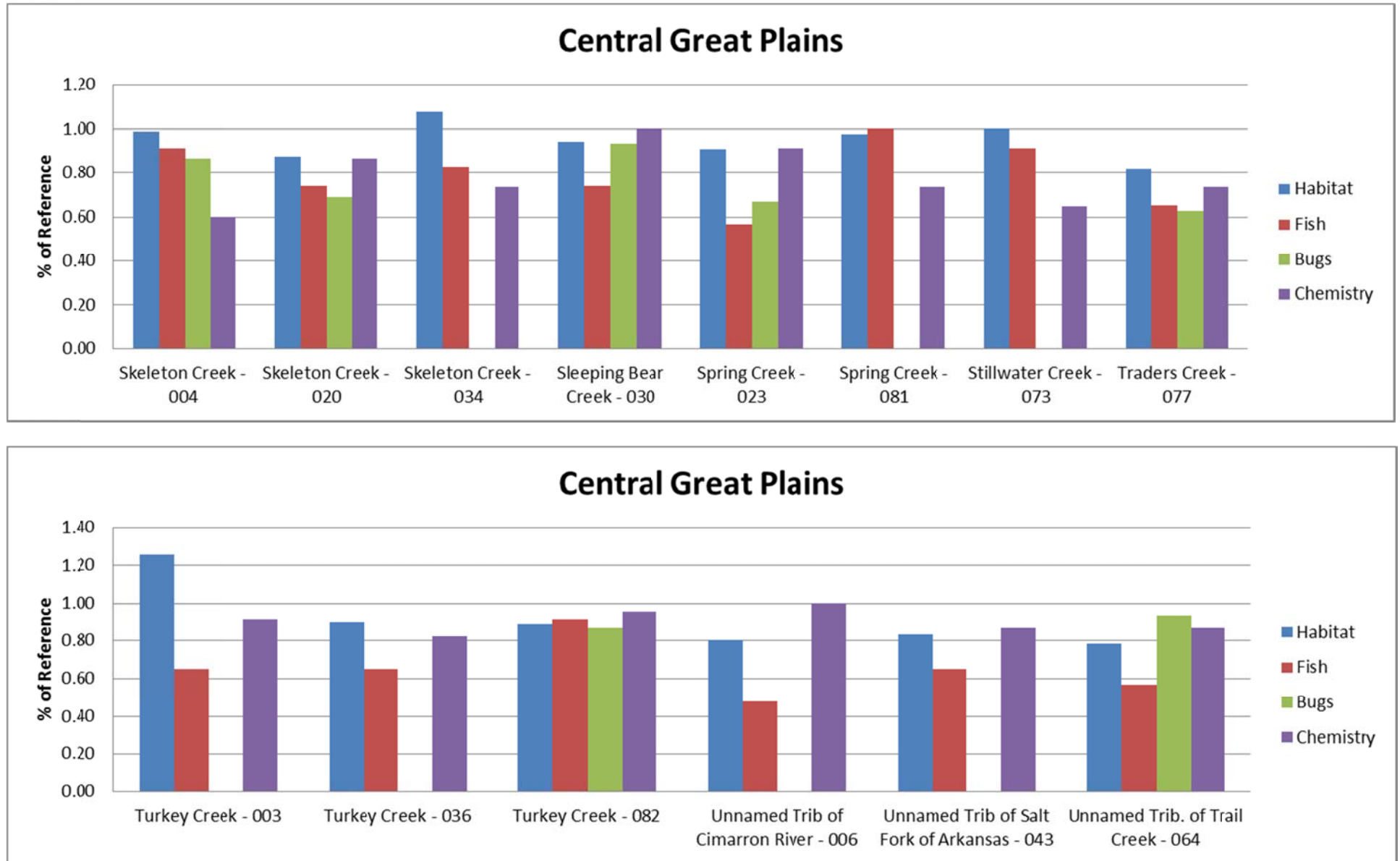
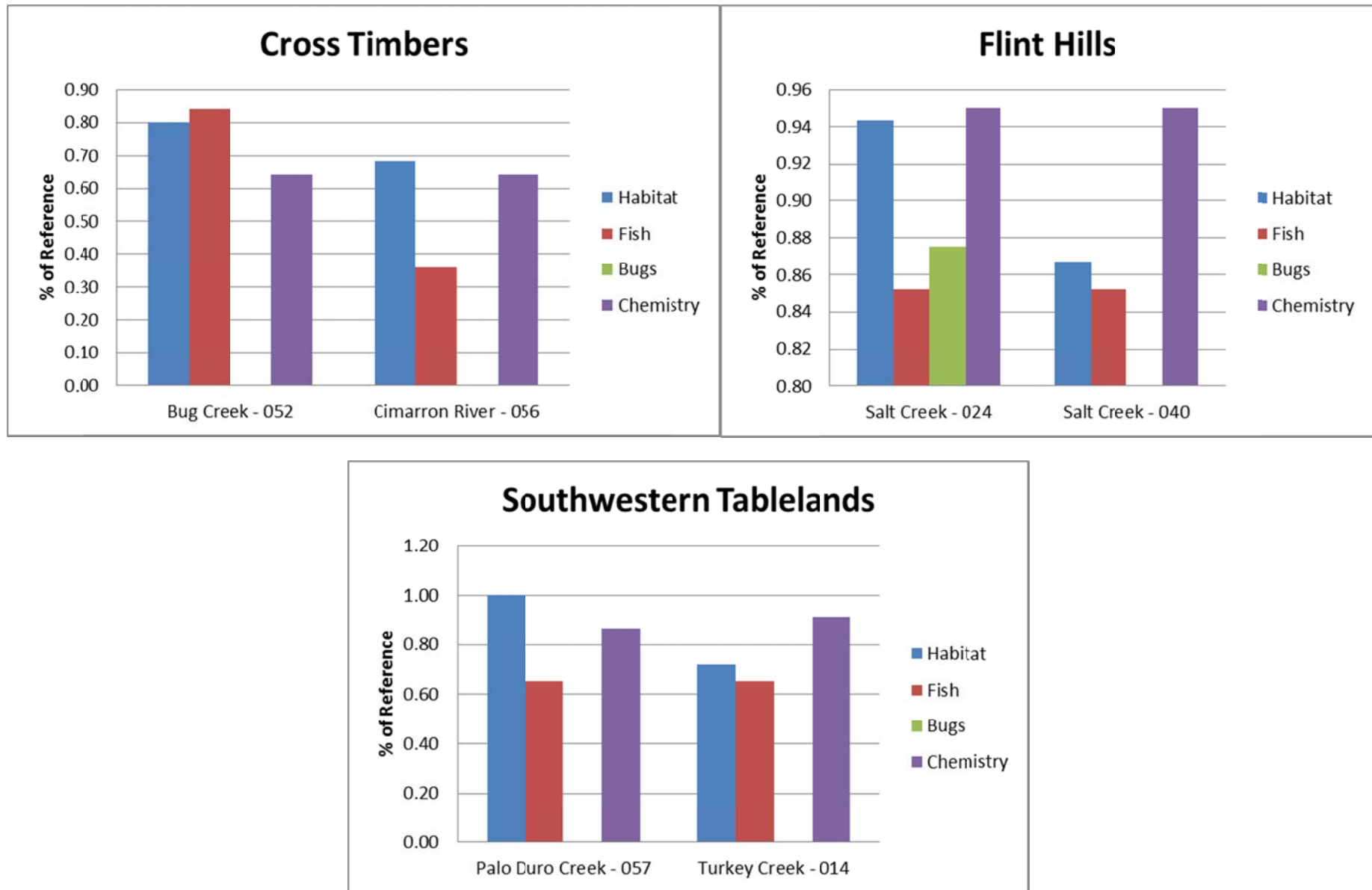


Figure 9 (cont.) Comparison of habitat, fish, macroinvertebrate and chemistry scores for probabilistic sites relative to the average high quality sites in each ecoregion.



3.3 ASSESSMENT

Table 24 shows the landuse upstream of each monitoring site as obtained through GIS using the 2006 National Land Cover Data set produced by the Multi-Resolution Land Characterization (MRLC) consortium. Approximately 30% of the land in the Upper North Canadian, Cimarron, and Upper Arkansas River basins is cultivated crops, and 43% is grassland. There is very little development in the area (< 8%). Table 25 presents the types and number of permitted activities that occur in the watershed upstream of each site. Four fixed sites had no permitted activities in the watershed: Beaver Creek (Logan), Clear Creek (Beaver), Crooked Creek (Beaver), and Salt Creek (Payne).

Eight sites had national pollution discharge elimination systems (NPDES) in the watershed. To examine the effects of point source versus non-point source pollution on parameters at the monitoring sties, one-way ANOVAs were performed comparing sites with an NPDES to sites with no NPDES. Table 26 shows the results where the P values are less than 0.1. Sites in the Central Great Plains ecoregion with NPDES permits had significantly higher values for chloride, conductivity, dissolved oxygen and DO % saturation, nitrogen, phosphorus, total dissolved solids, total suspended solids, and flow. Sites with no NPDES permits had moderately significantly higher values for hardness and sulfate. Sites in the Flint Hills ecoregion with NPDES permits showed higher values for dissolved oxygen and flow. Within this basin, sites with permits were significantly more likely to have higher flows during this time of drought, which can improve the likelihood of the biological community surviving.

Fixed Sites

Several sites, all named Salt Creek, stood out for high chlorides. Five sites have high nutrients, especially nitrogen. Land use is mostly cultivated crops and grassland at Cottonwood Creek, Indian Creek, Skeleton (Upper) Creek, and Turkey Creek. Landuse at Stillwater (Lower) Creek is mostly deciduous forest and grassland. All five of these sites have multiple permits within their watersheds.

Cottonwood Creek is on the list of impaired waters for primary body contact recreation (PBCR). It receives municipal wastewater discharge from three Oklahoma City (OKC) area municipalities. There are 563 oil and gas (O&G) permits, 17 total retention lagoons (both municipal and industrial), six land application of waste permits (OKC), and three public water supply intakes (Oklahoma City and Guthrie). The habitat and fish collection at this site are better than the average high quality site for the ecoregion. The benthic macroinvertebrates are still at 80% of reference, though the water chemistry is fair. This may be a situation where the wastewater discharge is keeping water in the stream and supporting the biological community during a time of drought.

Indian Creek is on the list of impaired waters for PBCR. There are 58 O&G permits. These permits should not affect the bacteria in the streams. The aquatic community appears to be quite healthy.

Skeleton Creek (Upper) has the city of Enid within the watershed. It is on the list of impaired waters for warm water aquatic community (WWAC) and PBCR. Permits in the watershed include a landfill for the City of Enid, five NPDES permits (both municipal and industrial wastewater), 331 O&G permits, five total retention lagoons (both municipal and industrial), and treatment/storage disposal permits for Vance Air Force Base and Union Pacific. Several of the industrial wastewater NPDES permits are for the Koch

Nitrogen Plant and a grain elevator, any of which could be affecting the amount of nitrogen in the stream. Skeleton Creek has excellent physical habitat, but the fish are less than half of what would be expected and the benthic macroinvertebrates are less than 40% of reference.

Within the fixed sites, one site, Turkey Creek, has consistently high nutrient and salt levels and low flow. Land use in the watershed is grassland (40%), barren land (33%), and cultivated crops (20%). There are two permits for confined animal feeding operations (CAFOs) and 68 oil and gas (O&G) permits. While the habitat at Turkey Creek is good, the fish are only 65% of reference conditions. There were no macroinvertebrate collections. Perhaps runoff from the CAFOs is affecting the creek, but perhaps it is the consequence of drought.

Many sites in this study were affected by drought, so macroinvertebrates were unable to be collected, but some of the results from collected macroinvertebrates are not yet back from the taxonomist. Nine sites (Bitter, Deer, Kingfisher, Long, Pond, Salt (Kingfisher), Turkey Creek (Lower), West Clay, and Wildhorse Creeks) have excellent habitat, water chemistry, and fish collections, but the macroinvertebrate collections were poor. Cooper Creek, Griever Creek, Main Creek, and Kiowa Creek (Harper) have good water quality but poor habitat. Deep Creek had a poor fish collection.

Probabilistic Sites

Most of the probabilistic sites had very low flow (33 of 51 sites). The 13 sites with low dissolved oxygen all had low flows. Eleven sites had high salt concentrations; of those, seven were on the Cimarron River, which drains an area underlain by gypsum and rock salt. One site, Pond Creek, had a poor macroinvertebrate score with good habitat, water chemistry, and fish.

The effects of the drought make it hard to accurately explain the results seen in this cycle of the Rotating Basin Project. Habitat assessments are not likely to be representative of normal conditions in this area. Many fixed sites did not have the complete cycle of two summer and two winter macroinvertebrate collections; many probabilistic sites did not have a collection at all. It appears that some watersheds with NPDES permits did not have enough natural flow to “dilute” the effects of the discharges. In other watersheds the discharges may have kept the creek flowing. Sites in this basin will be resampled starting in 2017, and it will be important to examine results under what will hopefully be more representative climatic conditions.

Table 24. Watershed landuse for each fixed monitoring site.

Site Name	WBID	Barren Land (Rock/Sand/Clay)	Cultivated Crops	Deciduous Forest	Developed, High Intensity	Developed, Low Intensity	Developed, Medium Intensity	Developed, Open space	Emergent Herbaceous Wetlands	Evergreen Forest	Grasslands/Herbaceous	Mixed Forest	Open Water	Pasture/Hay	Shrub/Scrub	Woody Wetlands	Total Acres
Beaver Creek (Osage)	OK621210-00-0050L		4.0%	1.8%				2.1%	0.2%		75.7%		0.7%	9.9%		5.6%	29,429.2
Beaver Creek (Logan)	OK620900-03-0230C		17.8%	8.1%		0.2%	0.1%	5.6%		1.6%	65.9%		0.6%				53,427.2
Bent Creek	OK720500-01-0070D		24.6%			0.1%		5.0%		6.2%	62.7%		0.1%		1.3%		82,661.2
Bitter Creek	OK621100-00-0100G		59.5%	0.5%		0.6%	0.1%	5.5%	0.2%		24.4%		0.3%	7.1%		1.9%	54,158.3
Black Bear Creek: Upper	OK621200-03-0260B	9.8%	17.1%	9.2%	0.1%	0.8%	0.6%	11.4%	1.2%	0.1%	36.2%		2.6%	3.6%	3.5%	3.8%	139,306.5
Bois d'Arc Creek	OK621000-03-0010C		55.1%	0.8%	0.4%	4.2%	1.2%	5.5%	0.3%		18.8%		0.3%	10.1%	0.2%	3.1%	63,177.3
Buffalo Creek: Lower	OK620920-05-0010G		20.7%	0.1%		0.2%	0.1%	3.1%	0.0%	0.3%	74.4%	0.0%	0.4%	0.2%	0.3%	0.2%	259,440.3
Clear Creek (Harper)	OK720500-02-0070G	0.4%	11.1%	0.0%		0.1%	0.1%	4.6%	0.0%		78.9%	0.0%	0.1%		4.3%	0.4%	63,039.7
Clear Creek (Beaver)	OK720500-02-0300F	0.2%	28.8%	0.0%	0.0%	0.1%	0.0%	4.3%	0.0%		59.6%		0.0%		6.8%	0.1%	122,693.3
Cooper Creek	OK620910-02-0040C		63.1%	0.6%	0.0%	0.3%	0.0%	4.8%		0.6%	30.1%		0.2%	0.1%			74,717.7
Cottonwood Creek	OK620910-04-0010E		27.6%	7.8%	1.5%	6.8%	5.9%	9.4%		0.7%	37.8%		2.2%	0.4%		0.0%	212,494.0
Council Creek	OK620900-02-0050H		4.2%	17.2%	0.0%	0.3%	0.0%	4.7%		2.6%	65.6%		0.4%	5.0%			26,379.3
Crooked Creek (Grant)	OK621000-06-0010C		52.3%	1.5%	0.0%	0.5%	0.0%	4.0%	0.6%		38.3%	0.0%	0.2%	0.2%	0.8%	1.6%	124,784.8
Crooked Creek (Beaver)	OK620930-00-0100G		1.4%			0.0%	0.1%	1.9%			95.5%		0.9%			0.1%	4,004.6
Dead Indian Creek	OK620910-05-0080A	0.1%	58.6%	1.2%	0.0%	0.5%	0.0%	3.6%		0.1%	35.2%		0.5%	0.3%			73,313.0
Deep Creek	OK620910-02-0250C	0.2%	58.5%	0.6%	0.0%	1.2%	0.2%	3.5%	0.0%	3.3%	32.1%	0.1%	0.2%	0.1%			70,169.3
Deer Creek	OK621000-04-0010D		75.1%	0.2%	0.0%	0.3%	0.1%	4.4%	0.3%		15.7%		0.3%	1.6%	0.0%	2.2%	98,702.4
Doga Creek	OK621200-02-0020C	0.3%	14.0%	5.9%		0.3%	0.1%	14.4%	0.5%		38.0%		2.0%	2.3%	8.4%	13.8%	18,335.0
Driftwood Creek	OK621010-03-0030C	4.1%	78.9%	0.3%	0.0%	0.4%	0.4%	3.7%			11.4%		0.2%	0.4%	0.0%	0.3%	76,578.9
Duck Pond Creek	OK720500-02-0250F	0.1%	30.5%	0.0%	0.0%	0.1%	0.0%	4.6%			56.6%		0.0%		8.0%	0.0%	38,232.5
Eagle Chief Creek: Lower	OK620920-04-0010C	16.4%	30.3%	8.0%	0.0%	1.3%	0.4%	9.7%	1.7%	0.0%	21.7%		3.6%	1.0%	3.1%	3.0%	303,118.6
Eagle Chief Creek: Upper	OK620920-04-0010G	30.3%	40.4%	0.1%	0.0%	0.2%	0.4%	3.0%	0.2%		24.0%		0.7%	0.1%	0.0%	0.5%	149,487.2

Site Name	WBID	Barren Land (Rock/Sand/Clay)	Cultivated Crops	Deciduous Forest	Developed, High Intensity	Developed, Low Intensity	Developed, Medium Intensity	Developed, Open space	Emergent Herbaceous Wetlands	Evergreen Forest	Grasslands/Herbaceous	Mixed Forest	Open Water	Pasture/Hay	Shrub/Scrub	Woody Wetlands	Total Acres
Euchee Creek	OK620900-01-0290D	0.2%	2.9%	25.6%	0.5%	2.4%	1.4%	6.6%		1.0%	54.3%		0.5%	4.7%			56,913.5
Griever Creek	OK620920-01-0130G	30.4%	6.0%	0.6%	0.0%	0.4%	0.2%	3.2%		15.9%	41.4%	1.7%	0.0%		0.2%		44,082.9
Indian Creek	OK620910-02-0310C	8.3%	12.3%	8.0%	0.0%	1.6%	7.2%	13.4%	1.9%	0.2%	26.5%		2.5%	3.9%	3.7%	10.6%	43,874.1
Kingfisher Creek	OK620910-05-0010J	0.1%	53.3%	1.5%	0.0%	0.4%	0.1%	3.8%		2.1%	38.1%		0.4%	0.1%			120,481.5
Kiowa Creek: Harper Co.	OK720500-02-0130C	0.2%	11.9%	0.0%	0.0%	0.1%	0.3%	3.8%			77.9%	0.0%	0.1%		5.2%	0.5%	169,013.3
Lagoon Creek	OK620900-01-0180J		3.5%	27.3%	0.0%	0.4%	0.1%	5.1%		1.2%	58.2%		0.2%	4.0%			33,768.3
Long Creek	OK620920-02-0080D	0.2%	26.1%		0.0%	0.3%	0.3%	3.5%	0.0%	9.2%	59.2%		0.2%		1.1%		33,778.1
Main Creek	OK620920-01-0180F	3.3%	8.7%		0.0%	0.4%	0.3%	3.6%	0.0%	18.6%	63.1%	0.0%	0.2%		1.7%	0.0%	58,780.3
Medicine Lodge River	OK621010-03-0010D	0.0%	82.3%	0.2%	0.0%	0.4%	0.4%	3.3%	0.0%		10.4%	0.0%	1.7%	0.6%	0.0%	0.6%	48,945.7
Otter Creek	OK620910-03-0040C	1.0%	46.8%	6.5%	0.0%	0.2%	0.0%	4.3%		1.7%	39.0%		0.3%	0.1%		0.0%	75,067.8
Persimmon Creek	OK720500-01-0150G	0.4%	19.9%		0.0%	0.3%	0.1%	4.7%	0.0%	1.8%	58.9%	0.0%	0.1%	0.4%	13.4%	0.0%	106,797.2
Pond Creek	OK621000-05-0010D	0.0%	64.0%	0.1%	0.0%	0.5%	0.1%	4.4%	1.3%		26.9%		0.4%	0.4%	0.0%	2.0%	199,396.4
Red Rock Creek: Lower	OK621200-05-0010K	1.0%	10.8%	14.3%	0.1%	2.4%	0.7%	17.2%	2.9%	0.1%	26.4%		3.6%	4.3%	5.6%	10.5%	294,139.8
Red Rock Creek: Upper	OK621200-05-0160G	0.1%	12.0%	13.7%		0.5%	1.1%	26.4%	3.5%		22.4%		7.0%	0.8%	3.8%	8.7%	15,100.1
Salt Creek (Kingfisher)	OK620910-02-0100D	0.8%	47.7%	0.7%	0.1%	1.1%	0.3%	3.5%	0.0%	6.0%	39.4%	0.1%	0.3%	0.0%			119,649.9
Salt Creek (Payne)	OK620900-02-0020D	0.0%	2.9%	27.1%	0.0%	0.3%	0.2%	4.5%		1.1%	59.8%		0.3%	3.7%			27,500.2
Salt Creek: Lower	OK621200-04-0010F	0.5%	25.7%	5.2%	0.2%	0.8%	0.3%	12.5%	0.3%	0.0%	47.0%		0.8%	2.5%	1.7%	2.5%	65,033.5
Salt Creek: Middle	OK621200-04-0010K	0.0%	2.4%	0.7%	0.0%	0.3%	0.0%	6.0%	0.3%		77.2%		0.7%	9.6%	0.1%	2.6%	116,069.8
Sandy Creek	OK621010-02-0010D	0.0%	35.7%	2.4%	0.0%	0.1%	0.0%	3.5%	0.1%		56.9%	0.0%	0.4%	0.3%	0.1%	0.5%	52,131.2
Skeleton Creek: Upper	OK620910-03-0010S	4.0%	44.9%	5.7%	0.0%	0.6%	0.3%	7.8%	0.8%	0.0%	29.6%		1.1%	1.9%	1.4%	1.9%	229,179.3
Stillwater Creek: Upper	OK620900-04-0070T	0.0%	4.9%	19.9%	0.5%	2.9%	1.3%	6.7%	0.0%	0.9%	57.3%		3.3%	2.1%	0.0%		169,800.7
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	4.4%	61.9%	2.9%	0.1%	1.3%	0.4%	6.4%	0.1%	0.0%	21.7%		0.3%	0.1%	0.3%	0.1%	114,768.2
Turkey Creek: Lower	OK620910-06-0010B	6.1%	15.0%	7.6%	0.1%	1.0%	1.9%	12.9%	3.4%	0.0%	29.0%		1.8%	5.8%	6.7%	8.6%	138,340.1

Site Name	WBID	Barren Land (Rock/Sand/Clay)	Cultivated Crops	Deciduous Forest	Developed, High Intensity	Developed, Low Intensity	Developed, Medium Intensity	Developed, Open space	Emergent Herbaceous Wetlands	Evergreen Forest	Grasslands/Herbaceous	Mixed Forest	Open Water	Pasture/Hay	Shrub/Scrub	Woody Wetlands	Total Acres
Turkey Creek: Upper	OK620910-06-0010T	8.3%	7.3%	17.0%		1.8%	0.8%	13.1%	1.3%	0.1%	31.8%		0.8%	4.8%	2.4%	10.6%	13,939.5
Uncle John's Creek	OK620910-05-0030C	0.0%	55.5%	2.6%	0.1%	0.7%	0.4%	4.6%		0.2%	34.7%		1.1%	0.1%			93,048.7
West Clay Creek	OK621010-01-0130R	0.0%	61.0%	0.4%	0.0%	0.5%	0.0%	4.6%		0.0%	33.1%		0.1%	0.1%		0.0%	37,285.1
Wildhorse Creek	OK621000-02-0040F	0.6%	26.2%	12.8%	0.1%	1.8%	1.1%	14.0%	1.9%	0.0%	25.7%		2.5%	3.0%	1.3%	9.0%	74,482.2
Yellowstone Creek	OK621010-01-0270C	86.6%	4.1%	2.4%		0.0%		1.8%	0.0%		4.0%		0.9%		0.0%	0.1%	35,382.7

Table 25. Permitted landuse for each fixed site.

Site Name	WBID	#CAFO	# Landfill	#NPDES Permits	# O&G	#Total Retention Lagoon	# Land Application	# Public Water Intakes	# Storage Disposal
Beaver Creek (Osage)	OK621210-00-0050L				188	2			
Beaver Creek (Logan)	OK620900-03-0230C								
Bent Creek	OK720500-01-0070D				74	4			
Bitter Creek	OK621100-00-0100G				192	4			
Black Bear Creek: Upper	OK621200-03-0260B				373	3		1	
Bois d'Arc Creek	OK621000-03-0010C				77	3			
Buffalo Creek: Lower	OK620920-05-0010G	2			444	7			
Clear Creek (Harper)	OK720500-02-0070G	7			436	2			
Clear Creek (Beaver)	OK720500-02-0300F								
Cooper Creek	OK620910-02-0040C				151				
Cottonwood Creek	OK620910-04-0010E			3	563	17	6	3	
Council Creek	OK620900-02-0050H				78				
Crooked Creek (Grant)	OK621000-06-0010C				340	5			
Crooked Creek (Beaver)	OK620930-00-0100G								
Dead Indian Creek	OK620910-05-0080A	1		1	174				
Deep Creek	OK620910-02-0250C				266				
Deer Creek	OK621000-04-0010D				100				
Doga Creek	OK621200-02-0020C				15				
Driftwood Creek	OK621010-03-0030C				244	4			
Duck Pond Creek	OK720500-02-0250F				64				
Eagle Chief Creek: Lower	OK620920-04-0010C	1	1		643	9	1		
Eagle Chief Creek: Upper	OK620920-04-0010G	1	1		180				
Euchee Creek	OK620900-01-0290D			1	47		1		
Griever Creek	OK620920-01-0130G				163				
Indian Creek	OK620910-02-0310C				58				
Kingfisher Creek	OK620910-05-0010J				287				
Kiowa Creek: Harper Co.	OK720500-02-0130C	1			309				
Lagoon Creek	OK620900-01-0180J				105				
Long Creek	OK620920-02-0080D				308				
Main Creek	OK620920-01-0180F	1			265				
Medicine Lodge River	OK621010-03-0010D				131				
Otter Creek	OK620910-03-0040C				179	6	1		
Persimmon Creek	OK720500-01-0150G				105	2			

Site Name	WBID	#CAFO	# Landfill	#NPDES Permits	# O&G	#Total Retention Lagoon	# Land Application	# Public Water Intakes	# Storage Disposal
Pond Creek	OK621000-05-0010D				511	3			
Red Rock Creek: Lower	OK621200-05-0010K				1192	11	1		
Red Rock Creek: Upper	OK621200-05-0160G				209				
Salt Creek (Kingfisher)	OK620910-02-0100D	1		1	322	1			
Salt Creek (Payne)	OK620900-02-0020D								
Salt Creek: Lower	OK621200-04-0010F			1	209			1	
Salt Creek: Middle	OK621200-04-0010K				94			1	
Sandy Creek	OK621010-02-0010D				212				2
Skeleton Creek: Upper	OK620910-03-0010S		1	5	331	5			
Stillwater Creek: Upper	OK620900-04-0070T	1			235			3	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R			1	162	5			
Turkey Creek: Lower	OK620910-06-0010B	2	1		130				
Turkey Creek: Upper	OK620910-06-0010T				5				
Uncle John's Creek	OK620910-05-0030C				73	4			
West Clay Creek	OK621010-01-0130R				81				
Wildhorse Creek	OK621000-02-0040F				101	6			
Yellowstone Creek	OK621010-01-0270C				201				

Table 26. Comparison of sites with and without NPDES permits based on one-way ANOVAs. Significantly higher values are shaded in the "NPDES Permit" column.

Ecoregion	Parameter	NPDES Permit	N	Mean	StDev	P Value	Result
CGP	Chloride	No	621	466	1484	0.000	
		Yes	106	2378	4912		Higher
CGP	Conductivity	No	659	2431	4008	0.000	
		Yes	113	6578	12512		Higher
CGP	DO	No	648	9.112	3.761	0.030	
		Yes	115	9.945	3.892		Higher
CGP	DO % Saturation	No	649	89.7	34.19	0.005	
		Yes	115	99.4	33.89		Higher

Ecoregion	Parameter	NPDES Permit	N	Mean	StDev	P Value	Result
CGP	Hardness	No	643	853.1	699.8	0.055	Higher
		Yes	113	714	759		
CGP	Nitrate	No	621	0.482	1.029	0.000	
		Yes	106	2.334	3.843		Higher
CGP	Nitrite	No	621	0.0545	0.0931	0.000	
		Yes	106	0.1205	0.2486		Higher
CGP	Total N	No	621	1.39	1.237	0.000	
		Yes	106	3.39	3.96		Higher
CGP	Available N	No	621	0.567	1.081	0.000	
		Yes	106	2.475	3.9		Higher
CGP	OrthoP	No	621	0.0742	0.1109	0.000	
		Yes	106	0.435	0.628		Higher
CGP	Total P	No	621	0.1329	0.1371	0.000	
		Yes	106	0.4918	0.6066		Higher
CGP	Sulfate	No	620	552.7	660.2	0.048	Higher
		Yes	105	419.8	452.5		
CGP	TDS	No	621	1698	2660	0.000	
		Yes	106	4695	8609		Higher
CGP	TSS	No	621	25.03	48.5	0.001	
		Yes	106	43.58	82.16		Higher
CGP	Flow	No	595	2.736	6.782	0.000	
		Yes	107	8.166	14.114		Higher
FH	Chloride	No	54	30.49	30.89	0.096	
		Yes	18	43.57	19.18		Higher
FH	Conductivity	No	57	474.5	142.5	0.074	
		Yes	19	541.6	130.9		Higher
FH	DO	No	57	7.872	2.87	0.025	
		Yes	19	9.611	2.883		Higher
FH	DO % Saturation	No	57	76.84	24.43	0.013	
		Yes	19	93.47	24.91		Higher
FH	Flow	No	58	4.45	12.71	0.012	
		Yes	17	15.05	20.81		Higher

3.4 DESIGNATED USE SUPPORT ASSESSMENT

The designated uses assessed for the monitoring sites are presented below, along with the current attainment status of each use (based on OCC assessment results submitted for the 2012 Integrated Report). The impairments and TMDLs for the sites are presented in Appendix D.

Table 27. Beneficial use support assessment. F = fully supporting, N = not supporting, I = insufficient information, X = use not assessed.

Site Name	WBID	Cool Water Aquatic Community	Warm Water Aquatic Community	Habitat Limited Aquatic Community	Primary Body Contact (Recreation)	Secondary Body Contact (Recreation)	Aesthetics	Agriculture	Fish Consumption	Public/Private Water Supply	Emergency Water Supply	High Quality Water	Outstanding Resource Waters	Sensitive Water Supply
Beaver Creek (Logan)	OK620900-03-0230C		N		N		I	F	X	I				
Beaver Creek (Osage)	OK621210-00-0050L		F		N		F	F	X	I				
Bent Creek	OK720500-01-0070D		F		N		F	N	X	I				
Bitter Creek	OK621100-00-0100G		F		N		I	N	X	I				
Black Bear Creek - 015	CCA12-015		I		X		I	F	X	I				
Black Bear Creek - 074	CCA12-074		N		N		I	F	N	I				
Black Bear Creek: Upper	OK621200-03-0260B		I		X		I	F	X	I				
Bois d'Arc Creek	OK621000-03-0010C		F		N		F	F	X	I				
Bois d'Arc Creek - 031	CCA12-031		F		N		F	F	X	I				
Buffalo Creek: Lower	OK620920-05-0010G		F		N		I	F	X	I				
Bug Creek - 052	CCA12-052		X		X		X	X	X	X				
Camp Creek - 058	CCA12-058		I		X		I	I	X	X				
Camp Creek - 068	CCA12-068		N		I		F	F	X	I				
Canyon View Creek - 044	CCA12-044		X		X		X	X	X					
Chilocco Creek - 011	CCA12-011		N		N		F	F	X					
Chilocco Creek - 039	CCA12-039		N		N		F	F	X					
Cimarron River - 013	CCA12-013		N		N		I	F	N		F			
Cimarron River - 016	CCA12-016		N		N		I	N	F		F			
Cimarron River - 018	CCA12-018		N		N		F	N	F		F			
Cimarron River - 046	CCA12-046		N		N		I	F	I		F			
Cimarron River - 050	CCA12-050		X		X		X	X	X		F			
Cimarron River - 056	CCA12-056		N		I		F	F	X	I				
Cimarron River - 065	CCA12-065		N		N		I	F	N		F			
Clear Creek - 009	CCA12-009		N		N		F	F	I	I				
Clear Creek (Beaver)	OK720500-02-0300F		F		F		F	F	X	I				
Clear Creek (Harper)	OK720500-02-0070G		N		N		F	F	I	I				

Site Name	WBID	Cool Water Aquatic Community	Warm Water Aquatic Community	Habitat Limited Aquatic Community	Primary Body Contact (Recreation)	Secondary Body Contact (Recreation)	Aesthetics	Agriculture	Fish Consumption	Public/Private Water Supply	Emergency Water Supply	High Quality Water	Outstanding Resource Waters	Sensitive Water Supply
Cooper Creek	OK620910-02-0040C		F		N		F	N	X	I				
Cottonwood Creek	OK620910-04-0010E		F		N		F	F	X	I				
Council Creek	OK620900-02-0050H		F		N		F	F	X	I				
Council Creek - 079	CCA12-079		F		N		F	F	X	I				
Crooked Creek (Beaver)	OK620930-00-0100G		N		N		F	F	X	I				
Crooked Creek (Grant)	OK621000-06-0010C		F		N		F	F	X	I				
Dead Indian Creek	OK620910-05-0080A		F		N		F	N	X	I				
Deep Creek	OK620910-02-0250C		F		N		I	N	X	I				
Deer Creek	OK621000-04-0010D		N		N		I	F	X	I				
Deer Creek - 063	CCA12-063		N		N		I	F	X	I				
Deer Creek - 070	CCA12-070		N		N		I	F	X	I				
Doe Creek - 026	CCA12-026		I		X		I	I	X	X				
Doga Creek	OK621200-02-0020C		F		N		F	F	X	I				
Driftwood Creek	OK621010-03-0030C		N		N		F	F	X	I				
Dry Creek - 022	CCA12-022		X		X		X	X	X					
Duck Pond Creek	OK720500-02-0250F		F		N		F	F	X	I				
Eagle Chief Creek: Lower	OK620920-04-0010C		F		N		F	F	X	I				
Eagle Chief Creek: Upper	OK620920-04-0010G		F		N		F	F	X	I				
Euchee Creek	OK620900-01-0290D		I		N		I	F	X		F			
Griever Creek	OK620920-01-0130G		N		N		I	F	X	I				
Indian Creek	OK620910-02-0310C		F		N		F	F	X	I				
Kingfisher Creek	OK620910-05-0010J		N		N		F	N	X					
Kingfisher Creek - 060	CCA12-060		N		N		F	N	X					
Kiowa Creek: Harper Co.	OK720500-02-0130C		F		N		F	F	I	I				
Lagoon Creek	OK620900-01-0180J		F		N		F	F	X					
Lariat Creek - 078	CCA12-078		N		X		I	X	X					
Little Turkey Creek - 072	CCA12-072		F		N		F	F	X					
Long Creek	OK620920-02-0080D		F		N		F	F	X	I				
Main Creek	OK620920-01-0180F		N		N		I	N	X	I				
Medicine Lodge River	OK621010-03-0010D		F		N		I	F	X	I				
Medicine Lodge River - 007	CCA12-007		F		N		I	F	X	I				

Site Name	WBID	Cool Water Aquatic Community	Warm Water Aquatic Community	Habitat Limited Aquatic Community	Primary Body Contact (Recreation)	Secondary Body Contact (Recreation)	Aesthetics	Agriculture	Fish Consumption	Public/Private Water Supply	Emergency Water Supply	High Quality Water	Outstanding Resource Waters	Sensitive Water Supply
Nash Creek - 084	CCA12-084		X		X		X	X	X					
North Canadian River - 042	CCA12-042		F		N		F	F	F	F				
North Canadian River - 062	CCA12-062		F		N		F	F	F	F				
North Canadian River - 080	CCA12-080		I		X		I	F	X					
Otter Creek	OK620910-03-0040C		F		N		F	F	X	I				
Palo Duro Creek - 057	CCA12-057		N		N		F	F	X	I				
Persimmon Creek	OK720500-01-0150G		F		N		I	F	X	I				
Pond Creek	OK621000-05-0010D		F		N		I	F	X	I				
Pond Creek - 059	CCA12-059		F		N		I	F	X	I				
Red Rock Creek - 047	CCA12-047		N		N		I	F	X					
Red Rock Creek: Lower	OK621200-05-0010K		N		N		I	F	X					
Red Rock Creek: Upper	OK621200-05-0160G		N		N		F	N	X					
Salt Creek - 024	CCA12-024		F		N		F	F	X	I				
Salt Creek - 040	CCA12-040		F		N		I	F	X	I				
Salt Creek (Kingfisher)	OK620910-02-0100D		F			I	I	N	F		F			
Salt Creek (Payne)	OK620900-02-0020D		F		N		F	F	X	I				
Salt Creek: Lower	OK621200-04-0010F		F		N		F	F	X	I				
Salt Creek: Middle	OK621200-04-0010K		F		N		I	F	X	I				
Salt Fork Arkansas River - 076	CCA12-076		N		N		F	N	F	F				
Sand Creek - 035	CCA12-035		I		X		X	I	X	X				
Sandy Creek	OK621010-02-0010D		F		N		I	F	X	I				
Skeleton Creek - 004	CCA12-004			I		I	I	F	I		F			
Skeleton Creek - 020	CCA12-020		X		X		X	X	X	X				
Skeleton Creek - 034	CCA12-034		N		N		I	F	F	I				
Skeleton Creek: Upper	OK620910-03-0010S		N		N		I	F	F	I				
Sleeping Bear Creek - 030	CCA12-030		I		X		I	I	X	I				
Spring Creek - 023	CCA12-023		X		X		X	X	X	X				
Spring Creek - 081	CCA12-081		X		X		X	X	X		F			
Stillwater Creek - 073	CCA12-073			X	X		X	X	X	X	F			
Stillwater Creek: Upper	OK620900-04-0070T			N		I	F	F	X	I	F			
Traders Creek - 077	CCA12-077		I		N		F	F	X	F				

Site Name	WBID	Cool Water Aquatic Community	Warm Water Aquatic Community	Habitat Limited Aquatic Community	Primary Body Contact (Recreation)	Secondary Body Contact (Recreation)	Aesthetics	Agriculture	Fish Consumption	Public/Private Water Supply	Emergency Water Supply	High Quality Water	Outstanding Resource Waters	Sensitive Water Supply
Turkey Creek - 003	CCA12-003		F		N		I	F	X	I				
Turkey Creek - 014	CCA12-014		X		X		X	X	X					
Turkey Creek - 036	CCA12-036		X		X		X	X	X					
Turkey Creek - 082	CCA12-082		I		X		I	I	X	X				
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R		F		N		I	F	X	I				
Turkey Creek: Lower	OK620910-06-0010B		F		N		I	F	X	I				
Turkey Creek: Upper	OK620910-06-0010T		F		N		I	F	X	I				
Uncle John's Creek	OK620910-05-0030C		F		N		F	F	X					
West Clay Creek	OK621010-01-0130R		F		N		F	N	X	X				
Wildhorse Creek	OK621000-02-0040F		F		I		F	N	X					
Yellowstone Creek	OK621010-01-0270C		F		N		I	N	X	I				

4.0 LITERATURE CITED

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APPENDICES

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Fixed Sites																											
Beaver Creek (Logan)	OK620900-03-0230C	50203	6/11/2012	5.52	71.7	18.4	I	x	267	26.7	1244	8.25	190.2	104.7	< 0.02	< 0.02	< 0.02	0.73	0.06	0.77	0.035	0.067	446	665	< 10	0.702	
Beaver Creek (Logan)	OK620900-03-0230C	50482	7/23/2012	8.25	119.3	44.6			179	32.7	554	8.7	41.6	34.1	< 0.02	< 0.02	< 0.02	0.88	0.06	0.92	0.023	0.095	164	342	< 10	0	
Beaver Creek (Logan)	OK620900-03-0230C	50532	7/25/2012																								0
Beaver Creek (Logan)	OK620900-03-0230C	50732	8/7/2012	3.01	4	51.1	I		186	27.6	565	8.08											196				0
Beaver Creek (Logan)	OK620900-03-0230C	50668	8/20/2012	2.62	33.6	74.3	I		158	25.3	536	8.29	48	35	0.07	< 0.02	< 0.02	1.25	0.11	1.29	0.022	0.126	2125	304	15	0	
Beaver Creek (Logan)	OK620900-03-0230C	50826	9/25/2012	5.6	63.4	161	I		227	21.3	855	7.56	127.2	33.8		< 0.02	< 0.02	2.17	0.04	2.21	0.07	0.243	156	550	140	0	
Beaver Creek (Logan)	OK620900-03-0230C	51028	10/29/2012	7.78	67.9	26.6	I		164	8.2	545.7	8.59	43	46		< 0.02	< 0.02	0.99	0.04	1.03	0.027	0.064	500	315	< 10	0	
Beaver Creek (Logan)	OK620900-03-0230C	51195	12/11/2012	9.1	73.8	22.8	I	x	301	5.7	956	7.75	99.1	43.6		< 0.02	< 0.02	0.68	0.04	0.72	0.035	0.095	240	518	10	0	
Beaver Creek (Logan)	OK620900-03-0230C	51318	1/22/2013	10.49	83	12.5	I		320	4.2	996	8.13	80.5	99.9		< 0.02	< 0.02	0.65	0.04	0.69	0.007	0.056	468	444	< 10	0	
Beaver Creek (Logan)	OK620900-03-0230C	51447	2/20/2013	8.87	76.1	15.4	I	x	258	7.3	1668	8.55	314.2	157.4		< 0.02	< 0.02	0.62	0.04	0.66	0.009	0.06	693	973	< 10	0.5	
Beaver Creek (Logan)	OK620900-03-0230C	51589	3/26/2013	9.49	81.3	12.5	I	x	287	7.9	1919	8.4	361.6	207.3		< 0.02	< 0.02	0.51	0.04	0.55	0.008	0.044	860	1100	< 10	0.3	
Beaver Creek (Logan)	OK620900-03-0230C	51807	4/30/2013	9.5	108.1	68.1	I	x	103	20	690	8.73	153.8	35		< 0.02	< 0.02	1.37	0.04	1.41	0.024	0.135	218	451	26	0.341	
Beaver Creek (Logan)	OK620900-03-0230C	51964	6/3/2013	6.31	78.3	161	I	x	139	22.5	735.7	7.97	45.6	37.5	0.06	0.84	0.23	1.13	1.13	2.20	0.133	0.194	149	308	90		
Beaver Creek (Logan)	OK620900-03-0230C	52168	7/1/2013	4.52	58.1	34.3	I	x	284	27.5	830	8.24	107.9	63.8	< 0.02	< 0.02	< 0.02	0.8	0.06	0.84	0.034	0.109	318	494	20	0.765	
Beaver Creek (Logan)	OK620900-03-0230C	52384	7/31/2013				I	x																			
Beaver Creek (Logan)	OK620900-03-0230C	52413	8/12/2013			128	I	x	156	28	318.3	8.13	22.1	16.7	0.04	0.4	0.04	1.01	0.48	1.45	0.125	0.186	112	222	53		
Beaver Creek (Logan)	OK620900-03-0230C	52562	9/17/2013	6.25	76.6	28.9	I	x	218	24.6	823	8.51	120.8	60.3	< 0.02	< 0.02	< 0.02	0.67	0.06	0.71	0.018	0.076	292	490	20		
Beaver Creek (Logan)	OK620900-03-0230C	52710	10/22/2013	10.27	100.6	30.7	I		264	13	634	8.48	58.3	51.2		< 0.02	< 0.02	0.53	0.04	0.57	0.018	0.07	370	360	17	0.787	
Beaver Creek (Logan)	OK620900-03-0230C	52932	12/3/2013	11.6	100.5	11	O		298	7.1	929	8.23	127.9	98.5		< 0.02	< 0.02	0.43	0.04	0.47	0.037	0.074	347	550	< 10	2.279	
Beaver Creek (Logan)	OK620900-03-0230C	53077	1/13/2014	11.21	86.7	10.8	I		366	5.4	1292	8.4	151	100		< 0.02	< 0.02	0.37	0.26	0.63	0.013	0.056	564	690	< 10	3.238	
Beaver Creek (Logan)	OK620900-03-0230C	53412	2/18/2014	11.42	99.1	22.1	O		324	10.1	1266	6.47	155.8	100.3		< 0.02	< 0.27	0.41	0.29	0.70	0.007	0.048	422	700	< 10		
Beaver Creek (Logan)	OK620900-03-0230C	53237	3/24/2014	8.04	71.3	18.8	Both		356	11.1	1438	8.31	205.5	127		< 0.02	< 0.02	0.52	0.04	0.56	0.021	0.069	498	830	< 10	0.1	
Beaver Creek (Logan)	OK620900-03-0230C	53537	4/29/2014	6.76	71.3	36.3	I	x	268	17.7	1615	8.76	247.3	136.8		< 0.02	< 0.02	0.65	0.04	0.69	0.017	0.085	470	900	19	5.29	
Beaver Creek (Osage)	OK621210-00-0050L	51811	4/30/2010	8.63	90.5	52.7	I	x	148	18.5	342.6	7.8	6.8	13.7		0.03	< 0.02	0.58	0.05	0.63	0.015	0.061	193	224	15	56.225	
Beaver Creek (Osage)	OK621210-00-0050L	50212	6/12/2012	3.77	44.3	60.8	I	x	124	25	324.5	7.62	6.2	7.7	0.13	0.31	< 0.02	0.76	0.46	1.09	0.028	0.092	150	215	33		
Beaver Creek (Osage)	OK621210-00-0050L	50719	7/12/2012	3.34	40.6	45.4	I		174	25.2	388	7.28											174			0	
Beaver Creek (Osage)	OK621210-00-0050L	50497	7/24/2012	3.51	46.7	47.2	I		172	28.4	357.4	7.82	13	4.8	< 0.02	0.34	< 0.02	1.3	0.38	1.66	0.023	0.124	199	215	25	0	
Beaver Creek (Osage)	OK621210-00-0050L	50640	8/14/2012																								0
Beaver Creek (Osage)	OK621210-00-0050L	50685	8/21/2012	4.65	46.9	15.1	O	x	184	22.2	356.4	7.72	10.1	2.3	< 0.02	< 0.02	< 0.02	0.96	0.06	1.00	0.034	0.131	191	244	41	0	
Beaver Creek (Osage)	OK621210-00-0050L	50837	9/25/2012	6.85	76.4	105	I	x	177	21.5	345.8	8.11	17.6	3.8		< 0.02	< 0.02	2.06	0.04	2.10	0.025	0.226	213	186	94	0	
Beaver Creek (Osage)	OK621210-00-0050L	51026	10/30/2012	3.44	31.1	41.8	I	x	169	11.2	345.4	7.18	9.3	7		< 0.02	< 0.02	1.1	0.04	1.14	0.014	0.113	222	214	28		
Beaver Creek (Osage)	OK621210-00-0050L	51178	12/11/2012	4.87	38.5	15.5	O	x	222	5.9	370.1	6.62	10.3	7.7		< 0.02	< 0.02	1.24	0.04	1.28	< 0.005	0.073	418	226	< 10	0	
Beaver Creek (Osage)	OK621210-00-0050L	51348	1/23/2013	10.38	83.3	20.1	O		244	5.5	404.3	7.08	11	6.9		< 0.02	< 0.02	1.81	0.04	1.85	< 0.005	0.11	313	207	< 10	0	
Beaver Creek (Osage)	OK621210-00-0050L	51422	2/19/2013	10.15	85.5	47.7	Both	x	215	8.4	361	7.39	7.8	10		< 0.02	< 0.02	1.8	0.04	1.84	0.014	0.161	430	179	32	0	
Beaver Creek (Osage)	OK621210-00-0050L	51603	3/25/2013	11.79	90.5	41.6	I	x	179	4.9	339.1	7.93	6.5	14		0.62	0.06	1.66	0.68	2.34	0.012	0.123	249	250	< 10	0	
Beaver Creek (Osage)	OK621210-00-0050L	51973	6/4/2013	7.16	82.1	48.7	I	x	147	22.1	292.5		4.7	8.9	0.03	0.16	< 0.02	0.7	0.21	0.88	0.037	0.083	150	184	29	14.251	
Beaver Creek (Osage)	OK621210-00-0050L	52186	7/2/2013			31.2	I																				0
Beaver Creek (Osage)	OK621210-00-0050L	52213	7/8/2013	7.34	91.6	42.9	I		181	27.1	276	7.85	8.9	9.2	< 0.02	< 0.02	< 0.02	0.86	0.06	0.90	0.022	0.101	219	236	37	0	
Beaver Creek (Osage)	OK621210-00-0050L	52504	8/13/2013	6.83	83.1	66.1	I	x	122	25.2	251.8	7.68	3.1	3	< 0.02	0.07	< 0.02	0.9	0.11	0.99	0.071	0.136	136	189	65		
Beaver Creek (Osage)	OK621210-00-0050L	52541	9/17/2013	5.65	65.4	22.7	I		215	22.7	429.2	7.63	9.6	11.6	< 0.02	< 0.02	< 0.02	0.52	0.06	0.56	0.022	0.07	225	260	17	0.1	
Beaver Creek (Osage)	OK621210-00-0050L	52718	10/22/2013	6.05	56.3	28.5	I		148	12.3	316.9	7.27	7	10.3		0.1	< 0.02	0.4	0.12	0.52	0.039	0.068	196	200	< 10	0.1	
Beaver Creek (Osage)	OK621210-00-0050L	52940	12/3/2013	10.33	83.8	15.5	O		226	6.4	432.7	7.53	15	18.1		0.03	< 0.02	0.49	0.05	0.54	0.055	0.093	270	250	< 10	3.698	
Beaver Creek (Osage)	OK621210-00-0050L	53050	1/14/2014	12.92	95.2	6.43	O		251	2.7	507	7.54	15.6	19.6		< 0.02	< 0.03	0.28	0.05	0.33	0.006	0.035	287	310	< 10	4.51	
Beaver Creek (Osage)	OK621210-00-0050L	53151	2/19/2014	13.56	110.6	12.7	O		265	6.6	537	8.32	14.7	15.4		< 0.02	0.05	0.51	0.07	0.58	0.005	0.053	268	320	< 10	1.293	
Beaver Creek (Osage)	OK621210-00-0050L	53226	3/24/2014	10.12	93.3	14.6	O		253	11.7	509	8.33	13.9	15.8		< 0.02	< 0.02	0.39	0.04	0.43	0.008	0.047	312	310	< 10	2.07	
Beaver Creek (Osage)	OK621210-00-0050L	53527	4/29/2014	7.84	78.5	19.7	O		237	15.4	475.8	8.07	15.8	14.3		< 0.02	< 0.02	0.6	0.04	0.64	0.012	0.069	263	290	17	5.14	
Bent Creek	OK720500-01-0070D	50071	5/14/2012			3.2	O		224		2097												1600				
Bent Creek	OK720500-01-0070D	50235	6/18/2012	7.4	87.1	3.14	O		250	23.3	1892	7.98	27.2	934	0.07	0.24	< 0.02	0.44	0.33	0.70	0.109	0.124	1370	1636	< 10	1.639	
Bent Creek	OK720500-01-0070D	50326	6/20/2012	6.36	73.4	2.47	O		204	22.3	1846	7.82</															

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)
Bent Creek	OK720500-01-0070D	51553	3/4/2013	13.21	109.8	4.18	O		209	7.1	2084	8.24	37.1	1194.5		0.03	< 0.02	0.44	0.05	0.49	0.029	0.053	1400	1741	< 10	7.033
Bent Creek	OK720500-01-0070D	51613	4/1/2013	10.18	94.2	2.09	O		181	11.6	2140	8.05	34	1206		< 0.02	< 0.02	0.49	0.04	0.53	0.032	0.068	1220	1954	< 10	4.044
Bent Creek	OK720500-01-0070D	51831	5/6/2013	10.86	107.4	1.76	O		195	14.7	2129	8.17	35.4	1130.1		< 0.02	< 0.02	0.36	0.04	0.40	0.014	0.039	1530	1908	< 10	3.145
Bent Creek	OK720500-01-0070D	51990	6/10/2013	9.5	110	1.87	O		233	22.4	1942	8.02	28.6	935.4	0.08	0.14	0.12	0.59	0.34	0.85	0.23	0.246	960	1660	< 10	3.98
Bent Creek	OK720500-01-0070D	52022	6/17/2013																							
Bent Creek	OK720500-01-0070D	52243	7/15/2013	6.37	70.8	3.05	O		202	20.3	1640	7.86	24.8	887.6	0.2	0.23	< 0.02	0.77	0.45	1.02	0.25	0.266	916	1410	< 10	1.853
Bent Creek	OK720500-01-0070D	52604	8/19/2013	7.86	90.6	3.47	O		250	22.1	2004	8.07	31.4	1175.8	0.04	0.11	< 0.02	0.45	0.16	0.57	0.125	0.134	1390	1760	< 10	3.519
Bent Creek	OK720500-01-0070D	52833	9/23/2013	8.52	97.4	4.09	I		209	18.3	1878	8.48	27.4	1134.8		0.34	< 0.02	0.43	0.36	0.79	0.138	0.155	1600	< 10	1.303	
Bent Creek	OK720500-01-0070D	52734	10/28/2013	11.63	109.3	2.57	I		235	12.3	1915	8.06	28.2	1089.5		0.26	< 0.02	0.3	0.28	0.58	0.055	0.078	840	1700	< 10	3.044
Bent Creek	OK720500-01-0070D	52990	12/30/2013	16.44	113.4	2.33	O		255	0	2257	8.02	35.3	1155.5		0.42	< 0.02	0.31	0.44	0.75	0.026	0.046	1560	2000	< 10	4.699
Bent Creek	OK720500-01-0070D	53087	1/21/2014	15.82	116.8	1.05	I		223	1.5	2185	8.1	32.4	1134.2		0.33	< 0.02	0.33	0.35	0.68	0.027	0.058	1480	1900	< 10	7.146
Bent Creek	OK720500-01-0070D	53167	2/24/2014	15.64	121.9	1.14	I		235	4.5	2160	8.04	32.6	1072.3		0.28	< 0.02	0.35	0.30	0.65	0.055	0.081	1140	1900	< 10	4.504
Bent Creek	OK720500-01-0070D	53254	3/31/2014	12.88	125	1.7	I		203	13.7	2189	7.91	31.4	1190.8		< 0.02	< 0.02	0.46	0.04	0.50	0.029	0.079	1480	1900	< 10	5.335
Bent Creek	OK720500-01-0070D	53551	5/5/2014	10.5	111	2.84	I		217	18	2105	7.91	30.7	1418.9		< 0.02	< 0.02	0.43	0.04	0.47	0.051	0.084	7.91	1900	< 10	2.316
Bitter Creek	OK621100-00-0100G	50211	6/12/2012	5.1	60.2	48.5	I	x	188	23.2	3032	7.67	600.8	898.5	0.02	0.4	< 0.02	0.98	0.44	1.40	0.093	0.173	1236	2215	67	6.498
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	4.67	61.3	50.7	I		192	27.8	3472	7.69														0
Bitter Creek	OK621100-00-0100G	50490	7/23/2012	4.71	58.9	19.1			183	27.5	4007	7.66	749.6	1536.1	0.06	0.04	< 0.02	0.57	0.12	0.63	0.068	0.111	1712	3128	< 10	
Bitter Creek	OK621100-00-0100G	50635	8/13/2012																							0
Bitter Creek	OK621100-00-0100G	50684	8/21/2012	3.91	43.1	15.1	O	x	180	20.5	3802	7.3	849.3	1715.8	< 0.02	< 0.02	< 0.02	0.67	0.06	0.71	0.065	0.128	896	3211	36	
Bitter Creek	OK621100-00-0100G	50833	9/24/2012	10.04	111.4	17.9	O	x	162	21.1	2432	7.86	468	817.4		0.04	< 0.02	0.77	0.06	0.83	0.056	0.086	990	1735	10	0.502
Bitter Creek	OK621100-00-0100G	51022	10/29/2012	4.41	36.5	6.32	O	x	212	7.8	4070	7.32	643.6	1293.4		< 0.02	< 0.02	0.67	0.04	0.71	0.106	0.143	1124	3060	< 10	0.371
Bitter Creek	OK621100-00-0100G	51174	12/10/2012	10.44	76.9	3.02	O	x	299	3.4	4001	7.59	584.3	1305.9		< 0.02	< 0.02	0.24	0.04	0.28	0.058	0.077	1050	3060	20	0.633
Bitter Creek	OK621100-00-0100G	51344	1/22/2013	15.9	112.7	4.93	O		281	2	2120	7.65	546.9	1247.6		0.09	< 0.02	0.33	0.11	0.44	0.006	0.027	1220	2776	< 10	4.396
Bitter Creek	OK621100-00-0100G	51421	2/19/2013	7.55	73.3	11.5	I	x	210	4.6	3869	7.34	657.3	1499.5		< 0.02	< 0.02	0.46	0.04	0.50	0.013	0.07	1770	2683	< 10	12.161
Bitter Creek	OK621100-00-0100G	51602	3/25/2013	10.83	81.3	9.47	O		255	3.8	3703	7.79	607.6	1388.2		< 0.02	< 0.02	0.71	0.04	0.75	0.009	0.11	940	2738	< 10	4.321
Bitter Creek	OK621100-00-0100G	51810	4/30/2013	3.76	39.8	30.9	I	x	214	18.3	2721	7.44	415.9	765.7		< 0.02	< 0.02	2.81	0.04	2.85	0.04	0.101	1200	2000	18	2.264
Bitter Creek	OK621100-00-0100G	51972	6/4/2013	4.23	48	104	I	x	163	21.6	1472		245.9	274.2	0.38	0.84	0.42	1.56	1.64	2.82	0.248	0.329	576	1140	820	6.424
Bitter Creek	OK621100-00-0100G	52185	7/2/2013			24	I																			
Bitter Creek	OK621100-00-0100G	52212	7/8/2013	3.75	45.7	20.4	I		180	25.4	2950	7.55	590.8	867.1	0.08	0.03	< 0.02	0.68	0.13	0.73	0.122	0.173	1255	2100	< 10	1.193
Bitter Creek	OK621100-00-0100G	52503	8/13/2013	4.6	55.9	278	I	x	62	25.2	276.7	7.22	23.7	27.1	0.02	0.32	0.05	1.81	0.39	2.18	0.359	0.517	111	262	218	
Bitter Creek	OK621100-00-0100G	52540	9/17/2013	4.92	56.4	21.1	I		217	22.2	3371	7.51	654.3	1031.4	0.04	0.08	< 0.02	0.6	0.14	0.70	0.065	0.104	1590	2500	31	3.686
Bitter Creek	OK621100-00-0100G	52717	10/22/2013	8.73	78.3	10.9	I		208	10.5	3423	7.44	592.6	1198.1		0.31	0.02	0.48	0.33	0.81	0.042	0.067	1700	2600	< 10	2.721
Bitter Creek	OK621100-00-0100G	52939	12/3/2013	14.12	113.4	7.72	O		280	5.9	3193	7.65	548.6	961.6		0.35	0.02	0.48	0.37	0.85	0.07	0.094	2000	2400	< 10	4.883
Bitter Creek	OK621100-00-0100G	53049	1/14/2014	13.26	96.4	2.46	O		262	2.2	3530	7.64	551.7	1058.6		0.32	0.04	0.29	0.36	0.65	0.012	0.047	1650	2700	< 10	4.763
Bitter Creek	OK621100-00-0100G	53150	2/19/2014	16.24	131.1	7.37	O		214	6.3	3366	8.48	528.9	1055.6		< 0.02	0.44	1.16	0.46	1.62	0.009	0.123	1360	2600	< 10	3.879
Bitter Creek	OK621100-00-0100G	53225	3/24/2014	11	92.6	5.75	O		235	7.9	2687	7.97	470.8	868		< 0.02	< 0.02	0.73	0.04	0.77	0.025	0.102	1650	1900	< 10	3.789
Bitter Creek	OK621100-00-0100G	53526	4/29/2014	6.87	66.1	22.8	O		215	13.6	3874	7.79	653.2	1218.9		< 0.02	< 0.02	1.11	0.04	1.15	0.075	0.18	2390	3000	29	3.527
Black Bear Creek: Upper	OK621200-03-0260B	50206	6/11/2012	6.8	90	16.5	I	x	192	27.6	1706	8.27	420.1	25.4	< 0.02	0.04	< 0.02	0.77	0.08	0.83	0.185	0.232	364	878	22	10.709
Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	5.19	71.9	28.9			266	30.7	930	8.6	139.9	30.5	0.09	< 0.02	< 0.02	1.53	0.13	1.57	1.278	1.289	670	508	< 10	0.222
Black Bear Creek: Upper	OK621200-03-0260B	50533	7/25/2012																							
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	2.6	35	26.2	I		110	27.9	2893	7.28											1000			< 0.1
Black Bear Creek: Upper	OK621200-03-0260B	50672	8/21/2012	4.99	64.8	18.7	I		203	23.8	2964	7.84	886.2	20.6	< 0.02	< 0.02	< 0.02	1.21	0.06	1.25	0.087	0.189	630	1930	23	0
Black Bear Creek: Upper	OK621200-03-0260B	50829	9/24/2012	4.32	44	59.2	I	x	174	17	3378	7.52	1285.2	26.8		< 0.02	< 0.02	2.43	0.04	2.47	0.108	0.294	772	2023	40	0
Black Bear Creek: Upper	OK621200-03-0260B	51032	10/30/2012	6.61	62.9	7.56	I		286	11.5	3037	8.24	926.1	27.8		< 0.02	< 0.02	0.78	0.04	0.82	0.062	0.094	865	1559	< 10	0
Black Bear Creek: Upper	OK621200-03-0260B	51170	12/10/2012	7.76	59.4	6.94	O	x	324	4.1	2963	7.66	832.7			< 0.02	< 0.02	0.43	0.04	0.47	0.068	0.096	730	1606	< 10	0
Black Bear Creek: Upper	OK621200-03-0260B	51315	1/22/2013	10.8	85	6.63	I	x	310	3.5	5734	8.24	2048.4	70.2		< 0.02	< 0.02	0.76	0.04	0.80	0.094	0.15	1420	3194	< 10	0.6
Black Bear Creek: Upper	OK621200-03-0260B	51443	2/19/2013	12.47	107.3	12.9	I	x	178	7.5	2408	8.63	746.2	34.5		< 0.02	< 0.02	0.84	0.04	0.88	0.057	0.124	630	1388	< 10	
Black Bear Creek: Upper	OK621200-03-0260B	51585	3/25/2013	11.81	102.7	15.4	I	x	218	8.9	2707	8.45	893.1	58.5		< 0.02	< 0.02	0.67	0.04	0.71	0.063	0.114	905	1571	< 10	0.81
Black Bear Creek: Upper	OK621200-03-0260B	51803	4/29/2013																							

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Black Bear Creek: Upper	OK621200-03-0260B	53081	1/14/2014	11.97	87.9	15.4	I	x	291	3.3	290	8.38	770.9	63.1		< 0.02	< 0.02	0.52	0.84	1.36	0.044	0.078	684	1500	< 10	0.589	
Black Bear Creek: Upper	OK621200-03-0260B	53416	2/19/2014	12.42	101.1	16.1	O		404	7	3111	6.71	828.8	61.6		< 0.02	< 0.02	0.82	0.59	0.04	0.63	0.022	0.071	526	1700	< 10	0.551
Black Bear Creek: Upper	OK621200-03-0260B	53241	3/25/2014	8.21	74.4	48.8	Both		266	10.8	3007	8.06	822.3	67.4		< 0.02	< 0.02	0.96	0.04	1.00	0.074	0.152	688	1600	28	0.353	
Black Bear Creek: Upper	OK621200-03-0260B	53533	4/28/2014	6.09	67.1	33.3	I	x	368	19.6	3113	8.29	840.1	47.5		< 0.02	< 0.02	0.85	0.04	0.89	0.158	0.227	668	1600	13	2.525	
Bois d'Arc Creek	OK621000-03-0010C	50210	6/12/2012	4.45	52.7	57.5	I	x	215	25.1	1588	7.82	174.4	423.5	< 0.02	0.16	< 0.02	0.88	0.20	1.06	0.048	0.147	654	1071	52	3.671	
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	4.42	57.1	39.5	I		200	28.6	1305	7.77											437			1.557	
Bois d'Arc Creek	OK621000-03-0010C	50489	7/23/2012	2.78	36.4	17			184	27.7	1995	7.63	376	365.8	0.11	0.02	< 0.02	0.85	0.15	0.89	0.081	0.129	602	1223	< 10	0	
Bois d'Arc Creek	OK621000-03-0010C	50634	8/13/2012																								0
Bois d'Arc Creek	OK621000-03-0010C	50683	8/21/2012	3.41	38.1	8.25	O	x	112	21.8	2127	7.35	486.8	374.1	0.09	0.02	< 0.02	0.72	0.13	0.76	0.048	0.08	540	1394	< 10	0	
Bois d'Arc Creek	OK621000-03-0010C	50832	9/24/2012	8.56	91	15.8	O	x	214	18.5	1656	7.83	332.6	273.7		< 0.02	< 0.02	0.75	0.04	0.79	0.059	0.086	404	906	23	0	
Bois d'Arc Creek	OK621000-03-0010C	51021	10/29/2012	6.87	53.1	9.07	O	x	183	5.4	1809	6.88	347.1	266.7		< 0.02	< 0.02	0.75	0.04	0.79	0.026	0.054	493	1088	231	0	
Bois d'Arc Creek	OK621000-03-0010C	51173	12/10/2012	7.94	59.6	12.1	O	x	399	4.2	2325	7.44	459.1	294.8		< 0.02	< 0.02	0.78	0.04	0.82	0.061	0.111	682	1291	11	0	
Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	17.46	129.9	9.29	O		259	3.7	1551	8.05	152.3	355.5		< 0.02	< 0.02	0.99	0.04	1.03	< 0.005	0.071	690	1006	< 10	2.554	
Bois d'Arc Creek	OK621000-03-0010C	51420	2/19/2013	12.41	100.7	43.3	I	x	199	6.9	1274	8.39	127.5	264.3		< 0.02	< 0.02	1.06	0.04	1.10	0.015	0.113	480	742	35	4.538	
Bois d'Arc Creek	OK621000-03-0010C	51601	3/25/2013	13.11	103.1	16.4	O		204	5.8	1262	7.35	129.9	257		< 0.02	< 0.02	0.76	0.04	0.80	0.005	0.089	475	803	10	6.168	
Bois d'Arc Creek	OK621000-03-0010C	51809	4/30/2013	8.48	90.9	41.7	I	x	196	19.3	1600	7.85	132.6	501.9		< 0.02	< 0.02	1.06	0.04	1.10	0.018	0.094	782	1076	37	25.04	
Bois d'Arc Creek	OK621000-03-0010C	51971	6/4/2013	4.86	56.1	75.3	I	x	147	22.3	687		38.3	160.6	0.14	1.54	0.15	1.29	1.83	2.98	0.191	0.249	280	441	43	6.897	
Bois d'Arc Creek	OK621000-03-0010C	52184	7/2/2013			78.9	I																				0
Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	3.64	44.5	56.3	I		189	25.5	768	7.81	105.9	122.3	0.05	< 0.02	< 0.02	0.98	0.09	1.02	0.16	0.233	310	534	35	0.223	
Bois d'Arc Creek	OK621000-03-0010C	52502	8/13/2013	4.9	60.6	83.1	I	x	101	26.1	431	7.56	18.9	73.4	0.08	0.37	0.06	1.43	0.51	1.86	0.233	0.3	174	300	93	0	
Bois d'Arc Creek	OK621000-03-0010C	52539	9/17/2013	4.06	46.9	77	I	x	187	22.5	1307	7.57	259.1	127.3	0.02	< 0.02	< 0.02	1.15	0.06	1.19	0.117	0.215	345	790	89	5.618	
Bois d'Arc Creek	OK621000-03-0010C	52716	10/22/2013	5.8	52.3	151	I		105	11.3	326.3	7.28	39.2	16.3		0.3	< 0.02	0.93	0.32	1.25	0.18	0.257	195	270	55	0.25	
Bois d'Arc Creek	OK621000-03-0010C	52938	12/3/2013	9.48	77.9	35.4	I	x	232	6.8	1091	7.42	107.3	202.1		0.72	< 0.02	1.08	0.74	1.82	0.173	0.238	557	720	23	2.302	
Bois d'Arc Creek	OK621000-03-0010C	53048	1/14/2014	14.75	109.7	5.6	O		257	3.1	1709	8.77	154.9	549.6		0.16	0.11	0.47	0.27	0.74	0.011	0.058	944	1300	< 10	4.262	
Bois d'Arc Creek	OK621000-03-0010C	53149	2/19/2014	11.66	96.8	11.5	O		256	7.4	1767	7.95	159.7	700.3		0.05	0.11	0.61	0.16	0.77	0.011	0.065	626	1300	< 10	2.958	
Bois d'Arc Creek	OK621000-03-0010C	53224	3/24/2014	8.87	76.9	26.1	I	x	205	9	1632	8.25	155.7	526.7		< 0.02	< 0.02	0.85	0.04	0.89	0.042	0.153	885	1200	25	2.646	
Bois d'Arc Creek	OK621000-03-0010C	53525	4/29/2014	6.1	62.3	28.6	I		272	16.3	1814	7.98	162.9	592.2		< 0.02	< 0.02	0.95	0.04	0.99	0.122	0.188	928	1400	36	5.499	
Buffalo Creek: Lower	OK620920-05-0010G	50074	5/14/2012			7.48	O		133		3676													2800			0
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	4.33	48.2	6.08	O		144	21.4	3977	6.98												2660			0
Buffalo Creek: Lower	OK620920-05-0010G	50237	6/18/2012	9.9	129.3	6.04	O		117	28.8	4400	8.03	511.9	2138.6	< 0.02	< 0.02	< 0.02	1.09	0.06	1.13	0.007	0.058	2570	3754	< 10	< 0.1	
Buffalo Creek: Lower	OK620920-05-0010G	50542	7/30/2012	10.22	141.9	4.19	O		64	30.8	6274	8.63	918.3	2614.8	< 0.07	< 0.02	< 0.02	1.85	0.11	1.89	0.011	0.103	2890	5380	< 10	0	
Buffalo Creek: Lower	OK620920-05-0010G	50742	8/27/2012	8.25	114.5	4.11	O		31.8	4545	8.47	636.4	2161.7	< 0.02	< 0.02	< 0.02	1.72	0.06	1.76	< 0.005	0.066	1780	4294	< 10	0		
Buffalo Creek: Lower	OK620920-05-0010G	50859	10/1/2012	6.06	67.7	1.47	O		104	20.4	2428	7.94	143.4	1244.3		< 0.02	< 0.02	0.86	0.04	0.90	0.011	0.038	1610	2042	< 10	2.705	
Buffalo Creek: Lower	OK620920-05-0010G	51070	11/5/2012	12.26	127.6	10.8	O		155	16.6	4818	8.11	717.3	2105.1		< 0.02	< 0.02	1	0.04	1.04	0.007	0.033	2390	2200	44	0	
Buffalo Creek: Lower	OK620920-05-0010G	51225	12/17/2012	11.63	101.4	23.3	I		172	8.6	4617	7.95	750.8	2245.5		< 0.02	< 0.02	0.64	0.04	0.68	0.016	0.046	1680	3730	20	0.4	
Buffalo Creek: Lower	OK620920-05-0010G	51354	1/28/2013	11.03	100.7	1.41	I		158	10.8	3705	7.93	329	1838.3		< 0.02	< 0.02	0.29	0.04	0.33	< 0.005	0.017	2280	3060	< 10	< 0.1	
Buffalo Creek: Lower	OK620920-05-0010G	51556	3/4/2013	11.66	108.2	4.01	O		151	11.5	3402	8.24	243.9	1814.6		< 0.02	< 0.02	0.4	0.04	0.44	< 0.005	0.016	1800	2967	< 10	4.024	
Buffalo Creek: Lower	OK620920-05-0010G	51616	4/1/2013	9.7	95	2.53	O		7.96	13.9	3775	7.96	295.4	1973.8		< 0.02	< 0.02	0.5	0.04	0.54	< 0.005	0.024	2650	3340	< 10	0	
Buffalo Creek: Lower	OK620920-05-0010G	51834	5/6/2013	15.4	175.4	0.69	O		90	21.2	3794	8.58	290	2072.7		< 0.02	< 0.02	0.32	0.04	0.36	< 0.005	0.009	2610	3500	< 10	< 0.2	
Buffalo Creek: Lower	OK620920-05-0010G	51993	6/10/2013	6.89	89.6	0.89	O		113	28.2	3909	7.61	307.1	2038	< 0.02	< 0.02	< 0.02	0.67	0.06	0.71	< 0.005	0.023	2160	3524	< 10	0	
Buffalo Creek: Lower	OK620920-05-0010G	52025	6/17/2013																								0
Buffalo Creek: Lower	OK620920-05-0010G	52246	7/15/2013	12.8	160.6	8.17	O		104	26.1	5722	8.15	873.7	2331.8	0.05	< 0.02	< 0.02	1.82	0.09	1.86	0.009	0.093	2340	4660	18	0	
Buffalo Creek: Lower	OK620920-05-0010G	52607	8/19/2013	8.49	108.4	4.39	O		175	27.6	2290	8.16	130.6	1025.9	< 0.02	< 0.02	< 0.02	0.96	0.06	1.00	0.018	0.08	1450	1910	< 10	< 0.2	
Buffalo Creek: Lower	OK620920-05-0010G	52838	9/23/2013	9.74	9.94	3.7	O		93	23.6	3819	8.41	313.4	2145.4		< 0.02	< 0.02	0.71	0.04	0.75	< 0.005	0.027	2150	3400	< 10	0	
Buffalo Creek: Lower	OK620920-05-0010G	52737	10/28/2013	11.6	112.9	1.31	O		124	13.5	4183	8.07	485.3	2386		< 0.02	< 0.02	0.52	0.04	0.56	< 0.005	0.019	2190	3700	10	0	
Buffalo Creek: Lower	OK620920-05-0010G	52993	12/30/2013	14.5	14.6	1.26	O		184	1	3719	8.09	266.6	1956.1		0.18	< 0.02	0.35	0.20	0.55	< 0.005	0.008	2900	3300	< 10	0.1	
Buffalo Creek: Lower	OK620920-05-0010G	53090	1/21/2014	13.22	105.3	2.28	O		140	4.2	3664	8.22	254.8	1947.2		< 0.02	< 0.02	0.26	0.04	0.30	< 0.005	0.02	1910	3300	< 10	0.1	
Buffalo Creek: Lower	OK620920-05-0010G	53170	2/24/2014																								

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Clear Creek (Beaver)	OK720500-02-0300F	51074	11/6/2012	8.95	76	3.28	0		214	7.9	1628	7.78	280.8	663		< 0.02	< 0.02	0.53	0.04	0.57	0.006	0.027	1000	1560	< 10	0	
Clear Creek (Beaver)	OK720500-02-0300F	51229	12/18/2012	11.08	85.3	8.13	0		222	4	2294	7.95	274.5	708.6		< 0.02	< 0.02	0.23	0.04	0.27	0.013	0.017	1270	1636	< 10	0	
Clear Creek (Beaver)	OK720500-02-0300F	51358	1/29/2013	7.26	62	4.52	0		207	8.2	2350	8.08	291	837.3		< 0.02	< 0.02	0.25	0.04	0.29	0.007	0.014	1020	1683	< 10	0	
Clear Creek (Beaver)	OK720500-02-0300F	51560	3/5/2013	9.19	75.2	3.7	0		243	6.5	1535	8.21	273.8	155.7		< 0.02	< 0.02	0.4	0.04	0.44	0.006	0.025	509	871	< 10	6.361	
Clear Creek (Beaver)	OK720500-02-0300F	51620	4/2/2013	8.33	70	1.54	0		260	7.6	1558	8.09	278.5	153.2		< 0.02	< 0.02	0.32	0.04	0.36	0.006	0.014	510	925	< 10	5.604	
Clear Creek (Beaver)	OK720500-02-0300F	51838	5/7/2013	5.88	61	2.52	0		265	16.9	1592	7.86	282.2	148.3		< 0.02	< 0.02	0.29	0.04	0.33	< 0.005	0.017	453	949	< 10		
Clear Creek (Beaver)	OK720500-02-0300F	51997	6/11/2013	3.1	36.8	2.21	0		311	22.9	1707	7.78	301.7	143.9	< 0.02	< 0.02	< 0.02	0.92	0.06	0.96	0.007	0.027	420	1033	< 10		
Clear Creek (Beaver)	OK720500-02-0300F	52029	6/18/2013																								
Clear Creek (Beaver)	OK720500-02-0300F	52250	7/16/2013	6.2	71.5	4.55	0		268	22.1	1874	8.04	317.5	293.4	< 0.02	< 0.02	< 0.02	0.53	0.06	0.57	0.005	0.021	570	1210	< 10	0	
Clear Creek (Beaver)	OK720500-02-0300F	52611	8/20/2013	4.95	60.4	2.66	0		229	24.4	1803	7.52	247.4	292.1	0.03	< 0.02	< 0.02	0.6	0.07	0.64	0.02	0.035	480	1030	< 10	< 0.1	
Clear Creek (Beaver)	OK720500-02-0300F	52842	9/24/2013	13.11	160	1.14	0		114	20.7	2070	8.62	362.3	583.4		< 0.02	< 0.02	0.52	0.04	0.56	< 0.005	0.012	605	1400	< 10	0	
Clear Creek (Beaver)	OK720500-02-0300F	52741	10/29/2013	8.72	84.9	1.75	0		165	13.9	2110	7.84	270.2	499.7		< 0.02	< 0.02	0.4	0.04	0.44	0.006	0.017	810	1400	< 10	0	
Clear Creek (Beaver)	OK720500-02-0300F	52996	12/31/2013	10.66	74.3	1.4	0		280	0.7	1553	7.86	261.8	140.1		< 0.02	< 0.02	0.39	0.04	0.43	0.009	0.027	470	910	< 10	0.1	
Clear Creek (Beaver)	OK720500-02-0300F	53093	1/22/2014	9.97	74.6	1.45	0		262	3.1	1443	7.9	244.7	118		< 0.02	0.42	0.22	0.44	0.66	< 0.005	0.013	530	850	< 10		
Clear Creek (Beaver)	OK720500-02-0300F	53173	2/25/2014	9.4	72.4	2.49	I		250	4.2	1279	8	242.3	121.7		< 0.02	< 0.02	0.3	0.04	0.34	< 0.005	0.019	458	840	< 10		
Clear Creek (Beaver)	OK720500-02-0300F	53260	4/1/2014	6.86	62.6	2.17	I		248	11.1	1467	7.86	253.4	121.9		< 0.02	< 0.02	0.35	0.04	0.39	0.005	0.02	482	860	< 10	0.4	
Clear Creek (Beaver)	OK720500-02-0300F	53557	5/6/2014	3.18	33.6	2.63	I		266	17.8	1651	7.57	285.1	194.4		< 0.02	< 0.02	0.51	0.04	0.55	< 0.005	0.016	406	1000	< 10	0.1	
Clear Creek (Harper)	OK720500-02-0070G	50075	5/15/2012			2.5	0		205	16.4	620												290				
Clear Creek (Harper)	OK720500-02-0070G	50304	6/6/2012	6.07	69.2	2.1	0		165	21.7	661	7.88											220				2.309
Clear Creek (Harper)	OK720500-02-0070G	50239	6/19/2012	6.32	72.9	3.42	0		202	22.5	677	7.8	77.3	28.1	< 0.02	0.13	< 0.02	0.35	0.17	0.50	0.009	0.018	240	392	< 10	1.775	
Clear Creek (Harper)	OK720500-02-0070G	50543	7/31/2012	6.7	77.8	4.43	0		188	22.6	618	7.97	81.5	29	0.03	0.27	< 0.02	0.29	0.32	0.58	0.01	0.015	215	407	< 10	1.116	
Clear Creek (Harper)	OK720500-02-0070G	50743	8/28/2012	7.19	79.5	2.25	0		205	20.2	670	7.98	77.1	27.5	< 0.02	0.25	< 0.02	0.18	0.29	0.45	0.009	0.016	283	413	< 10	0.719	
Clear Creek (Harper)	OK720500-02-0070G	50860	10/2/2012	6.77	66.1	2.7	0		220	14.2	672	7.91	77.9	28.4		0.39	< 0.02	0.24	0.41	0.65	0.008	0.018	210	406	< 10	0.74	
Clear Creek (Harper)	OK720500-02-0070G	51071	11/6/2012	8.76	75.7	2.16	0		225	8.9	678.2	8.02	73.5	28.4		0.66	< 0.02	0.27	0.68	0.95	< 0.005	0.007	238	410	< 10	5.698	
Clear Creek (Harper)	OK720500-02-0070G	51226	12/18/2012	10.8	84.3	2.31	0		168	4.7	671.9	8.04	72.9	29		1	< 0.02	0.24	1.02	1.26	0.006	0.009	220	398	< 10	6.683	
Clear Creek (Harper)	OK720500-02-0070G	51355	1/29/2013	8.5	74.2	1.64	0		189	8.2	676.4	8.01	71.7	28.4		0.74	< 0.02	0.16	0.76	0.92	< 0.005	0.013	230	359	< 10	9.442	
Clear Creek (Harper)	OK720500-02-0070G	51557	3/5/2013	9.54	76.4	1.12	0		200	5.8	736.5	8	93.3	37.6		0.63	< 0.02	0.25	0.65	0.90	< 0.005	0.009	246	425	< 10	16.908	
Clear Creek (Harper)	OK720500-02-0070G	51617	4/2/2013	8.64	71.4	0.99	0		212	7	722	7.91	86.1	34.7		0.6	< 0.02	0.25	0.62	0.87	0.005	0.009	315	419	< 10	8.773	
Clear Creek (Harper)	OK720500-02-0070G	51835	5/7/2013	9.5	103.8	1.37	0		251	16.3	709	7.6	85.8	30.4		0.16	< 0.02	0.21	0.18	0.39	< 0.005	0.012	253	57	< 10		
Clear Creek (Harper)	OK720500-02-0070G	51994	6/11/2013	6.32	74.5	6.25	0		205	21.4	741	7.72	85.5	31.4	0.02	0.14	< 0.02	0.44	0.18	0.60	0.013	0.03	287	439	< 10	4.432	
Clear Creek (Harper)	OK720500-02-0070G	52026	6/18/2013																								
Clear Creek (Harper)	OK720500-02-0070G	52247	7/16/2013	6.22	70	4.32	0		231	21.1	703	7.85	81.4	31.2	0.03	0.21	< 0.02	0.35	0.26	0.58	0.012	0.029	245	416	< 10	2.53	
Clear Creek (Harper)	OK720500-02-0070G	52608	8/20/2013	6.03	68.8	5.51	0		209	21.6	736	7.81	83.2	39	0.03	0.53	< 0.02	0.53	1.08	1.09	0.019	0.032	280	449	< 10	3.774	
Clear Creek (Harper)	OK720500-02-0070G	52839	9/24/2013	8.97	100.2	7.25	I		179	17	8.66	8.66	85.2	34.9		0.55	< 0.02	0.42	0.57	0.99	0.015	0.029	270	450	< 10	2.065	
Clear Creek (Harper)	OK720500-02-0070G	52738	10/29/2013	8	99.6	10	I		257	15.1	686	7.29	74.7	31.7		0.68	< 0.02	0.42	0.70	1.12	0.005	0.029	240	420	11	5.033	
Clear Creek (Harper)	OK720500-02-0070G	52998	12/31/2013	9.65	83.2	2.5	I		219	7.2	265	8.02	69.6	26.6		1.34	< 0.02	0.24	1.36	1.60	0.016	0.031	360	390	< 10	2.713	
Clear Creek (Harper)	OK720500-02-0070G	53095	1/22/2014	10.32	91.2	2.01	I		204	10.2	651	8.12		27.2		1.26	0.14	0.25	1.40	1.65	0.011	0.02	223	390	< 10	1.531	
Clear Creek (Harper)	OK720500-02-0070G	53175	2/25/2014	13.58	104.8	3.47	I		207	4.4	667	8.35	73.2	31.6		0.79	0.14	0.21	0.93	1.14	< 0.005	0.016	315	410	< 10	5.072	
Clear Creek (Harper)	OK720500-02-0070G	53262	4/1/2014	11.7	106.3	3.2	I		200	11	650	8.21	76.4	30.8		0.44	< 0.02	0.27	0.46	0.73	< 0.005	0.022	209	410	< 10	8.161	
Clear Creek (Harper)	OK720500-02-0070G	53559	5/6/2014	9.12	98.8	2.67	I		201	19.2	649	7.96	74.5	28.2		0.2	0.05	0.4	0.25	0.65	0.005	0.016	204	380	< 10	4.416	
Cooper Creek	OK620910-02-0040C	50200	6/12/2012	7.73	92.4	21.1	I		227	24.2	1623	8.34	250	322.7	< 0.02	< 0.02	< 0.02	1.47	0.06	1.51	0.273	0.381	390	1243	< 10	0.485	
Cooper Creek	OK620910-02-0040C	50415	7/9/2012																								
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	3.3	39.8	15.8	0		221	24	1840	8.14											270				0.022
Cooper Creek	OK620910-02-0040C	50513	7/24/2012	1.76	22.5	25.6			212	26.1	2339	8.42	487.2	269.1	< 0.02	< 0.02	< 0.02	2.41	0.06	2.45	0.104	0.309	25	1308	< 10	0	
Cooper Creek	OK620910-02-0040C	50664	8/21/2012	5.42	64.1	20.7	I		168	23.4	2146	8.63	499.8	260.4	< 0.02	< 0.02	< 0.02	2.17	0.06	2.21	0.022	0.231	234	1280	32		
Cooper Creek	OK620910-02-0040C	50846	9/25/2012	3.85	43	12.8	0		245	20.3	2503	8.3	566.3	304.1		< 0.02	< 0.02	1.67	0.04	1.71	0.03	0.156	360	1380	13	0.55	
Cooper Creek	OK620910-02-0040C	51019	10/30/2012	6.87	59.5	15.2	0		300	8.5	2930	8.43	661.6	305.4		< 0.02	< 0.02	1.91	0.04	1.95	0.009	0.203	520	1679	< 10	0.343	
Cooper Creek	OK620910-02-0040C	51187	12/11/2012	13.68	99.1	15.8	0		362	1.7	3185	8.5	713.3	367.5		0.29	< 0.02	1.07	0.31	1.38	0.007	0.093	710	1823	12	0.489	

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)			
Cooper Creek	OK620910-02-0040C	52534	9/17/2013	10.85	135.2	20.3	I	x	238	26.3	2017	8.34	321.2	422	0.03	1.15	0.44	1.62	2.43	0.135	0.169	450	1280	<	10	3.413			
Cooper Creek	OK620910-02-0040C	52702	10/22/2013	12.04	118	10.6	O		358	14	2960	8.41	476.6	685		1.04	<	0.02	0.52	1.06	1.58	0.052	0.073	850	2000	<	10	2.64	
Cooper Creek	OK620910-02-0040C	52924	12/3/2013	12.47	100.1	3.89	I		340	5.7	3405	8.18	501.8	949.5		0.7	<	0.02	0.37	0.72	1.09	0.009	0.024	1230	2300	<	10	1.255	
Cooper Creek	OK620910-02-0040C	53042	1/14/2014	12.41	96.7	2.92	I		351	4.4	3254	8.2	448	859.4		1.25	0.65	0.59	1.90	2.49	<	0.005	0.04	950	2200	<	10	1.714	
Cooper Creek	OK620910-02-0040C	53163	2/19/2014	12.66	107.7	6.45	I		290	8	3164	8.18	481.8	962.9		0.32	0.44	0.66	0.76	1.42	<	0.005	0.058	1280	2200	<	10	1.765	
Cooper Creek	OK620910-02-0040C	53250	3/25/2014	13.31	115.7	3.22	I		268	8.8	3164	8.18	531.2	888.3		0.23	<	0.02	0.76	0.25	1.01	<	0.005	0.052	980	2100	<	10	4.442
Cooper Creek	OK620910-02-0040C	53547	4/29/2014	10.24	100.8	14.6	I		324	14.7		8.11	565.6	642.2		0.17	<	0.02	0.86	0.19	1.05	0.046	0.121	940	2000	11	2.278		
Cottonwood Creek	OK620910-04-0010E	50202	6/11/2012	6.07	77.9	51.1	I	x	213	25.8	1118	8.05	114.7	194.6	0.03	5.17	<	0.02	0.73	5.22	5.92	1.303	1.334	446	883	58	98.194		
Cottonwood Creek	OK620910-04-0010E	50529	7/24/2012																										
Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	6.82	93.5	71.3			167	30	1314	8.13	173.1	224.7	<	0.02	8.77	<	0.02	0.72	8.81	9.51		2.021	2.065	314	803	37	17.734
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	5.59	72.6	68.8	I		117	28.7	1348	7.94												740				22.64	
Cottonwood Creek	OK620910-04-0010E	50673	8/21/2012	6.66	81.9	133	I	x	320	24.2	740	7.96	80.2	135.1	0.11	3.03	<	0.02	1.04	3.16	4.09	1.016	1.064	108	485	85	47.567		
Cottonwood Creek	OK620910-04-0010E	50827	9/25/2012	8.67	100.4	64.1	I		118	22.7	1232	7.85	171.5	202.1		10.8	<	0.02	0.91	10.80	11.71	2.768	2.821	282	1033	81	17.804		
Cottonwood Creek	OK620910-04-0010E	51027	10/29/2012	9.51	86.1	14.2	I		181	9.8	1352	8.31												424				35.427	
Cottonwood Creek	OK620910-04-0010E	51196	12/11/2012	12.51	99	14.6	O	x	171	5.4	1327	8.07	158.4	232.1		8.74	<	0.02	0.68	8.76	9.44		2.5	2.446	398	775	10	27.107	
Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	13.64	108	15.2	I		206	4.4	1240	8.27	148	233.9		8.23	<	0.02	0.81	8.25	9.06	1.988	1.877	500	576	11	22.979		
Cottonwood Creek	OK620910-04-0010E	51448	2/20/2013	10.47	90.7	32.4	I	x	179	7.7	1190	8.46	149.3	218.3		6.52	<	0.02	0.77	6.54	7.31	1.425	1.373	538	757	20	31.991		
Cottonwood Creek	OK620910-04-0010E	51590	3/26/2013	12.02	104	12.6	I		196	8.1	1379	8.57	174.9	278.3		7.44	<	0.02	0.66	7.46	8.12	1.747	1.768	765	836	<	10		
Cottonwood Creek	OK620910-04-0010E	51808	4/30/2013	7.91	91.1	82.8	I	x	191	20.1	866	8.11	72.3	177.9		1.81	<	0.02	1.11	1.83	2.94	0.389	0.452	494	571	76			
Cottonwood Creek	OK620910-04-0010E	51965	6/3/2013	5.94	70.2	897	I	x	190	21.6	733.5	7.79	29.4	67.8	0.18	0.8	0.07	2.47	1.05	3.34	0.601	0.866	174	374	1307				
Cottonwood Creek	OK620910-04-0010E	52170	7/1/2013	7.93	100	56.6	I	x	285	25.6	1208	8.28	129.8	243.1	<	0.02	3.03	<	0.02	0.76	3.07	3.81	0.826	0.848	408	888	55		
Cottonwood Creek	OK620910-04-0010E	52383	7/31/2013				I	x																					
Cottonwood Creek	OK620910-04-0010E	52414	8/12/2013			181	I	x	296	26.5	805	8.17	63.9	119.6	0.04	1.79	0.16	1.25	1.99	3.20	0.448	0.536	300	541	200				
Cottonwood Creek	OK620910-04-0010E	52563	9/17/2013	5.99	92.2	640	I	x	108	23.2	606	8.34	65.4	90.3	0.04	5.21	0.13	2.37	5.38	7.71	1.201	1.512	218	410	767				
Cottonwood Creek	OK620910-04-0010E	52711	10/22/2013	10.05	101.4	23.7	I		222	14.2	1091	8.21	114.9	199.6		6	<	0.02	0.62	6.02	6.64	1.484	1.523	302	670	26			
Cottonwood Creek	OK620910-04-0010E	52933	12/3/2013	11.02	102.9	11	I		289	10.1	1306	8.28	142	221.2		5.49	0.59	0.61	6.08	6.69	1.511	1.522	483	800	<	10			
Cottonwood Creek	OK620910-04-0010E	53078	1/13/2014	12.93	107.6	8.64	I		183	7.9	1357	8.55	134.6	238.9		6.33	1.18	0.48	6.61	6.99	1.606	1.649	396	840	10				
Cottonwood Creek	OK620910-04-0010E	53413	2/18/2014	13.27	118.3	32.1	I	x	424	11	1342	7.18	140.2	239.9		5.75	0.26	0.74	6.01	6.75	1.14	1.18	522	820	50				
Cottonwood Creek	OK620910-04-0010E	53238	3/24/2014	12.18	110.7	31.3	Both		264	11.7	1353	8.52	157.5	231.6		4.43	<	0.02	0.98	4.45	5.43	0.935	0.955	312	810	27	77.649		
Cottonwood Creek	OK620910-04-0010E	53538	4/29/2014	7.35	76.9	113	I	x	212	17.3	1244	8.48	125.2	205.5		1.99	0.27	1.48	2.26	3.74	0.94	1.103	342	740	120				
Council Creek	OK620900-02-0050H	50280	5/16/2012	8.92	94.4	36.6	I		218	17.9	704	7.8												273					
Council Creek	OK620900-02-0050H	50219	6/12/2012	6.58	80.9	139	I		283	23.5	778	8.02	94.9	13.9	0.08	0.34	<	0.02	1.59	0.44	1.95	0.036	0.136	275	458	74	0		
Council Creek	OK620900-02-0050H	50523	7/24/2012	1.86	26.7	101	I		198	27.5	819	7.34	157.4	10.1	0.06	<	0.02	<	0.02	3.23	0.10	3.27	0.046	0.305	218	437	59	0	
Council Creek	OK620900-02-0050H	50618	8/14/2012				O																					0	
Council Creek	OK620900-02-0050H	50692	8/21/2012	14.82	180	282	I	x	122	23.6	991	8.25	227.2	52.2	0.04	<	0.02	<	0.02	5.49	0.08	5.53	0.072	0.477	231	700	170	0	
Council Creek	OK620900-02-0050H	50822	9/24/2012	9.7	107.6	542	I		146	21	545	6.95	65.5	32.1		<	0.02	<	0.02	6.37	0.04	6.41	0.117	0.739	191	135	100	0	
Council Creek	OK620900-02-0050H	51063	10/30/2012	3.5	30.2	21.5	O	x	274	8.6	634	7.05	37.3	4.8		<	0.02	<	0.02	3.32	0.04	3.36	0.047	0.347	335	175	<	10	0
Council Creek	OK620900-02-0050H	51191	12/10/2012	3.3	25.7	7.13	O	x	485	5.8	1098	7.67	79.4	22.7		<	0.02	<	0.02	1.08	0.04	1.12	0.116	0.226	594	600	<	10	0
Council Creek	OK620900-02-0050H	51322	1/23/2013	8.14	63	2.69	O	x	460	5.6	1198	7.42	88.3	41		<	0.02	<	0.02	0.66	0.04	0.70	0.021	0.085	582	680	<	10	0
Council Creek	OK620900-02-0050H	51417	2/19/2013	8.24	67.1	6.26	O	x	407	6.9	1084	7.96	88.4	52.8		<	0.02	<	0.02	0.57	0.04	0.61	0.014	0.061	557	609	<	10	0
Council Creek	OK620900-02-0050H	51608	3/25/2013	7.72	63	6.48	O		193	7.1	632	7.44	67.5	28.1		<	0.02	<	0.02	0.64	0.04	0.68	0.006	0.042	272	560	<	10	0
Council Creek	OK620900-02-0050H	51788	4/29/2013	7.45	81.7	11	O		172	19.8	589	7.99	67.2	18.6		<	0.02	<	0.02	0.93	0.04	0.97	0.011	0.062	222	25	<	10	0.5
Council Creek	OK620900-02-0050H	51968	6/3/2013	5.79	65	61	I	x	133	21	312.5	7.73	22.3	13.2	0.09	0.27	<	0.02	0.9	0.38	1.19	0.087	0.137	153	160	<	10	6.838	
Council Creek	OK620900-02-0050H	52191	7/2/2013			62.3	O																					0	
Council Creek	OK620900-02-0050H	52218	7/9/2013	4.4	56.5	87.3	I		181	27.5	426.4	8.03	41.3	16.4	0.02	<	0.02	<	0.02	1.16	0.06	1.20	0.01	0.102	212	329	44	0	
Council Creek	OK620900-02-0050H	52499	8/12/2013	6.41	79.4	33.5	I	x	114	26.2	312.3	7.33	18.8	11.6	<	0.02	0.2	<	0.02	0.94	0.24	1.16	0.032	0.082	116	280	20	1.108	
Council Creek	OK620900-02-0050H	52536	9/16/2013	5.05	60.2	71.3	I		206	24.1	370.8	7.93	48.8	16.6	0.03	0.03	<	0.02	0.99	0.08	1.04	0.011	0.09	232	300	48	0		
Council Creek	OK620900-02-0050H	52713	10/21/2013	11.1	99.9	24.5	I		170	11.2	390.1	7.64	36.5	28.1		<	0.02	<	0.02	0.59	0.04	0.63	0.009	0.037	253	280	<	10	0
Council Creek	OK620900-02-0050																												

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Crooked Creek (Beaver)	OK620930-00-0100G	50545	7/31/2012	1.31	15.6	33.9	I		232	23.8	11199	7.48	4094.8	398.2	0.48	0.48	< 0.02	9.02	0.98	9.52	0.048	0.385	780	7440	80	0	
Crooked Creek (Beaver)	OK620930-00-0100G	50745	8/28/2012	4.69	55.1	21			93	20.6	15639	8.23	5025.4	872	0.36	1.01	< 0.02	7.13	1.39	8.16	0.023	0.288	1024	9960	47	0	
Crooked Creek (Beaver)	OK620930-00-0100G	51356	1/29/2013	7.59	64.6	2.05	O		215	7.6	5081	8.06	1489.9	252.4		< 0.02	< 0.02	0.38	0.04	0.42	0.006	0.018	950	2740	< 10	< 0.1	
Crooked Creek (Beaver)	OK620930-00-0100G	51559	3/5/2013	9.7	77.1	1.38	O		230	4.9	5140	8.22	1478.1	223.1		< 0.02	< 0.02	0.28	0.04	0.32	< 0.005	0.019	760	2767	< 10		
Crooked Creek (Beaver)	OK620930-00-0100G	51619	4/2/2013	9.16	75.6	1.83	O		240	6.3	5273	8.05	1497	218.5		< 0.02	< 0.02	0.33	0.04	0.37	< 0.005	0.018	640	3080	< 10		
Crooked Creek (Beaver)	OK620930-00-0100G	51837	5/7/2013	3.87	40.1	1.33	O		197	16.3	5200	7.66	1516.7	214		< 0.02	< 0.02	0.34	0.04	0.38	< 0.005	0.021	610	2720	< 10	< 0.2	
Crooked Creek (Beaver)	OK620930-00-0100G	51996	6/11/2013	1.9	22.1	0.6	O		198	22.2	4762	7.54	1428.1	185.1	< 0.02	< 0.02	< 0.02	0.77	0.06	0.81	< 0.005	0.018	340	2700	< 10		
Crooked Creek (Beaver)	OK620930-00-0100G	52028	6/18/2013																								
Crooked Creek (Beaver)	OK620930-00-0100G	52249	7/16/2013	2.9	32.9	2.56	O		252	20.7	4566	7.59	1288	218.8	0.02	< 0.02	< 0.02	0.59	0.06	0.63	0.008	0.028	580	2680	< 10	0	
Crooked Creek (Beaver)	OK620930-00-0100G	52610	8/20/2013	1.13	13	1.19	O		261	21.8	4379	7.51	1215.1	178.2	< 0.02	< 0.02	< 0.02	0.5	0.06	0.54	0.016	0.031	5.87	2560	< 10	0	
Crooked Creek (Beaver)	OK620930-00-0100G	52843	9/24/2013	8	100.4	1.18	O		247	22.6	4769	8.38	1398.6	240.3		< 0.02	< 0.02	0.52	0.04	0.56	0.033	0.047		2700	< 10	0.007	
Crooked Creek (Beaver)	OK620930-00-0100G	52740	10/29/2013	7.2	70.2	> 1000	I	x	70	14.2	152	8.35	16.2	11.6		0.46	0.06	3.37	0.52	3.89	0.427	0.779	54	170	800		
Crooked Creek (Beaver)	OK620930-00-0100G	52995	12/31/2013	12.1	83.9	1.73	O		246	-0.2	5307	7.84	1449.1	217.8		< 0.02	< 0.02	0.33	0.04	0.37	< 0.005	0.012	850	2900	< 10	0.1	
Crooked Creek (Beaver)	OK620930-00-0100G	53092	1/22/2014	11.21	80.1	1.87	O		259	0.6	5154	7.88	1364.4	202.6		< 0.02	< 0.02	0.18	0.04	0.22	< 0.005	0.016	630	2800	< 10	0.1	
Crooked Creek (Beaver)	OK620930-00-0100G	53172	2/25/2014	10.35	78	1.64	I		215	3.2	3538	8.06	1374	203.4		< 0.02	< 0.02	0.33	0.04	0.37	< 0.005	0.017	565	2800	< 10	0.1	
Crooked Creek (Beaver)	OK620930-00-0100G	53259	4/1/2014	7.07	64	1.62			20	10.6	5177	7.47	1455.5	201.1		< 0.02	< 0.02	0.37	0.04	0.41	< 0.005	0.02	675	2900	< 10	< 0.2	
Crooked Creek (Beaver)	OK620930-00-0100G	53556	5/6/2014	2.5	27	0.71	I		75	18	5085	7.51	1474.9	198.1		< 0.02	< 0.02	0.49	0.04	0.53	< 0.005	0.018	510	2800	< 10	0.1	
Crooked Creek (Grant)	OK621000-06-0010C	50245	6/18/2012	6.17	77.5	25.9	I	x	333	24.5	1089	8.03	141.7	122.3	0.12	0.56	< 0.02	1.5	0.70	2.08	0.249	0.315	326	633	21		
Crooked Creek (Grant)	OK621000-06-0010C	50386	7/11/2012	12.63	177.9	8.68	O		373	31.2	1095	8.56														0.06	
Crooked Creek (Grant)	OK621000-06-0010C	50474	7/18/2012																								
Crooked Creek (Grant)	OK621000-06-0010C	50563	7/31/2012	5.34	21.2	6.88	O		298		1071	8.22	123.9	71.7	0.13	0.25	< 0.02	1.15	0.40	1.42	0.064	0.135	320	558	< 10	0.922	
Crooked Creek (Grant)	OK621000-06-0010C	50650	8/7/2012				O																				
Crooked Creek (Grant)	OK621000-06-0010C	50704	8/28/2012	8.5	109.2	10.2	I	x	337	26.8	977	8.44	119.9	72.5	< 0.02	< 0.02	< 0.02	0.66	0.06	0.70	0.03	0.075	635	591	19	0.487	
Crooked Creek (Grant)	OK621000-06-0010C	50940	10/2/2012	5.17	56.4	15.3	I	x	297	17.7	911	8.34	108.5	66.2		< 0.11	< 0.02	0.7	0.13	0.83	0.026	0.077	229	450	50	0.559	
Crooked Creek (Grant)	OK621000-06-0010C	51083	11/5/2012	5.81	56.9	5.21	O		335	12.8	775	8.36	119.1	72.5		0.12	< 0.02	0.71	0.14	0.85	0.042	0.085	405	633	< 10	0	
Crooked Creek (Grant)	OK621000-06-0010C	51212	12/17/2012	10.56	101.5	12.6	I	x	464	6.8	1155	8.29	123.9	73.3		0.38	< 0.02	0.77	0.40	1.17	0.043	0.122	425	646	< 10	0	
Crooked Creek (Grant)	OK621000-06-0010C	51339	1/28/2013	13.19	123.7	18.1	O	x	375	10.2	1017	8.78	108.6	76.4		< 0.02	< 0.02	3.28	0.04	3.32	0.013	0.251	710	604	20	1.347	
Crooked Creek (Grant)	OK621000-06-0010C	51547	3/4/2013	13.58	118	23.6	I	x	362	7.4	1128	8.68	130	129.8		0.37	< 0.02	1.1	0.39	1.49	0.01	0.097	296	760	19	0.998	
Crooked Creek (Grant)	OK621000-06-0010C	51629	4/2/2013	6.76	63.5	23.4	I	x	373	11.2	763	8.34	168.2	114.2		< 0.02	< 0.02	1.33	0.04	1.37	0.019	0.164	655	738	28	1.432	
Crooked Creek (Grant)	OK621000-06-0010C	51825	5/7/2013	13.49	141	23.9	I	x	337	15.8	973	8.6	122	84.7		< 0.02	< 0.02	1.06	0.04	1.10	0.017	0.177	640	576	22	0.54	
Crooked Creek (Grant)	OK621000-06-0010C	52016	6/11/2013	4.98	63.5	25.8	I	x	340	25.5	706	8.35	103.9	69.5	0.13	0.07	< 0.02	1.26	0.22	1.35	0.256	0.34	270	700	17	0.75	
Crooked Creek (Grant)	OK621000-06-0010C	52038	6/18/2013																								
Crooked Creek (Grant)	OK621000-06-0010C	52258	7/15/2013	4.75	59.2	27.7	I		434	24.6	919	8.55	111.5	60	0.1	0.05	0.02	1.12	0.17	1.19	0.114	0.204	355	560	< 10	0	
Crooked Creek (Grant)	OK621000-06-0010C	52591	8/19/2013			36.6	I	x	241	26.4	576	8.35	47.3	58.8	< 0.02	0.16	0.12	1.19	0.30	1.47	0.329	0.407	550	380	< 10	4.35	
Crooked Creek (Grant)	OK621000-06-0010C	52570	9/23/2013	8.71	99.3	17.8	I		341	21.8	780	8.41	112.8	67.1		0.14	< 0.02	0.72	0.16	0.88	0.059	0.111	330	530	12	0.433	
Crooked Creek (Grant)	OK621000-06-0010C	52728	10/28/2013	10.85	109.4	4.75	O		341	13.9	925	8.69	96.7	74.2		0.06	< 0.02	0.53	0.08	0.61	0.009	0.058	500	540	< 10	0.198	
Crooked Creek (Grant)	OK621000-06-0010C	53069	12/17/2013	19.05	153.4	6.8	O		382	4.9	1140	8.32	99	73.8		0.7	< 0.02	0.96	0.72	1.68	0.063	0.161	650	650	< 10		
Crooked Creek (Grant)	OK621000-06-0010C	53387	1/22/2014	16.89	132.1	7.41	O		339	3.8	874	111.2	84.2		< 0.02	0.17	1	0.19	1.19	< 0.005	0.116	550	610	< 10	0		
Crooked Creek (Grant)	OK621000-06-0010C	53284	2/19/2014	14.3	124.6	7.9	O		298	7.5	974	8.93	103.6	77.3		0.45	0.23	0.72	0.68	1.40	< 0.005	0.079	310	550	< 10		
Crooked Creek (Grant)	OK621000-06-0010C	53439	4/1/2014	8.97	87.3					12.7	1182	8.5	133.5	85.1		< 0.02	< 0.02	1.11	0.04	1.15	0.02	0.129		660	24	3	
Crooked Creek (Grant)	OK621000-06-0010C	53591	5/6/2014	4.11	47.7	21.6	O		361	20.2	1225	7.82	185.7	84		< 0.02	< 0.02	1.32	0.04	1.36	0.071	0.196	375	730	23	0.421	
Dead Indian Creek	OK620910-05-0080A	50198	6/12/2012	5.64	66.9	26.4	I		234	24.3	1423	8.24	119.7	414	0.02	0.1	< 0.02	0.76	0.14	0.88	0.134	0.171	560	961	15	0.276	
Dead Indian Creek	OK620910-05-0080A	50413	7/9/2012																								
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	2.92	36.4	70	O		155	26.6	1958	7.79											514				
Dead Indian Creek	OK620910-05-0080A	50511	7/24/2012	2.17	26.5	19			171	25	7.94	258	660.8	< 0.02	0.03	< 0.02	1.83	0.07	1.88	0.022	0.161	750	1428	< 10	0		
Dead Indian Creek	OK620910-05-0080A	50662	8/21/2012	3.24	38.3	60.8	I		180	23.4	1960	8.21	223	659.8	0.03	0.03	< 0.02	1.27	0.08	1.32	0.108	0.218	464	1300	56	0	
Dead Indian Creek	OK620910-05-0080A	50844	9/25/2012	3.25	27.6	147	I		229	20.8	1950	7.93	226.5	681.5		< 0.02	< 0.02	1.26	0.04	1.30	0.094	0.184	452	1370	30	< 0.1	
Dead Indian Creek	OK620910-05-0080A	51017	10/30/2012	10.47	91.3	8.21	O		241	9.3	1724	8.25	143.3	476		0.22	< 0.02	0.6	0.24	0.84	0.063	0.08	478	1145	< 10	0.077	
Dead Indian Creek	OK620910-05-0080A	51185	12/11/2012	17.48	128.9	15.1	O		321	2.5	1795	8.52	156	464		0.15	< 0.02	0.32	0.17								

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Dead Indian Creek	OK620910-05-0080A	52496	8/13/2013	6.47	79.5	56.6	I	x	245	25.6	1825	8.17	175.8	582	0.03	1.03	< 0.02	1.11	1.08	2.16	0.279	0.324	840	1280	47	18.242	
Dead Indian Creek	OK620910-05-0080A	52531	9/17/2013	5.1	59.8	55.3	I	x	239	23.1	2061	8.04	233.3	544.6	0.06	0.91	< 0.02	0.72	0.99	1.65	0.137	0.172	480	1400	53	1.937	
Dead Indian Creek	OK620910-05-0080A	52700	10/22/2013	10.94	99	3.46	O		245	10.6	2303	8.21	260.9	625.6		1.04	< 0.02	0.44	1.06	1.50	0.022	0.031	800	1600	< 10	3.921	
Dead Indian Creek	OK620910-05-0080A	52922	12/3/2013	8.85	69.5	9.84	O		301	4.8	2386	7.89	274.3	726.9		1.55	< 0.02	0.46	1.57	2.03	0.013	0.041	1430	1700	< 10	7.237	
Dead Indian Creek	OK620910-05-0080A	53040	1/14/2014	10.9	81.6	9.79	O		290	3	2450	8.02	264.1	688.2		1.45	0.4	0.62	1.85	2.47	0.01	0.046	620	1500	< 10	3	
Dead Indian Creek	OK620910-05-0080A	53161	2/19/2014	9.44	77.2	13.9	I		246	6.4	2360	7.83	274.1	849		0.52	0.3	0.94	0.82	1.76	0.006	0.088	1140	1600	< 10	4.244	
Dead Indian Creek	OK620910-05-0080A	53248	3/25/2014	8.25	75	6.64	I		210	5.4	2230	7.49	250.1	615.2		0.1	< 0.02	0.72	0.12	0.84	0.006	0.064	750	1500	< 10	6.982	
Dead Indian Creek	OK620910-05-0080A	53545	4/29/2014	5.24	51.8	17.5	I		255	14.6	1994	7.81	235.6	502.7		0.03	< 0.02	1.21	0.05	1.26	0.115	0.19	527	1300	< 10	0.782	
Deep Creek	OK620910-02-0250C	50193	6/11/2012	5.69	70.9	194	I		234	26.6	382	7.94	39.5	239.2	0.16	0.89	< 0.02	1.29	1.07	2.20	0.27	0.345	371	733	67	1.73	
Deep Creek	OK620910-02-0250C	50333	6/27/2012	5.59	70.8	74.3	I		175	26.4	1529	7.61											730			0.928	
Deep Creek	OK620910-02-0250C	50418	7/9/2012																								
Deep Creek	OK620910-02-0250C	50506	7/23/2012	6.07	74.8	223			212	25.8	1021	8.07	66.3	222.3	0.07	< 0.02	< 0.02	1.23	0.11	1.27	0.095	0.229	640	664	68	0.269	
Deep Creek	OK620910-02-0250C	50657	8/20/2012	6.48	72.7	110	I		239	20.9	852	8.25	66.3	168	0.06	0.14	< 0.02	0.76	0.22	0.92	0.053	0.121	343	514	62	0.377	
Deep Creek	OK620910-02-0250C	50839	9/24/2012	5.66	60.6	52.1	I		266	18.5	920	8.17	61.8	161		0.16	< 0.02	0.8	0.18	0.98	0.035	0.064	395	544	37	0.676	
Deep Creek	OK620910-02-0250C	51012	10/29/2012	12.14	104.5	34.6	I		289	8.7	1025	8.42	62.9	199.5		0.71	< 0.02	0.63	0.73	1.36	0.027	0.057	448	668	15	0.797	
Deep Creek	OK620910-02-0250C	51180	12/10/2012	16.17	111.7	22.9	O		325	0.2	1035	8.72	58	173.2		1.46	< 0.02	0.32	1.48	1.80	0.011	0.031	463	597	12	0.812	
Deep Creek	OK620910-02-0250C	51304	1/22/2013	12.82	93.1	24.8	O		362	2.4	1332	8.28	159.2	338.6		1.65	< 0.02	0.38	1.67	2.05	0.012	0.041	1050	861	20	0.906	
Deep Creek	OK620910-02-0250C	51450	2/19/2013	13.68	107.7	60.1	I		282	5.1	1275	8.58	83.6	307.2		0.9	< 0.02	0.67	0.92	1.59	0.026	0.072	480	819	37	1.252	
Deep Creek	OK620910-02-0250C	51592	3/25/2013	14.21	108.1	26	I		221	3.7	1870	8.64	152.3	616		0.9	0.02	0.37	0.92	1.29	0.014	0.046	800	1362	18	1.203	
Deep Creek	OK620910-02-0250C	51792	4/29/2013	8.65	94	72.6	I		205	19	2505	7.94	180.6	1068.7		0.13	< 0.02	0.77	0.15	0.92	0.044	0.1	990	1946	68	1.324	
Deep Creek	OK620910-02-0250C	51869	5/20/2013																								
Deep Creek	OK620910-02-0250C	51950	6/3/2013	5.5	62	166	I	x	155	21	1765	7.74	69.8	867.4	0.46	0.55	0.1	1.38	1.11	2.03	0.176	0.223	710	1382	98	4.366	
Deep Creek	OK620910-02-0250C	52226	7/8/2013	3	36	25.8	I		207	24.5	1385	7.86	92.8	403.3	0.06	< 0.02	< 0.02	0.67	0.10	0.71	0.046	0.1	1240	881	18	0.463	
Deep Creek	OK620910-02-0250C	52489	8/12/2013	1.12	13.8	56.9	I	x	177	26.5	4163	7.53	83.4	442.4	0.05	0.49	0.13	0.92	0.67	1.54	0.172	0.228	410	911	26	0	
Deep Creek	OK620910-02-0250C	52526	9/16/2013	6.4	74.7	69.3	I	x	224	22.8	1830	7.93	109.1	639.4	0.14	0.86	0.06	0.83	1.06	1.75	0.049	0.11	680	1310	15		
Deep Creek	OK620910-02-0250C	52695	10/21/2013	11.51	107.6	70.6	I		315	12.1	1718	8.15	100	578.3		2.31	0.27	0.47	2.58	3.05	0.086	0.119	646	1300	29	1.296	
Deep Creek	OK620910-02-0250C	52917	12/2/2013	15.45	121.2	20	O		320	4.8	2143	8.24	144.8	773.8		1.76	< 0.02	0.42	1.78	2.20	0.011	0.034	1180	1600	< 10	2.214	
Deep Creek	OK620910-02-0250C	53035	1/13/2014	11.94	91.7	21.3	O		285	4	2281	8.3	146.7	1209.2		1.6	< 0.02	0.47	1.62	2.09	0.009	0.041	1420	1700	< 10	1.72	
Deep Creek	OK620910-02-0250C	53156	2/18/2014	4.89	99	26.3	I		278	7.1	2335	7.89	154.7	867.1		1.1	0.18	0.69	1.28	1.97	0.011	0.065	1270	1800	< 10	1.299	
Deep Creek	OK620910-02-0250C	53243	3/24/2014	13.76	114.3	53.6	I		251	7.1	2410	7.73	162.9	956.7		1.03	< 0.02	0.74	1.05	1.79	0.026	0.084	910	1900	37	2.471	
Deep Creek	OK620910-02-0250C	53540	4/28/2014	8.27	81	67.5	I	x	279	14.1	2006	7.99	148.8	838.1		0.44	0.22	1.17	0.66	1.83	0.03	0.094	690	1500	37	1.381	
Deer Creek	OK621000-04-0010D	50293	5/30/2012	6.42	80.2	33	I		330	24.6	1209	8.05															5.635
Deer Creek	OK621000-04-0010D	50253	6/19/2012	6.25	82.9	31.2	I		317	27.9	1881	8	382.3	144.5	< 0.02	< 0.02	< 0.02	0.83	0.06	0.87	0.069	0.137	532	1111	39		
Deer Creek	OK621000-04-0010D	50471	7/18/2012																								
Deer Creek	OK621000-04-0010D	50560	7/31/2012	4.8	62.8	34.9	I		286	27.1	2027	8.15	389.8	253.7	< 0.02	< 0.02	< 0.02	0.97	0.06	1.01	0.162	0.23	660	1133	39	0.108	
Deer Creek	OK621000-04-0010D	50653	8/7/2012				O																				
Deer Creek	OK621000-04-0010D	50701	8/28/2012	5.52	67.6	354	I	x	88	24.2	357.8	7.76	39.2	25.7	0.08	2.42	0.18	2.57	2.68	5.17	0.342	0.471	103	410	150		
Deer Creek	OK621000-04-0010D	50943	10/2/2012	6.16	67.7	29.7	I	x	283	18.2	1207	8.46	184.6	166.8		< 0.02	< 0.02	0.84	0.04	0.88	0.173	0.195	448	916	32	0.182	
Deer Creek	OK621000-04-0010D	51086	11/6/2012	6.46	57.8	14.7	I		350	8.8	2010	7.98	367	253.8		< 0.02	< 0.02	0.72	0.04	0.76	0.176	0.215	720	1300	< 10	0.145	
Deer Creek	OK621000-04-0010D	51215	12/18/2012	10.56	86.1	12.6	I	x	331	5	2412	8.19	485.6	221.8		< 0.02	< 0.02	0.31	0.04	0.35	0.078	0.103	746	1403	< 10	1.788	
Deer Creek	OK621000-04-0010D	51342	1/29/2013	9.56	94.9	47.4	I	x	339	12.7	1730	8.24	320.5	204.6		< 0.02	< 0.02	0.95	0.04	0.99	0.03	0.134	660	1062	38	1.164	
Deer Creek	OK621000-04-0010D	51392	2/4/2013	12.27	105.3		I		7.6	2208	8.29																0.749
Deer Creek	OK621000-04-0010D	51550	3/4/2013	12.79	120.7	20.1	I	x	288	10.5	1750	8.58	374.7	132.8		< 0.02	< 0.02	0.49	0.04	0.53	0.017	0.055	538	1060	22	1.436	
Deer Creek	OK621000-04-0010D	51632	4/2/2013	8.04	75.8	34.7	I	x	317	11.4	2316	8.21	557.5	164.2		< 0.02	< 0.02	0.42	1.3	0.04	0.067	0.143	1095	1384	27	1.094	
Deer Creek	OK621000-04-0010D	51828	5/7/2013	7.51	79.4	30.8	I	x	283	16.3	1718	8.26	375.5	114.8		< 0.02	< 0.02	0.78	0.04	0.82	0.065	0.16	540	994	22	0.873	
Deer Creek	OK621000-04-0010D	52013	6/11/2013	4.45	56.7	79.6	I	x	211	25.8	1039	8.21	193.6	59.3	< 0.02	< 0.02	< 0.02	1.29	0.06	1.33	0.146	0.25	425	645	61	1.707	
Deer Creek	OK621000-04-0010D	52035	6/18/2013																								
Deer Creek	OK621000-04-0010D	52259	7/16/2013	5.68	68.5	123	I	x	234	23.3	906	8.32	149.7	64.2	0.11	0.26	< 0.02	1.54	0.39	1.82	0.172	0.279	271	560	87	2.827	
Deer Creek	OK621000-04-0010D	52594	8/20/2013			135	I	x	109	25.2	612	8.24	98.5	31.9	0.03	0.33	< 0.02	1.51	0.38	1.86	0.268	0.363	186	427	76	4.264	
Deer Creek	OK621000-04-0010D	52573	9/24/2013	6.99	75.9	21.5	O		211	17.5	1																

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Doga Creek	OK621200-02-0020C	50214	6/12/2012	6.09	76.4	9.65	I	x	165	28.8	226.8	8.18	24.3	21.2	0.02	0.11	0.16	0.6	0.29	0.87	0.009	0.043	191	265	10	0	
Doga Creek	OK621200-02-0020C	50319	6/19/2012	5.77	72.1	18.4	O		227	28.1	492	7.9											210			0	
Doga Creek	OK621200-02-0020C	50494	7/24/2012	3.64	43.2	5.79			187	27.3	460	7.56	29.3	17.9	< 0.02	< 0.02	< 0.02	0.97	0.06	1.01	0.009	0.073	173	229	11	0	
Doga Creek	OK621200-02-0020C	50637	8/14/2012																							0	
Doga Creek	OK621200-02-0020C	50687	8/21/2012	6.49	75.5	41.4	O	x	178	23.5	456.3	8.08	34.7	18.2	< 0.02	< 0.02	< 0.02	1.03	0.06	1.07	0.024	0.133	164	285	38	0	
Doga Creek	OK621200-02-0020C	50834	9/25/2012	6.34	69.6	51.2	I	x	188	20.6	525	8.05	43.9	21	< 0.02	< 0.02	< 0.02	1.43	0.04	1.47	0.01	0.085	199	278	31	0	
Doga Creek	OK621200-02-0020C	51023	10/30/2012	5.02	42.2	12.6	O	x	187	7.8	436.1	7.09	43.9	25.4	< 0.02	< 0.02	< 0.02	1.08	0.04	1.12	0.068	0.122	292	324	< 10	0	
Doga Creek	OK621200-02-0020C	51175	12/11/2012	4.51	27.1	9.41	O	x	266	3.2	697	7.03	54.4	28	< 0.02	< 0.02	< 0.02	1.05	0.04	1.09	0.067	0.127	437	415	68	0	
Doga Creek	OK621200-02-0020C	51345	1/23/2013	3.64	27.2	6.67	O		238	2.3	715	6.98	47.8	27.2	< 0.02	< 0.02	< 0.02	1.05	0.04	1.09	0.013	0.072	381	373	43	0	
Doga Creek	OK621200-02-0020C	51424	2/19/2013	8.24	75.6	11.1	O	x	189	11.4	975	7.51	87.2	68.8	< 0.02	< 0.02	< 0.02	0.49	0.04	0.53	0.005	0.038	249	513	< 10	0	
Doga Creek	OK621200-02-0020C	51605	3/25/2013	4.49	39.1	8.24	O		179	10.6	478.1	7.29	30.3	38.6	< 0.02	< 0.02	< 0.02	0.87	0.04	0.91	< 0.005	0.038	224	337	< 10	0	
Doga Creek	OK621200-02-0020C	51813	4/30/2013	7.04	88.5	30.7	I	x	135	28.1	341.9	7.34	17.1	15.2	< 0.02	< 0.02	< 0.02	0.8	0.04	0.84	0.039	0.102	151	200	23	0	
Doga Creek	OK621200-02-0020C	51975	6/4/2013	9.1	112.5	36.9	I	x	112	26	269.9		8.8	12.9	< 0.02	< 0.02	< 0.02	0.7	0.31	0.99	0.038	0.082	137	166	< 10	6.124	
Doga Creek	OK621200-02-0020C	52188	7/2/2013			9.03	O																			0	
Doga Creek	OK621200-02-0020C	52215	7/8/2013	9.71	137.1	13.1	O		156	29.4	906	7.72	195.2	56.9	< 0.02	< 0.02	< 0.02	0.69	0.06	0.73	0.007	0.06	208	568	< 10	0	
Doga Creek	OK621200-02-0020C	52506	8/13/2013	4.02	51	26.6	I	x	111	27.2	558	7.08	70.4	39.7	0.07	0.39	< 0.02	0.87	0.48	1.28	0.219	0.261	152	329	< 10	0	
Doga Creek	OK621200-02-0020C	52543	9/17/2013	3.35	38.8	309	I	x	62	23	136.7	6.98	2.5	3.3	< 0.02	0.38	0.02	1.72	0.42	2.12	0.181	0.354	69	180	140	6.371	
Doga Creek	OK621200-02-0020C	52720	10/22/2013	9.68	93.3	22.9	O		142	13.7	280.1	8.33	7.8	7.4		0.05	< 0.02	0.68	0.07	0.75	0.036	0.108	192	180	< 10	0.2	
Doga Creek	OK621200-02-0020C	52941	12/23/2013	9.66	78.1	27.3	O		197	7.1	426.1	7.39	12.8	13.5		0.06	< 0.02	0.54	0.08	0.62	0.06	0.103	268	250	< 10	1.325	
Doga Creek	OK621200-02-0020C	53052	1/14/2014	12.3	97.9	5.05	O		278	5.7	566	7.51	15.2	22.1		< 0.02	0.03	0.18	0.05	0.23	0.013	0.039	289	350	< 10	1.168	
Doga Creek	OK621200-02-0020C	53153	2/19/2014	10.82	97.6	9.77	O		282	9.6	605	7.74	19.8	21.5		< 0.02	0.06	0.32	0.08	0.40	0.012	0.044	294	350	< 10		
Doga Creek	OK621200-02-0020C	53228	3/24/2014	9.97	100	5.25	O		280	15.6	575	8.28	21.4	21.5		< 0.02	< 0.02	0.33	0.04	0.37	0.012	0.038	325	340	< 10	0.202	
Doga Creek	OK621200-02-0020C	53529	4/29/2014	10.08	103.7	3.49	O		242	16.7	530	8.29	25	17.2		< 0.02	< 0.02	0.62	0.04	0.66	0.006	0.032	281	320	< 10	0.1	
Driftwood Creek	OK621010-03-0030C	50250	6/19/2012	4.52	57	157	I		374	24.2	1946	7.87	187.3	802.7	< 0.02	< 0.02	< 0.02	1.79	0.06	1.83	0.118	0.328	912	1535	635	0	
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	11.98	161.9	71.9	I		302	28.2	2458	8.26															
Driftwood Creek	OK621010-03-0030C	50556	7/30/2012	5.12	69.5	102	I		293	28.7	2633	8.06	290.4	905	< 0.02	< 0.02	< 0.02	1.45	0.06	1.49	0.046	0.201	920	1831	117		
Driftwood Creek	OK621010-03-0030C	50572	8/1/2012																								
Driftwood Creek	OK621010-03-0030C	50647	8/7/2012				I																				0
Driftwood Creek	OK621010-03-0030C	50698	8/27/2012	7.61	102.3	7.56	I		282	28.8	2393	8.27	200.5	889.7	< 0.02	< 0.02	< 0.02	1.35	0.06	1.39	0.036	0.172	1020	1731	85	0	
Driftwood Creek	OK621010-03-0030C	50938	10/1/2012	7.92	91.3	75.3	I	x	334	19.8	2224	8.52	230.4	791.3		< 0.02	< 0.02	< 0.02	1.2	0.04	1.24	0.044	0.147	488	1567	81	0
Driftwood Creek	OK621010-03-0030C	51080	11/5/2012	9.28	88	53	I		337	11.1	2232	8.59	217.3	792.8		< 0.02	< 0.02	0.94	0.04	0.98	0.026	0.092	1205	1611	31	0	
Driftwood Creek	OK621010-03-0030C	51210	12/17/2012	11.03	92	29.4	I		374	5.3	2159	8.55	187	754.8		< 0.02	< 0.02	0.72	0.04	0.76	0.012	0.066	884	1533	21	0	
Driftwood Creek	OK621010-03-0030C	51336	1/28/2013	9.08	87.5	68.8	I		390	11	1607	8.35	117.9	475		< 0.02	< 0.02	0.66	0.04	0.70	0.038	0.101	830	1141	69	0	
Driftwood Creek	OK621010-03-0030C	52091	3/4/2013	10.71	101.5	14.7	Irgaics	x	237	10.5	1677	8.27	135.7	497.8		0.1	< 0.02	0.47	0.12	0.59	0.039	0.072	690	1138	32	0.097	
Driftwood Creek	OK621010-03-0030C	51626	4/1/2013	7.98	75.7	73.7	I	x	402	11.9	1920	8.23	184.8	578.4		< 0.02	< 0.02	0.71	0.04	0.75	0.042	0.122	1130	1441	59	0	
Driftwood Creek	OK621010-03-0030C	51822	5/6/2013	6.95	73.3	38.4	I		344	15.9	1690	8.04	149.4	511.7		0.03	< 0.02	0.71	0.05	0.76	0.041	0.091	805	1224	22	0	
Driftwood Creek	OK621010-03-0030C	52010	6/10/2013	14.96	203	57.7	I		355	28.5	2354	8.54	271.9	702.8	< 0.02	< 0.02	< 0.02	1.57	0.06	1.61	0.045	0.273	1015	1660	49	0	
Driftwood Creek	OK621010-03-0030C	52042	6/18/2013																								0
Driftwood Creek	OK621010-03-0030C	52255	7/15/2013	9.08	117.7	94.8	I		386	23.8	2583	8.45	296.6	810.7	0.02	< 0.02	< 0.02	1.52	0.06	1.56	0.05	0.215	983	1930	48	0	
Driftwood Creek	OK621010-03-0030C	52588	8/19/2013			> 1000	I	x	115	24.6	329.5	8.07	9.8	67.8	0.08	0.39	< 0.02	3.17	0.49	3.58	0.533	1.203	370	880	480		
Driftwood Creek	OK621010-03-0030C	52567	9/23/2013	7.22	82.8	165	I		377	19.2	1563	8.29	121.6	474.7		0.13	< 0.02	1.54	0.15	1.69	0.125	0.263	940	1100	220	0	
Driftwood Creek	OK621010-03-0030C	52725	10/28/2013	7.51	75.5	79.6	I		395	13.6	1880	8.25	160.2	548.3		0.16	< 0.02	0.89	0.18	1.07	0.058	0.13	905	1300	54	0	
Driftwood Creek	OK621010-03-0030C	53063	12/16/2013	13.49	117.5	16.2	I		333	7.4	2043	7.93	185.2	586		0.07	< 0.02	0.45	0.09	0.54	0.01	0.056		1400	< 10		
Driftwood Creek	OK621010-03-0030C	53380	1/21/2014	8.32	65.4	10.9	I		372	3.7	1854	8.27	111.9	533.6		< 0.02	< 0.02	0.93	0.04	0.97	0.027	0.136	790	1300	14	0	
Driftwood Creek	OK621010-03-0030C	53277	2/18/2014	14.78	145.8	46.1	I		285	12.3	2017	8.31	194.6	566.3		< 0.02	0.19	0.64	0.21	0.85	0.024	0.099	880	1400	36	0.1	
Driftwood Creek	OK621010-03-0030C	53433	3/31/2014	11.72	130.8	68.8	I		340	18	2444	8.22	239.7	715.3		< 0.02	< 0.02	0.91	0.04	0.95	0.047	0.159	1190	1700	54	< 0.25	
Driftwood Creek	OK621010-03-0030C	53588	5/5/2014	9.16	112.5	55.1	I		1125	21.3	2641	7.98	315.5	900.6		< 0.02	< 0.02	0.47	0.04	0.51	0.046	0.103	540	1900	47	0.05	
Duck Pond Creek	OK720500-02-0250F	50079	5/15/2012			10.1	O		206		1051																
Duck Pond Creek	OK720500-02-0250F	50303	6/5/2012	4.52	55.4	7.76	O		185	25.4	1047	7.38															
Duck Pond Creek	OK720500-02-0250F	50243	6/19/2012	5.52	62.5	5.47	O		194	21.6	1081	7.8	203.3														

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)
Duck Pond Creek	OK720500-02-0250F	51561	3/5/2013	11.24	91.1	5.84	O		216	6.2	1173	8.21	223.3	61		0.02	< 0.02	0.28	0.04	0.32	< 0.005	0.018	307	648	< 10	0.2
Duck Pond Creek	OK720500-02-0250F	51621	4/2/2013	8.25	67.8	7.18	O		224	6.9	1202	7.97	240.6	55.8		< 0.02	< 0.02	0.36	0.04	0.40	0.007	0.033	218	673	34	0.4
Duck Pond Creek	OK720500-02-0250F	51839	5/7/2013	6.4	64.8	14.9			223	15.3	1205	7.81	226.8	55.8		< 0.02	< 0.02	0.36	0.04	0.40	0.01	0.039	270	688	< 10	
Duck Pond Creek	OK720500-02-0250F	51998	6/11/2013	3.78	41.7	14	O		223	20	1197	7.72	227	42.9	0.07	< 0.02	< 0.02	0.78	0.11	0.82	0.021	0.058	235	664	19	
Duck Pond Creek	OK720500-02-0250F	52030	6/18/2013																							
Duck Pond Creek	OK720500-02-0250F	52251	7/16/2013	2.27	25.2	4.29	O		22	20.3	1127	7.87	210.3	40.2	0.05	< 0.02	< 0.02	0.51	0.09	0.55	0.018	0.043	380	639	< 10	
Duck Pond Creek	OK720500-02-0250F	52612	8/20/2013	4.76	55.6	10.1	O		226	22.9	1123	7.76	208	49	0.05	< 0.02	< 0.02	0.67	0.09	0.71	0.033	0.079	200	653	< 10	0.218
Duck Pond Creek	OK720500-02-0250F	52841	9/24/2013	7.35	83.9	16	O		186	17.4	1217	8.42	256.8	51.2		0.02	< 0.02	0.46	0.04	0.50	0.019	0.043	270	710	< 10	0.064
Duck Pond Creek	OK720500-02-0250F	52742	10/29/2013	9.54	92.7	4.15	O		221	13.9	1195	8.12	231.1	51.6		0.04	< 0.02	0.26	0.06	0.32	< 0.005	0.019	175	670	< 10	0.181
Duck Pond Creek	OK720500-02-0250F	52997	12/31/2013	11.02	82.9	3.22	O		233	2.4	1230	7.88	231.3	56		0.09	< 0.02	0.53	0.11	0.64	0.007	0.051	410	690	< 10	0.327
Duck Pond Creek	OK720500-02-0250F	53094	1/22/2014	12.4	95.4	3.72	O		7.57	4.2	1213	8.08	225.1	56		0.05	0.35	0.32	0.40	0.72	0.005	0.037	317	690	< 10	
Duck Pond Creek	OK720500-02-0250F	53174	2/25/2014	12	93.4	3.29	I		197	4.7	1151	8.16	214.4	53.2		0.02	< 0.02	0.26	0.04	0.30	< 0.005	0.022	273	660	< 10	0.5
Duck Pond Creek	OK720500-02-0250F	53261	4/1/2014	9.94	90.5	5.25	I		200	11	1165	8.03	224.6	52		< 0.02	< 0.02	0.38	0.04	0.42	0.008	0.031	207	660	< 10	0.878
Duck Pond Creek	OK720500-02-0250F	53558	5/6/2014	9.61	102.7	5.71	I		195	18.4	1157	7.88	238.1	50.2		< 0.02	< 0.02	0.33	0.04	0.37	0.007	0.031	379	630	< 10	0.35
Eagle Chief Creek: Lower	OK620920-04-0010C	50195	6/11/2012	8.37	105	17.2	O		282	27	1211	8.1	70.4	381.3	< 0.02	1.37	< 0.02	0.54	1.41	1.93	0.015	0.053	590	875	19	9.095
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	6.18	72.1	15.3	O		231	22.9	1084	7.83											455			7.59
Eagle Chief Creek: Lower	OK620920-04-0010C	50420	7/9/2012																							
Eagle Chief Creek: Lower	OK620920-04-0010C	50508	7/23/2012	8.97	112	5.01			160	26.4	937	8.06	74.5	246.1	0.03	0.46	0.08	0.58	0.57	1.12	0.007	0.034	384	652	< 10	4.358
Eagle Chief Creek: Lower	OK620920-04-0010C	50659	8/20/2012	9.8	113	4.27	O		207	22.3	802	8.15	81.3	224.2	0.06	0.71	0.18	0.62	0.95	1.51	0.006	0.04	368	628	< 10	6.084
Eagle Chief Creek: Lower	OK620920-04-0010C	50841	9/24/2012	12.84	139.9	3.58	O		217	19.4	909	8.11	75.5	248.5		1.16	< 0.02	0.51	1.18	1.69	0.005	0.025	395	625	< 10	7.242
Eagle Chief Creek: Lower	OK620920-04-0010C	51014	10/29/2012	18.81	167.3	5.36	O		257	10	1119	8.36	74.7	235.7		1.87	< 0.02	0.44	1.89	2.33	0.007	0.021	460	735	< 10	5.865
Eagle Chief Creek: Lower	OK620920-04-0010C	51182	12/10/2012	13.28	96.6	12.5	O		270	2.1	1189	8.31	74.4	264.8		2.93	< 0.02	0.26	2.95	3.21	0.011	0.036	476	771	17	9.644
Eagle Chief Creek: Lower	OK620920-04-0010C	51306	1/22/2013	13.37	13.37	4.83	O		267	2.7	1241	8.35	76.7	279.3		3.84	0.15	0.65	3.99	4.64	0.005	0.021	640	798	< 10	6.347
Eagle Chief Creek: Lower	OK620920-04-0010C	51452	2/19/2013	13.45	111.1	6.57	O		252	7	1181	8.33	75.3	280.3		2.48	0.14	0.29	2.62	2.91	0.007	0.027	431	877	< 10	22.288
Eagle Chief Creek: Lower	OK620920-04-0010C	51594	3/25/2013	12.96	104	5.71	O		219	5.8	1175	66.8	312.9			3.66	0.13	0.58	3.79	4.37	0.006	0.024	445	803	< 10	10.011
Eagle Chief Creek: Lower	OK620920-04-0010C	51794	4/29/2013	11.1	124.2	15.5	I		225	20.7	1122	8.35	62.1	281		1.71	0.07	0.62	1.78	2.40	0.013	0.041	541	726	12	10.982
Eagle Chief Creek: Lower	OK620920-04-0010C	51871	5/20/2013																							
Eagle Chief Creek: Lower	OK620920-04-0010C	51952	6/3/2013	10.61	122.1	13.8	O		225	22.2	1116	8.29	72.4	340.1	< 0.02	1.28	0.09	0.38	1.39	1.75	0.012	0.029	459	795	16	9.085
Eagle Chief Creek: Lower	OK620920-04-0010C	52228	7/8/2013	9.6	116.4	16.4	O		216	25	822	75.8	248.9	< 0.02	0.54	< 0.02	1.34	0.58	1.90	0.01	0.111	358	689	24	5.895	
Eagle Chief Creek: Lower	OK620920-04-0010C	52491	8/12/2013	6.35	77.2	4.27	I	x	155	25.1	740	7.94	18.6	218.4	< 0.02	0.61	< 0.02	1.2	0.65	1.83	0.304	0.411	340	590	240	
Eagle Chief Creek: Lower	OK620920-04-0010C	52528	9/16/2013	7.8	90.7	20	I	x	243	22.9	1251	8.08	61.1	375.5	0.02	1.69	0.13	0.54	1.84	2.36	0.017	0.062	480	865	20	
Eagle Chief Creek: Lower	OK620920-04-0010C	52697	10/21/2013	14.8	139.4	8.62	O		269	12.5	1210	8.33	61.6	307.9		2.97	0.2	0.48	3.17	3.65	0.006	0.037	730	800	< 10	11.541
Eagle Chief Creek: Lower	OK620920-04-0010C	52919	12/2/2013	14.16	114.7	4.72	O		271	6.1	1333	8.25	70.3	365.3		3.25	< 0.02	0.37	3.27	3.64	< 0.005	0.022	780	920	< 10	14.473
Eagle Chief Creek: Lower	OK620920-04-0010C	53037	1/13/2014	13.83	111.4	10.3	O		285	5.3	1428	8.25	71.8	430.1		3.59	0.18	0.49	3.77	4.26	0.007	0.051	700	1000	12	11.178
Eagle Chief Creek: Lower	OK620920-04-0010C	53158	2/18/2014	14.06	120	7.53	I		290	8.3	1421	8.09	76.2	442.5		2.5	0.21	0.69	2.71	3.40	0.005	0.066	730	1000	< 10	13.569
Eagle Chief Creek: Lower	OK620920-04-0010C	53245	3/24/2014	14.1	122.4	6.57	I		274	8.9	1210	7.96	77.1	420		1.88	0.14	0.46	2.02	2.48	< 0.005	0.044	667	960	< 10	11.732
Eagle Chief Creek: Lower	OK620920-04-0010C	53542	4/28/2014	12.53	127.3	9.93	I	x	256	15.8	1271	8.14	79.9	361.1		0.63	0.13	0.81	0.76	1.57	0.007	0.038	420	880	< 10	9.285
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	7.23	87.4	162	I	x	174	22.2	1669	7.81														0.967
Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	9.04	126	6.75	I		239	30.3	1799	7.78	110.7	665.4	0.03	1.55	0.21	0.89	1.79	2.65	0.011	0.064	871	1291	< 10	
Eagle Chief Creek: Upper	OK620920-04-0010G	50553	7/30/2012	10.95	143.4	7.23	O		255	26.7	1495	8.19	99.5	446.1	0.02	1.99	0.23	0.75	2.24	2.97	0.007	0.048	560	996	< 10	0.14
Eagle Chief Creek: Upper	OK620920-04-0010G	50570	8/1/2012																							
Eagle Chief Creek: Upper	OK620920-04-0010G	50645	8/7/2012				I																			
Eagle Chief Creek: Upper	OK620920-04-0010G	50696	8/24/2012	12.35	167.2	5.54			320	28.7	1412	8.14	109.9	394.3	0.08	1.42	0.19	0.74	1.69	2.35	0.007	0.054	340	937	< 10	0.416
Eagle Chief Creek: Upper	OK620920-04-0010G	50934	10/1/2012	7.93	89.1	92.6	I	x	189	18.7	706	8.04	49.8	240.1		1.88	0.1	1.06	1.98	3.04	0.137	0.2	425	596	52	1.537
Eagle Chief Creek: Upper	OK620920-04-0010G	51076	11/5/2012	5.5	52.2	7.75	I		278	11.3	755	7.88	93	395.4		3.04	0.21	0.6	3.25	3.85	0.011	0.039	755	944	< 10	0
Eagle Chief Creek: Upper	OK620920-04-0010G	51208	12/17/2012	7.54	62.4	17.5	I	x	347	4.9	1753	8.05	120.5	488.3		2.92	< 0.02	0.6	2.94	3.54	0.011	0.039	1102	1227	< 10	0.894
Eagle Chief Creek: Upper	OK620920-04-0010G	51332	1/28/2013	5.76	52.9	14.7	O		296	9	1296	7.84	121.2	563.2		2.11	0.13	0.7	2.24	2.94	0.011	0.051	1125	1270	17	1.738
Eagle Chief Creek: Upper	OK620920-04-0010G	52087	3/4/2013				I	x					108.3	699.3		1.51	< 0.02	0.48	1.53	2.01	< 0.005	0.026		1636	< 10	1.593
Eagle Chief Creek: Upper	OK620920-04-0010G	51622	4/1/2013	10.63	104.1	10.1	I	x	233	12.4	1360	8	113.2	674.2		1.27	< 0.02	0.57	1.29	1.86	< 0.005	0.048	1080	1348	< 10	1.926
Eagle Chief Creek: Upper	OK620920-04-0010G	51818	5																							

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)
Eagle Chief Creek: Upper	OK620920-04-0010G	52722	10/28/2013	11.42	111.2	5.81	I		224	12	1799	8.25	99.3	746.1		2.43	0.02	0.35	3.03	3.38	< 0.005	0.027	1335	1500	< 10	0.634
Eagle Chief Creek: Upper	OK620920-04-0010G	53060	12/16/2013	14.63	117.9	3.8	I		332	4.2	2310	7.92	126.7	912.5		3.01	< 0.02	0.35	3.03	3.38	< 0.005	0.027	1340	1800	< 10	1.842
Eagle Chief Creek: Upper	OK620920-04-0010G	53378	1/21/2014	10.07	77.4	24.3	I		283	2.8	2321	8.19	124.4	979.9		2.65	0.18	0.6	2.83	3.43	0.017	0.064	1360	1800	< 10	28
Eagle Chief Creek: Upper	OK620920-04-0010G	53275	2/18/2014	15.85	157.5	13.3	I		283	12.3	2443	7.98	131.7	985.1		1.89	< 0.02	0.59	1.91	2.50	0.007	0.041	1170	1900	< 10	14
Eagle Chief Creek: Upper	OK620920-04-0010G	53430	3/31/2014	15.01	165.5	13.8	I		258	17	2243	8.04	122.6	901.3		1.24	< 0.02	0.67	1.26	1.93	0.007	0.057	1050	1700	< 10	11
Eagle Chief Creek: Upper	OK620920-04-0010G	53585	5/5/2014	10.21	116.4	8.35	I		415	18.7	2145	7.61	142.5	981.2		1.31	0.1	0.68	1.41	2.09	0.008	0.032	1080	1700	< 10	0.988
Euheee Creek	OK620900-01-0290D	50300	6/5/2012	7.3	87.5	17.3	O		262	24.1	708	8.11											267			0
Euheee Creek	OK620900-01-0290D	50220	6/12/2012	7.87	97.2	22.1	I		247	26	751	8.1	62.1	67.6	< 0.02	< 0.02	< 0.02	0.95	0.06	0.99	0.171	0.242	284	432	12	0
Euheee Creek	OK620900-01-0290D	50526	7/24/2012	6.65	90.2	38	O		237	31.8	814	8.34	77.2	71	0.02	< 0.02	< 0.02	1.2	0.06	1.24	0.218	0.295	196	459	26	0
Euheee Creek	OK620900-01-0290D	50619	8/14/2012				O																			0
Euheee Creek	OK620900-01-0290D	50693	8/21/2012	1.15	126	47.1	I	x	251	25.4	865	8.38	84.6	71.5	< 0.02	< 0.02	< 0.02	1.32	0.06	1.36	0.101	0.465	196	497	28	0
Euheee Creek	OK620900-01-0290D	50823	9/24/2012	8.55	100	58.5	I		190	22.3	719	8.05	71	74.9		< 0.02	< 0.02	1.12	0.04	1.16	0.462	0.514	152	373	21	0
Euheee Creek	OK620900-01-0290D	51064	10/30/2012	12.43	114.9	27.7	O	x	102	12.2	314.5	7.72	15.6	31	< 0.02	< 0.02	1.07	0.04	1.11	0.055	0.141	125	148	< 10	0	
Euheee Creek	OK620900-01-0290D	51192	12/10/2012	9.62	79.9	13.3	O	x	154	7	555	7.64	40.6	61.6	< 0.02	< 0.02	0.52	0.04	0.56	0.307	0.338	176	292	< 10	0	
Euheee Creek	OK620900-01-0290D	51321	1/23/2013	11.71	88.5	10.7	O	x	163	4.3	699	7.45	56.8	74.6	< 0.02	< 0.02	0.46	0.04	0.50	0.916	0.953	182	369	< 10	0	
Euheee Creek	OK620900-01-0290D	51416	2/19/2013	12.28	101.9	12.7	O	x	180	7.9	590	8.28	42.5	51.7	< 0.02	< 0.02	0.71	0.04	0.75	0.672	0.704	208	338	12	0	
Euheee Creek	OK620900-01-0290D	51607	3/25/2013	10.8	88.2	18	O	x	158	7.2	446.8	7.92	22.5	42.3	< 0.02	< 0.02	0.68	0.58	1.26	0.159	0.2	250	281	< 10	0	
Euheee Creek	OK620900-01-0290D	51787	4/29/2013	8.4	89.2	41.9	I		167	17.4	419.8	7.53	15.5	31	< 0.02	< 0.02	0.97	0.57	1.54	0.082	0.131	168	251	< 10	0	
Euheee Creek	OK620900-01-0290D	51967	6/3/2013	4.45	51.7	169	I	x	94	22.6	236.5	7.08	7.8	13.9	0.09	0.28	< 0.02	1.06	0.39	1.36	0.108	0.166	123	188	16	0
Euheee Creek	OK620900-01-0290D	52192	7/2/2013			30.7	O																			0
Euheee Creek	OK620900-01-0290D	52217	7/9/2013	5.25	67	29	I		172	27.8	400.2	7.96	16	22.6	< 0.02	< 0.02	< 0.02	0.71	0.06	0.75	0.052	0.105	180	263	11	0
Euheee Creek	OK620900-01-0290D	52333	8/6/2013			52.2	I	x																		0
Euheee Creek	OK620900-01-0290D	52498	8/12/2013	6.75	85.3	53.3	I	x	89	27.2	275	7.34	18.3	40.2	0.02	0.48	0.05	1.16	0.55	1.69	0.231	0.305	95	191	18	0
Euheee Creek	OK620900-01-0290D	52535	9/16/2013	4.75	57.5	67.9	I		186	25.1	429	7.83	18.4	27.3	< 0.02	< 0.02	< 0.02	0.96	0.06	1.00	0.055	0.136	185	270	44	0
Euheee Creek	OK620900-01-0290D	52712	10/21/2013	7.54	71.6	48.4	I		120	13.2	366.3	7.49	25.5	36.6		0.33	< 0.02	0.77	0.35	1.12	0.487	0.496	175	240	12	0
Euheee Creek	OK620900-01-0290D	52934	12/2/2013	9.89	81.8	18.7	I		157	7.7	437.4	7.48	25.8	33.4	< 0.02	< 0.02	0.56	0.04	0.60	0.375	0.386	214	260	< 10	0	
Euheee Creek	OK620900-01-0290D	53044	1/13/2014	14.27	108.4	9.15	O		216	4.4	569	8.05	39.1	51.2	< 0.02	< 0.02	0.53	0.05	0.58	0.171	0.222	252	330	< 10	0	
Euheee Creek	OK620900-01-0290D	53145	2/18/2014	11.99	98.2	19.3	I		177	7.3	692	8.8	62.1	78.7		0.08	0.12	0.83	0.20	1.03	1.569	1.549	209	410	11	0
Euheee Creek	OK620900-01-0290D	53230	3/25/2014	11.99	105.8	22.4	O		238	9.6	597	9.29	55	55.1	< 0.02	< 0.02	0.97	0.04	1.01	0.359	0.466	353	400	21	0	
Euheee Creek	OK620900-01-0290D	53521	4/28/2014	5.38	58.7	24.3	O		263	19.7	741	8.34	64.9	51.1	< 0.02	< 0.02	0.87	0.04	0.91	0.566	0.643	289	450	17	0	
Griever Creek	OK620920-01-0130G	50070	5/14/2012			11.4	O		244		3198												2300			
Griever Creek	OK620920-01-0130G	50155	5/29/2012	8.57	94.4	7.49	I		104	20	3689	7.97											2620			0.153
Griever Creek	OK620920-01-0130G	50234	6/18/2012	7.86	93.2	26.1	I		150	23.4	2931	8.15	155.8	1529.9	< 0.02	< 0.02	< 0.02	0.74	0.06	0.78	0.018	0.051	2090	2703	17	0.428
Griever Creek	OK620920-01-0130G	50855	10/1/2012	9.73	98	5.97	O		124	15.2	3388	8.2	304.3	1795.8		< 0.02	< 0.02	0.42	0.04	0.46	0.01	0.024	2000	3191	15	0.405
Griever Creek	OK620920-01-0130G	51066	11/5/2012	11.6	104.2	4.22	O		152	10.1	3820	8.25	302.2	1851.3		< 0.02	< 0.02	0.36	0.04	0.40	0.007	0.014	2420	3425	< 10	0.563
Griever Creek	OK620920-01-0130G	51221	12/17/2012	13	97.1	5.47	O		181	2.1	3693	8.13	293.2	1862		< 0.02	< 0.02	0.19	0.04	0.23	< 0.005	0.011	2170	3230	< 10	0.822
Griever Creek	OK620920-01-0130G	51350	1/28/2013	12.56	107.4	15.7	O		167	8	3481	8.1	281.5	1808.1		< 0.02	< 0.02	0.24	0.04	0.28	0.016	0.03	1930	2989	< 10	0.735
Griever Creek	OK620920-01-0130G	51552	3/4/2013	12.28	102	50.9	I	x	162	6.9	3140	8.21	229.1	1610.7		0.18	< 0.02	0.39	0.20	0.59	0.053	0.072	2020	2640	37	3.116
Griever Creek	OK620920-01-0130G	51612	4/1/2013	10.75	98.1	7.65	O		153	10.7	3646	8.23	299.6	1780.5		< 0.02	< 0.02	0.36	0.04	0.40	< 0.005	0.021	2210	3179	< 10	0.816
Griever Creek	OK620920-01-0130G	51830	5/6/2013	11.21	110.9	9.33	O		168	14.3	3595	8.25	254	1828.4		< 0.02	< 0.02	0.29	0.04	0.33	0.005	0.022	2630	3150	< 10	1.335
Griever Creek	OK620920-01-0130G	51989	6/10/2013	8.89	106.5	11	O		189	23.9	3465	8.12	224.4	1750.5	< 0.02	< 0.02	< 0.02	0.64	0.06	0.68	0.008	0.038	2200	3000	< 10	0.878
Griever Creek	OK620920-01-0130G	52021	6/17/2013																							
Griever Creek	OK620920-01-0130G	52242	7/15/2013	5.22	60.1	12.2	O		37	21.8	3100	7.7	258.8	1582.8	0.11	0.61	< 0.02	1.63	0.74	2.26	0.006	0.105	1480	2690	< 10	1.374
Griever Creek	OK620920-01-0130G	52603	8/19/2013	7.9	93.3	2.13	O		205	23.1	3539	8.06	234.8	1754.6	< 0.02	< 0.02	< 0.02	0.53	0.06	0.57	< 0.005	0.016	1900	3190	< 10	0.46
Griever Creek	OK620920-01-0130G	52835	9/23/2013	8.1	104.3	1.97	I		147	24.6	3815	8.55	332.7	2052.4		< 0.02	< 0.02	0.49	0.04	0.53	< 0.005	0.017	1820	3400	< 10	0.524
Griever Creek	OK620920-01-0130G	52733	10/28/2013	12.24	115.2	1.93	I		209	12.1	3646	7.9	271.3	1876		< 0.02	< 0.02	0.31	0.04	0.35	< 0.005	0.008	1980	3200	< 10	1.256
Griever Creek	OK620920-01-0130G	52989	12/30/2013	16.52	114.1	4.83	I		250	-0.1	3934	7.85	278.8	1953		0.08	< 0.02	0.34	0.10	0.44	< 0.005	0.013	1500	3500	< 10	
Griever Creek	OK620920-01-0130G	53086	1/21/2014	15.78	109.6	5.78	I		285	0.1	3810	7.87	273.5	1917.1		0.05	< 0.02	0.3	0.07	0.37	< 0.005	0.017	2850	3300	< 10	0.618
Griever Creek	OK620920-01-0130G	53166	2/24/2014	15	110.9	13.2	I		281	2.4	3382	7.9	186.9	1603.4		0.03	< 0.02	0.61	0.0							

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Kiowa Creek: Harper Co.	OK720500-02-0130C	53258	4/1/2014	9.69	83	3.71	I		190	8.5	876	7.49	126.9	68.4					0.07	0.36	< 0.005	0.016	318	510	< 10	11.714	
Kiowa Creek: Harper Co.	OK720500-02-0130C	53555	5/6/2014	8.3	82.4	17.5	I		238	14.9	860	8.06	127.6	64.6		0.05	< 0.02	0.52	0.12	0.64	0.009	0.035	284	480	15	5.936	
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	12.76	136	12.4	O		112	18.3	290.4	7.49											167			0.148	
Lagoon Creek	OK620900-01-0180J	50216	6/12/2012	5.78	65.6	9.87	O		192	21.3	847	7.64	207.4	57.1	< 0.02	< 0.02	< 0.02	0.89	0.06	0.93	< 0.005	0.042	317	643	< 10	0	
Lagoon Creek	OK620900-01-0180J	50521	7/24/2012	4.34	36.5	31.8			175	28.6	625	7.5	73.7	25.6	< 0.02	< 0.02	< 0.02	1.35	0.06	1.39	0.01	0.079	196	354	33	0	
Lagoon Creek	OK620900-01-0180J	50615	8/14/2012				O																			0	
Lagoon Creek	OK620900-01-0180J	50689	8/21/2012	5.73	65.8	28.3	I	x	154	22	674	7.65	119.1	27.2	< 0.02	< 0.02	< 0.02	1.37	0.06	1.41	0.006	0.077	180	361	19	0	
Lagoon Creek	OK620900-01-0180J	50820	9/24/2012	6.65	73.1	24.4	I		152	20.4	748	7.5	111.2	70.6		< 0.02	< 0.02	1.13	0.04	1.17	< 0.005	0.047	242	406	14	0	
Lagoon Creek	OK620900-01-0180J	51061	10/30/2012	7.15	61.3	6.92	O	x	112	8.6	508	6.83	68.1	32.7		< 0.02	< 0.02	0.81	0.04	0.85	< 0.005	0.037	196	285	< 10	0	
Lagoon Creek	OK620900-01-0180J	51189	12/10/2012	7.01	56.2	13.4	O	x	160	7.8	864	7.26	140.2	60.3		< 0.02	< 0.02	0.5	0.04	0.54	0.016	0.047	322	456	< 10	0	
Lagoon Creek	OK620900-01-0180J	51324	1/23/2013	14.3	116	0.81	O	x	257	6.9	2382	7.54	527.2	153.4		< 0.02	< 0.02	0.18	0.04	0.22	< 0.005	0.011	757	1216	< 10	0	
Lagoon Creek	OK620900-01-0180J	51419	2/19/2013	11.54	100	7.93	O	x	188	9.9	1447	7.68	292.9	82.2		< 0.02	< 0.02	0.45	0.04	0.49	< 0.005	0.027	452	771	< 10	0	
Lagoon Creek	OK620900-01-0180J	51610	3/25/2013	11.7	99.9	4.61	O		162	10.1	1283	7.15	249.8	77.8		< 0.02	< 0.02	0.43	0.04	0.47	< 0.005	0.021	397	728	< 10	0	
Lagoon Creek	OK620900-01-0180J	51790	4/29/2013	17.6	232	24.5	O		114	29.8	493	9.15	82.4	27.6		< 0.02	< 0.02	1.01	0.04	1.05	0.015	0.058	175	300	< 10	< 0.25	
Lagoon Creek	OK620900-01-0180J	51970	6/3/2013	5.88	72.5	59.2	I	x	78	24.6	258.3		21.6	13.5	0.08	0.28	< 0.02	1.32	0.38	1.62	0.056	0.129	92	180	17	0	
Lagoon Creek	OK620900-01-0180J	52183	7/2/2013	8.55																							
Lagoon Creek	OK620900-01-0180J	52220	7/9/2013	8.4	112.9	16.4	O		163	31.4	326.9	8.04	64.2	19.2	< 0.02	< 0.02	< 0.02	0.84	0.06	0.88	0.008	0.058	195	360	< 10	0	
Lagoon Creek	OK620900-01-0180J	52501	8/12/2013	8.32	105	44.5	I	x	91	27.8	259.7	7.42	16	7.9	< 0.02	0.28	< 0.02	1.02	0.32	1.32	0.014	0.098	108	178	19	0	
Lagoon Creek	OK620900-01-0180J	52538	9/16/2013	7.56	92.4	35.3	I		134	25.1	347.1	8.23	26.5	11.5	< 0.02	< 0.02	< 0.02	0.86	0.06	0.90	0.006	0.085	136	190	29	0	
Lagoon Creek	OK620900-01-0180J	52715	10/21/2013	10.25	96.4	9.72	O		120	12.9	467.2	7.98	62.6	22		< 0.02	< 0.02	0.62	0.04	0.66	0.007	0.035	206	280	< 10	0	
Lagoon Creek	OK620900-01-0180J	52937	12/2/2013	10.61	91.1	3.73	O		160	10.2	684	7.86	113.1	30		< 0.02	< 0.02	0.42	0.04	0.52	0.01	0.033	269	390	< 10	0	
Lagoon Creek	OK620900-01-0180J	53047	1/13/2014	16.7	136.5	0.83	O		238	9.1	2414	7.71	382.1	69.5		< 0.02	0.05	0.23	0.07	0.30	< 0.005	0.015	608	930	< 10	0	
Lagoon Creek	OK620900-01-0180J	53148	2/18/2014	12.65	103.3	3.23	O		187	9.5	1356	7.59	298.4	50.5		< 0.02	0.32	0.3	0.34	0.64	< 0.005	0.021	468	740	< 10	0	
Lagoon Creek	OK620900-01-0180J	53233	3/25/2014	10.6	95.8	3.23	O		187	11.1	1574	8.03	415	60.1		< 0.02	< 0.02	0.52	0.04	0.56	< 0.005	0.027	417	890	< 10	0	
Lagoon Creek	OK620900-01-0180J	53524	4/28/2014	7.47	83.3	9.45	O		184	21	1734	7.82	452.2	55.4		< 0.02	< 0.02	0.62	0.04	0.66	< 0.005	0.026	507	1000	< 10	0	
Long Creek	OK620920-02-0080D	50073	5/14/2012			1.44	O		161		3297												2140				
Long Creek	OK620920-02-0080D	50159	5/30/2012	9.44	118.6	2.84	O			27.3	3498	8.03											2330			0.281	
Long Creek	OK620920-02-0080D	50238	6/18/2012	6.36	85.6	3.77	O		166	33.9	3784	7.92	271.1	1794.9	< 0.02	< 0.02	< 0.02	0.65	0.06	0.69	< 0.005	0.015	2590	3393	< 10	0.302	
Long Creek	OK620920-02-0080D	50541	7/30/2012	0.63	8.3	285	I		265	30.5	4501	7.52	311.5	2215.8	3.92	< 0.02	< 0.02	9.65	3.96	9.69	0.106	0.354	2680	4020	140	0	
Long Creek	OK620920-02-0080D	50741	8/27/2012	6.52	80.5	9.02	O		87	25.5	3327	7.82	205.6	1831.4	< 0.02	< 0.02	< 0.02	0.68	0.06	0.72	0.009	0.048	1860	3053	< 10	< 0.1	
Long Creek	OK620920-02-0080D	50858	10/1/2012	11.1	120.8	11.6	O		83	19.1	2333	8.16	122.2	1227.3		< 0.02	< 0.02	0.5	0.04	0.54	0.007	0.034	1370	2000	17	0.109	
Long Creek	OK620920-02-0080D	51069	11/5/2012	12.65	127.1	10.9	O		164	15	3955	8.11	306.5	1985.1		< 0.02	< 0.02	0.81	0.04	0.85	0.005	0.023	2500	1978	22	0.072	
Long Creek	OK620920-02-0080D	51224	12/17/2012	12.4	108.7	9.26	O		146	9	3673	8.08	293.8	1895.1		< 0.02	< 0.02	0.3	0.04	0.34	0.006	0.02	1780	3080	< 10	0.232	
Long Creek	OK620920-02-0080D	51353	1/28/2013	12.71	119.6	7.83	I		8.07	12.2	3350	8.07	299.4	1879		0.02	< 0.02	0.32	0.04	0.36	< 0.005	0.019	2040	3397	16	0.425	
Long Creek	OK620920-02-0080D	51555	3/4/2013	12.65	110.3	34.3	I	x	200	8.9	2676	8.27	216	1157.3		0.9	< 0.02	0.48	0.92	1.40	0.02	0.036	1420	1813	37	3.232	
Long Creek	OK620920-02-0080D	51615	4/1/2013	11.35	105.3	15.6	O		136	11.5	3118	8.17	278.4	1430.8		< 0.02	< 0.02	0.51	0.04	0.55	0.007	0.036	1850	2580	13	1.237	
Long Creek	OK620920-02-0080D	51833	5/6/2013	9.98	114.7	5.78	O		140	21.8	3270	8.06	287.3	1479		< 0.02	< 0.02	0.24	0.04	0.28	< 0.005	0.014	1720	2761	< 10	0.594	
Long Creek	OK620920-02-0080D	51992	6/10/2013	10.21	138.3	10.8	O		156	30.9	2843	8.07	202	1316.2	< 0.02	< 0.02	< 0.02	0.62	0.06	0.66	0.007	0.036	1390	2410	15	0.245	
Long Creek	OK620920-02-0080D	52024	6/17/2013																								
Long Creek	OK620920-02-0080D	52245	7/15/2013	7.85	99	61.4	O		165	26.6	5560	7.89	731.7	2450.1	2.36	0.16	< 0.02	9.68	2.54	9.86	0.057	0.66	2140	4680	80	0	
Long Creek	OK620920-02-0080D	52606	8/19/2013	8.7	111.1	8.34			125	27.2	2465	8.13	172	1153.9	< 0.02	< 0.02	< 0.02	0.63	0.06	0.67	< 0.005	0.035	1260	2040	< 10	0.411	
Long Creek	OK620920-02-0080D	52837	9/23/2013	8.02	107	3.82	I		83	26.5	3040	8.61	181.9	1705.1		< 0.02	< 0.02	0.55	0.04	0.59	< 0.005	0.023	1500	2700	< 10	0.025	
Long Creek	OK620920-02-0080D	52736	10/28/2013	11.75	116.3	4.79	I		137	14.4	3478	8.05	251.3	1765.7		< 0.02	< 0.02	0.62	0.04	0.66	0.007	0.035	1600	3100	< 10	0.274	
Long Creek	OK620920-02-0080D	52992	12/30/2013	17.97	127.6	4.16	I		190	0.3	3898	7.98	279.1	1967.6		0.26	< 0.02	0.46	0.28	0.74	< 0.005	0.012	2880	3400	< 10	0.337	
Long Creek	OK620920-02-0080D	53089	1/21/2014	16.02	120.6	13.3	I		171	2	3557	8.07	267.8	1718.7		0.04	< 0.02	0.28	0.06	0.34	0.006	0.033	2210	3000	< 10	0.161	
Long Creek	OK620920-02-0080D	53169	2/24/2014	12.94	107.9	11.3	I		162	7.1	2803	8.07	250.8	1301.4		< 0.02	< 0.02	0.34	0.04	0.38	< 0.005	0.016	1670	2500	< 10	0.733	
Long Creek	OK620920-02-0080D	53256	3/31/2014	11.64	127.8	16.6	I		140	19.4	3303	7.96	271.4	1517.1		< 0.02	< 0.02	0.47	0.04	0.51	0.012	0.034	1670	2800	11	0.321	
Long Creek	OK620920-02-0080D	53553	5/5/2014	8.5	102.6	6.44	I		156	24.1	4509	7.97	432.6	2178.1		< 0.02	< 0.02	0.49	0.04	0.53	0.005	0.02	2420	4000	< 10	0.187	
Main Creek	OK620920-																										

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)
Main Creek	OK620920-01-0180F	51349	1/28/2013	11.48	97.7	58.8	I		193	7.8	3580	8.03	324.2	1771.2		0.34	< 0.02	0.54	0.36	0.90	0.032	0.073	1670	3180	73	4.156
Main Creek	OK620920-01-0180F	51551	3/4/2013	12.39	98.3	37	I	x	172	5.1	3121	8.09	261.7	1448.4		0.32	< 0.02	0.42	0.34	0.76	0.019	0.043	1690	2592	31	6.088
Main Creek	OK620920-01-0180F	51611	4/1/2013	10.24	95.8	14.1	O		165	11.9	3582	7.98	316.8	1797.6		0.06	< 0.02	0.34	0.08	0.42	0.011	0.028	2120	3140	19	4.216
Main Creek	OK620920-01-0180F	51829	5/6/2013	10.77	102.8	8.96	O		239	12.8	3507	7.98	295.7	1799.8		< 0.02	< 0.02	0.26	0.04	0.30	0.006	0.016	2130	3079	13	5.166
Main Creek	OK620920-01-0180F	51988	6/10/2013	8.27	94.9	25.8	I	x	153	21.7	3137	7.88	209.1	1575.3	0.05	0.36	< 0.02	0.73	0.43	1.11	0.04	0.07	2470	2782	32	10.35
Main Creek	OK620920-01-0180F	52020	6/17/2013																							
Main Creek	OK620920-01-0180F	52241	7/15/2013	8.82	99.3	5.04	O		140	20.7	3608	7.81	364.6	1857.6	0.03	0.08	< 0.02	0.36	0.13	0.46	< 0.005	0.03	1620	3190	< 10	3.648
Main Creek	OK620920-01-0180F	52602	8/19/2013	7.45	86.1	11.7	O		250	22	3510	7.79	273.6	1810.4	< 0.02	0.43	< 0.02	0.47	0.47	0.92	0.012	0.028	2170	3160	15	6.34
Main Creek	OK620920-01-0180F	52836	9/23/2013	8.8	112.2	10.3	I		124	24.2	3393	8.5	318.4	1906.4		0.24	< 0.02	0.42	0.26	0.68	0.007	0.025	1660	3100	15	4.443
Main Creek	OK620920-01-0180F	52732	10/28/2013	11.52	104.1	45.1	I		117	10.4	3604	7.69	312	1797		0.24	< 0.02	0.38	0.26	0.64	0.024	0.047	2940	3100	56	3.996
Main Creek	OK620920-01-0180F	52988	12/30/2013	17.15	118.5	4.35	I		183	-0.1	3856	7.56	323.2	1791.7		0.42	< 0.02	0.26	0.44	0.70	< 0.005	0.014	2140	3300	< 10	
Main Creek	OK620920-01-0180F	53085	1/21/2014	15.64	109.7	7.73	I		180	0.5	3677	7.47	304.3	1765.8		0.34	< 0.02	0.18	0.36	0.54	< 0.005	0.018	2720	3100	< 10	3.494
Main Creek	OK620920-01-0180F	53165	2/24/2014	15.36	111	7.65	I		197	1.5	3633	7.84	296.3	1681.8		0.22	< 0.02	0.22	0.24	0.46	< 0.005	0.02	2240	3100	< 10	6.671
Main Creek	OK620920-01-0180F	53252	3/31/2014	11.54	107.7	5.37	I		189	11.9	3607	7.03	301.3	1788.1		< 0.02	< 0.02	0.26	0.04	0.30	< 0.005	0.023	1780	3200	< 10	3.393
Main Creek	OK620920-01-0180F	53549	5/5/2014	10.88	109	9.24	I		168	14.9	3853	7.89	344.4	1906.7		< 0.02	< 0.02	0.23	0.04	0.27	0.005	0.016	2240	3400	< 10	4.542
Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	7.66	95	19.6	I	x	133	23.5	1033	8.24	89.4	261.3	< 0.02	< 0.02	< 0.02	0.54	0.06	0.58	0.031	0.064	412	698	24	
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	7.24	90.1	3.67	I		248	24.4	1197	7.96														0
Medicine Lodge River	OK621010-03-0010D	50557	7/30/2012	8.66	125	5.76	O		193	33.2	1390	7.83	166.8	297.3	0.05	< 0.02	< 0.02	0.67	0.09	0.71	0.064	0.087	420	867	< 10	0.021
Medicine Lodge River	OK621010-03-0010D	50573	8/1/2012																							
Medicine Lodge River	OK621010-03-0010D	50648	8/7/2012				O																			
Medicine Lodge River	OK621010-03-0010D	50699	8/27/2012	3.27	41.1	4.28	O		285	24.8	783	7.91	183.2	271.3	0.07	< 0.02	< 0.02	1.48	0.11	1.52	0.052	0.092	800	890	< 10	0
Medicine Lodge River	OK621010-03-0010D	50937	10/1/2012	12.7	141	6.08	O		217	20.8	1367	8.47	200.8	269.8		< 0.02	< 0.02	0.95	0.04	0.99	0.167	0.226	600	866	< 10	0
Medicine Lodge River	OK621010-03-0010D	51079	11/5/2012	5.67	57.6	23.6	I		377	14.4	1575	7.95	194.4	277.3		< 0.02	< 0.02	0.49	0.04	0.53	0.038	0.06	630	1067	64	0
Medicine Lodge River	OK621010-03-0010D	51209	12/17/2012	12.56	101.5	4.78	I	x	226	10	930	8.61	82.7	196.2		0.65	< 0.02	0.35	0.67	1.02	0.02	0.042	474	598	< 10	22.275
Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	11.16	104.3	5.46	I		240	10.3	609.5	8.51	74.8	184.9		1.07	< 0.02	0.85	1.09	1.94	0.037	0.057	275	609	< 10	48.784
Medicine Lodge River	OK621010-03-0010D	52090	3/4/2013	11.01	107.4	14.1	I	x	137	11.9	921	8.62	81.8	190.6		0.91	< 0.02	0.38	0.93	1.31	0.037	0.067	440	568	16	
Medicine Lodge River	OK621010-03-0010D	51625	4/1/2013	11.45	109.5	8.18	I	x	193	11.8	775	8.55	83.6	195		< 0.02	< 0.02	0.29	0.04	0.33	0.009	0.039	475	584	< 10	67.602
Medicine Lodge River	OK621010-03-0010D	51821	5/6/2013	11.02	126.4	7.74	I		162	20.1	905	8.65	87.7	205.6		< 0.02	< 0.02	0.24	0.04	0.28	0.009	0.034	485	575	12	59.914
Medicine Lodge River	OK621010-03-0010D	52009	6/10/2013	9.07	124	7.59	I		159	29.4	820	8.6	72.9	197.5	< 0.02	< 0.02	< 0.02	0.23	0.06	0.27	0.015	0.036	360	528	< 10	52.25
Medicine Lodge River	OK621010-03-0010D	52119	6/17/2013	7.47	98.1	9.36	I	x	149	27.1	779	8.43														19.331
Medicine Lodge River	OK621010-03-0010D	52041	6/18/2013																							
Medicine Lodge River	OK621010-03-0010D	52254	7/15/2013	8.37	101	3	I		228	23	1217	8.19	132	248.1	0.04	< 0.02	< 0.02	0.39	0.08	0.43	0.054	0.068	485	807	< 10	0.5
Medicine Lodge River	OK621010-03-0010D	52587	8/19/2013			17.1	I	x	208	25.7	837	8.68	78.7	238.3	< 0.02	< 0.02	< 0.02	0.57	0.21	0.76	0.1	0.137	735	640	16	70.896
Medicine Lodge River	OK621010-03-0010D	52566	9/23/2013	5.12	54.2	8.47	O		215	18.3	1311	8.05	163.8	290.4		0.04	< 0.02	0.5	0.06	0.56	0.086	0.093	795	870	< 10	0.2
Medicine Lodge River	OK621010-03-0010D	52724	10/28/2013	6.82	69.2	6.47	I		253	13.7	1366	8.06	212.5	300		< 0.02	< 0.02	0.34	0.04	0.38	0.04	0.058	620	990	< 10	0.042
Medicine Lodge River	OK621010-03-0010D	53062	12/16/2013	12.81	94.1	23.7	I	x	184	1.1	9133	8.4	79.2	177.4		0.84	< 0.02	0.46	0.86	1.32	0.038	0.071	330	580	19	
Medicine Lodge River	OK621010-03-0010D	53381	1/21/2014	13.63	103.7	33.2	I		229	2.5	966	8.9	81.2	180.5		1.16	0.1	0.54	1.26	1.80	0.053	0.101	410	600	36	
Medicine Lodge River	OK621010-03-0010D	53278	2/18/2014	11.45	116.2	30.7	I		205	13.7	876	8.42	75.3	159.1		1.13	< 0.02	0.53	1.15	1.68	0.041	0.082	370	560	29	
Medicine Lodge River	OK621010-03-0010D	53432	3/31/2014	10.63	125.3	12.7	I		158	20.9	904	8.43	87.5	195.9		< 0.02	< 0.02	0.37	0.04	0.41	0.007	0.045	340	540	< 10	
Medicine Lodge River	OK621010-03-0010D	53587	5/5/2014	8.39	105.2	14.8	I		172	23.9	825	8.17	107.2	214.1		< 0.02	< 0.02	0.44	0.04	0.48	0.025	0.063	1265	620	19	22.723
Otter Creek	OK620910-03-0040C	50204	6/11/2012	5.02	64.4	23.7	I	x	239	26.3	677	8.33	55.4	43	0.02	< 0.02	< 0.02	0.83	0.06	0.87	0.142	0.203	234	336	27	0.088
Otter Creek	OK620910-03-0040C	50481	7/23/2012	5.91	81.1	17.5	I		237	31.6	724	8.4	61.7	32.6	< 0.02	< 0.02	< 0.02	1	0.06	1.04	0.096	0.169	190	412	< 10	0
Otter Creek	OK620910-03-0040C	50530	7/25/2012																							0
Otter Creek	OK620910-03-0040C	50731	8/6/2012	2.95	35.8	25.3	I		248	25.8	679	8.01											228			0
Otter Creek	OK620910-03-0040C	50667	8/20/2012	11.33	145	23.6	I		236	26.2	722	8.7	67.3	33.5	< 0.02	< 0.02	< 0.02	0.99	0.06	1.03	0.088	0.163	2280	403	< 10	0
Otter Creek	OK620910-03-0040C	50825	9/25/2012	7.4	82.7	20.9	O		247	20.8	733	8.18	64.9	34.3		< 0.02	< 0.02	1.42	0.04	1.46	0.071	0.178	239	223	< 10	0
Otter Creek	OK620910-03-0040C	51194	12/11/2012	11.97	93.7	10.1	O	x	346	5.8	899	7.8	61.6	38.2		0.02	< 0.02	0.69	0.04	0.73	0.054	0.102	346	486	< 10	0
Otter Creek	OK620910-03-0040C	51317	1/22/2013	11.77	94.3	7.72	I		370	4.9	842	8.39	51.5	50.5		< 0.02	< 0.02	0.43	0.04	0.47	0.018	0.062	517	467	< 10	0
Otter Creek	OK620910-03-0040C	51446	2/20/2013	10.25	86.5	17	I	x	313	6.9	921	8.55	93.7	77.7		< 0.02	< 0.02	0.75	0.04	0.79	0.044	0.113	488	542	< 10	0.236
Otter Creek	OK620910-03-0040C	51588																								

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)
Otter Creek	OK620910-03-0040C	52709	10/22/2013	9.86	93.1	21.6	I		177	11.5	686	8.74	121.9	59.6		0.02	< 0.02	0.62	0.04	0.66	0.13	0.168	328	470	11	0.611
Otter Creek	OK620910-03-0040C	52931	12/3/2013	11.05	93.8	12.2	I		327	6.2	963	8.48	101.3	75.4		< 0.02	< 0.02	0.72	0.04	0.76	0.145	0.176	334	560	< 10	1.701
Otter Creek	OK620910-03-0040C	53076	1/13/2014	13.58	103.1	8.98	I	x	318	4.5	1230	8.69	143.1	115.8		0.03	0.29	0.55	0.32	0.87	0.031	0.09	554	710	< 10	3.996
Otter Creek	OK620910-03-0040C	53411	2/18/2014	11.96	97.4	18.9	O		400	7.2	1211	6.73	139.7	108.8		< 0.02	0.25	0.48	0.27	0.75	0.024	0.078	490	690	< 10	9.445
Otter Creek	OK620910-03-0040C	53236	3/24/2014	9.64	80.9	28.4	Both		362	8.5	1193	8.59	133.8	87.6		< 0.02	< 0.02	0.59	0.04	0.63	0.057	0.102	544	670	15	7.434
Otter Creek	OK620910-03-0040C	53536	4/29/2014	7.57	76.6	18.7	O		398	15.8	1376	8.87	169.9	105.6		< 0.02	< 0.02	0.62	0.04	0.66	0.096	0.142	512	760	14	3.053
Persimmon Creek	OK720500-01-0150G	50072	5/14/2012			7.35	O		246		1006												492			
Persimmon Creek	OK720500-01-0150G	50236	6/18/2012	11.32	148.4	3.43	O		208	29.1	853	8.55	71.1	202.4	< 0.02	0.15	< 0.02	0.37	0.19	0.54	0.037	0.049	342	624	< 10	1.958
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	8.58	101.6	5.9	O		210	23.9	590	8.4											384			0.774
Persimmon Creek	OK720500-01-0150G	50540	7/30/2012	15.62	198.7	1.2	O		135	29.1	870	8.63	73.4	220.3	< 0.02	< 0.02	< 0.02	0.36	0.06	0.40	0.005	0.016	350	568	20	0.087
Persimmon Creek	OK720500-01-0150G	50740	8/27/2012	12.38	162.5	1.26	O		165	29.4	893	8.4	74.6	184	< 0.02	< 0.02	< 0.02	0.32	0.06	0.36	< 0.005	0.017	307	610	< 10	1.384
Persimmon Creek	OK720500-01-0150G	50857	10/1/2012	13.01	136.9	0.74	O		201	17.7	801	8.32	68.5	185.1		< 0.02	< 0.02	0.31	0.04	0.35	< 0.005	0.012	320	529	< 10	1.091
Persimmon Creek	OK720500-01-0150G	51068	11/5/2012	17.49	168.1	0.94	O		210	13.5	889	8.53	63.7	175.7		< 0.02	< 0.02	0.38	0.04	0.42	< 0.005	0.014	349	577	< 10	1.825
Persimmon Creek	OK720500-01-0150G	51223	12/17/2012	12.33	99.7	8.33	O		242	6.1	767.3	8.49	50	244.5		0.39	< 0.02	0.47	0.41	0.88	0.009	0.031	408	657	17	4.54
Persimmon Creek	OK720500-01-0150G	51352	1/28/2013	16	146	5.87	O		245	11.2	389.2	8.5	47.3	220.3		0.31	< 0.02	0.5	0.33	0.83	0.013	0.04	263	663	12	8.245
Persimmon Creek	OK720500-01-0150G	51554	3/4/2013	11.69	97	18.2	I	x	245	7.2	976	8.36	48.3	217.7		0.4	< 0.02	2.06	0.42	2.48	0.158	0.315	472	670	257	66.311
Persimmon Creek	OK720500-01-0150G	51614	4/1/2013	12.76	121.4	5.42	O		233	13	958	8.58	55.1	222.2		0.06	< 0.02	0.5	0.08	0.58	0.016	0.045	417	673	< 10	12.724
Persimmon Creek	OK720500-01-0150G	51832	5/6/2013	14.14	150.6	4.72	O		241	18.3	962	8.64	54.7	214.8		0.03	< 0.02	0.37	0.05	0.42	0.007	0.03	405	636	< 10	10.731
Persimmon Creek	OK720500-01-0150G	51991	6/10/2013	9.09	108.3	19.2	O		263	24.1	1002	8.38	54.9	195.5	< 0.02	0.45	< 0.02	0.89	0.49	1.36	0.128	0.16	372	679	25	7.958
Persimmon Creek	OK720500-01-0150G	52023	6/17/2013																							
Persimmon Creek	OK720500-01-0150G	52244	7/15/2013	8.67	97.5	8.85	O		200	21	910	8	69.9	203.6	< 0.02	0.27	< 0.02	0.53	0.31	0.82	0.046	0.072	364	598	13	2.002
Persimmon Creek	OK720500-01-0150G	52605	8/19/2013	8.35	100.8	10.4	O		262	24.9	1089	8.36	72.7	236.8	< 0.02	0.71	< 0.02	0.72	0.75	1.45	0.153	0.167	425	745	16	8.5
Persimmon Creek	OK720500-01-0150G	52834	9/23/2013	9.43	111.6	10.2	I		235	19.8	932	8.95	66.6	201.9		0.6	< 0.02	0.58	0.62	1.20	0.088	0.107	390	640	18	3.234
Persimmon Creek	OK720500-01-0150G	52735	10/28/2013	11.95	112.8	6.87	I		258	12.6	958	8.39	56.9	197.2		0.42	< 0.02	0.4	0.44	0.84	0.02	0.047	420	650	13	7.446
Persimmon Creek	OK720500-01-0150G	52991	12/30/2013	17.21	118	4.5	I		210	0	1022	8.4	49.6	193.5		0.39	< 0.02	0.44	0.41	0.85	0.019	0.034	520	670	< 10	5.19
Persimmon Creek	OK720500-01-0150G	53088	1/21/2014	15.82	120	5.9	I		257	2.7	940	8.41	47.6	138.4		0.32	< 0.02	0.36	0.34	0.70	0.016	0.044	520	630	< 10	4.49
Persimmon Creek	OK720500-01-0150G	53168	2/24/2014	11.66	95.1	8.92	I		251	6.5	931	8.32	48.5	193.5		0.25	< 0.02	0.46	0.27	0.73	0.022	0.048	820	610	< 10	12.017
Persimmon Creek	OK720500-01-0150G	53255	3/31/2014	13.24	134.3	5	I		222	15.9	886	8.24	48.3	195.9		< 0.02	< 0.02	0.47	0.04	0.51	0.007	0.041	263	570	11	7.495
Persimmon Creek	OK720500-01-0150G	53552	5/5/2014	11.73	133.2	7.1	I		210	21.5	839	8.55	49.7	178.5		0.13	< 0.02	0.61	0.15	0.76	0.019	0.05	325	540	25	4.954
Pond Creek	OK621000-05-0010D	50244	6/18/2012	5.85	75.3	45.6	I		375	26	1303	7.93	167	97	0.05	1.08	< 0.02	0.94	1.15	2.04	0.231	0.279	334	743	29	
Pond Creek	OK621000-05-0010D	50335	6/27/2012	13.47	187	38.8	I		380	29.5	1416	8.48														0.751
Pond Creek	OK621000-05-0010D	50477	7/18/2012																							
Pond Creek	OK621000-05-0010D	50561	7/31/2012	7.67	100	48.4	I		354	27	1111	7.92	163.2	106.2	0.02	0.46	< 0.02	1.2	0.50	1.68	0.075	0.17	370	756	32	0.575
Pond Creek	OK621000-05-0010D	50652	8/7/2012																							
Pond Creek	OK621000-05-0010D	50702	8/28/2012	2.59	31.9	260	I	x	229	24.4	696	7.82	77.9	57.9	0.13	1.39	0.2	1.6	1.72	3.19	0.314	0.399	139	573	36	5.414
Pond Creek	OK621000-05-0010D	50942	10/2/2012	7.14	78	48.5	I	x	446	17.6	1195	8.32	126.9	91.9		1.12	0.2	1.24	1.32	2.56	0.102	0.21	434	695	45	0.448
Pond Creek	OK621000-05-0010D	51085	11/6/2012	9.07	83.4	21.8	I		534	10.3	1131	8.08	94.4	80.2		1.08	0.2	1.49	1.28	2.77	0.073	0.207	1065	681	19	0.428
Pond Creek	OK621000-05-0010D	51214	12/17/2012	13.22	117	23.9	I	x	556	7.96	1518	8.23	186.8	122		1.38	< 0.02	0.68	1.40	2.08	0.136	0.202	458	906	16	0.64
Pond Creek	OK621000-05-0010D	51341	1/28/2013	12.57	123.4	32.6	I	x	439	12.3	1356	8.15	182.5	117.9		1.14	< 0.02	0.92	1.16	2.08	0.063	0.122	499	853	27	0.779
Pond Creek	OK621000-05-0010D	51549	3/4/2013	12.33	116.8	41	I	x	442	10.5	1415	8.38	223	106.5		0.34	< 0.02	0.96	0.36	1.32	0.049	0.124	510	891	37	1.7
Pond Creek	OK621000-05-0010D	51582	3/12/2013	13.32	127.6		I	x		12.2	1163	8.39														
Pond Creek	OK621000-05-0010D	51631	4/2/2013	6.39	61.2	59.8	I	x	543	12.3	1451	8.12	195.9	119.2		0.52	< 0.02	1.33	0.54	1.87	0.127	0.229	730	868	46	1.306
Pond Creek	OK621000-05-0010D	51827	5/7/2013	12.6	132	37.3	I	x	298	15.9	968	8.34	116.8	76.5		0.57	0.23	1.11	0.80	1.91	0.092	0.195	335	587	15	0.936
Pond Creek	OK621000-05-0010D	52014	6/11/2013	4.34	54.6	58.1	I	x	319	25.3	866	8	95.1	58.2	0.09	0.41	0.2	1.09	0.70	1.70	0.253	0.331	352	505	33	
Pond Creek	OK621000-05-0010D	52036	6/18/2013																							
Pond Creek	OK621000-05-0010D	52260	7/16/2013	1.6	19	53.1	I	x	292	23.2	650	7.98	55.7	43.4	0.09	2.58	< 0.02	1.96	2.69	4.56	0.522	0.636	191	420	35	0.197
Pond Creek	OK621000-05-0010D	52593	8/20/2013			419	I	x	159	24.4	363.9	8.34	27.6	25.9	0.07	0.39	1.14	1.85	0.60	2.38	0.626	0.77	590	481	116	
Pond Creek	OK621000-05-0010D	52572	9/24/2013	7.5	84.4	44.4	I		427	19.1	592	8.5	50.6	54		0.88	0.2	1	1.08	2.08	0.187	0.261	434	510	27	0.27
Pond Creek	OK621000-05-0010D	52730	10/29/2013	7.76	78.6	26.9	I		317	14.2	862	7.98	66.3	56.8		2.03	0.27	0.72	2.30	3.02	0.206	0.253	270	510	15	0.074
Pond Creek	OK621000-05-0010D	53067	12/17/2013	19.05	153.4	6.8	O		382	4.9	1140	8.52	50.9	48.5												

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Red Rock Creek: Lower	OK621200-05-0010K	50535	7/25/2012																								
Red Rock Creek: Lower	OK621200-05-0010K	52389	7/31/2012				I	X																			
Red Rock Creek: Lower	OK621200-05-0010K	50670	8/21/2012	2.27	20.4	49.2	I		345	21	1547	8.29	233.1	141.4	0.05	< 0.02	< 0.02	1.25	0.09	1.29	0.298	0.385	375	869	32	0	
Red Rock Creek: Lower	OK621200-05-0010K	50831	9/24/2012	7.7	86.1	48.1	I	X	344	21.3	1503	8.45	231.5	141.4		< 0.02	< 0.02	1.57	0.04	1.61	0.171	0.281	384	820	< 10	0	
Red Rock Creek: Lower	OK621200-05-0010K	51030	10/30/2012	6.83	59.6	70.2	I		397	8	1898	8.7	321.1	170		< 0.02	< 0.02	1.41	0.04	1.45	0.138	0.237	610	1128	36	0	
Red Rock Creek: Lower	OK621200-05-0010K	51172	12/10/2012	10.79	84.1	53.6	Both	X	438	5.1	2329	8.54	390.5	200.8		< 0.02	< 0.02	1.65	0.04	1.69	0.094	0.224	730	1300	52	0	
Red Rock Creek: Lower	OK621200-05-0010K	53079	1/14/2013	13.07	96.9	20.5			199	3.4	749	8.38											348			0.578	
Red Rock Creek: Lower	OK621200-05-0010K	51441	2/19/2013	8.86	71.3	42.6	I	X	403	5.2	616.7	8.7	147.8	79.4		< 0.02	< 0.02	1.76	0.04	1.80	0.131	0.31	442	731	18	0	
Red Rock Creek: Lower	OK621200-05-0010K	51583	3/25/2013	9	70.2	56.4	I	X	243	4.2	892	8.21	121.8	64.9		< 0.02	< 0.02	1.11	0.04	1.15	0.072	0.165	400	554	20	1	
Red Rock Creek: Lower	OK621200-05-0010K	51801	4/29/2013	5.48	58.2	340	I	X	120	16.6	314.8	7.47	24.5	23.6		< 0.5	0.05	1.88	0.55	2.43	0.311	0.461	340	434	66	1.391	
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	5.12	57.4	64.1	I	X	208	21.2	623	7.82											251			2.979	
Red Rock Creek: Lower	OK621200-05-0010K	51959	6/3/2013	5.93	68.9	317	I	X	69	21.3	212.5	7.79	17.3	13.1	0.12	0.57	0.3	1.92	0.99	2.79	0.383	0.528	145	249	231		
Red Rock Creek: Lower	OK621200-05-0010K	52163	7/1/2013	3.11	39.2	149	I	X	142	26	350	8.09	23	20.1	0.03	0.15	< 0.02	1.13	0.20	1.30	0.323	0.402	148	300	38	1.868	
Red Rock Creek: Lower	OK621200-05-0010K	52407	8/12/2013			335	I	X	91				20.8	14.2	0.04	0.73	0.06	1.73	0.83	2.52	0.472	0.582	131	364	92		
Red Rock Creek: Lower	OK621200-05-0010K	52556	9/17/2013	3.47	42	97.3	I	X	138	23.8	395.2	8.03	27.2	23.8	0.05	0.05	< 0.02	1.02	0.12	1.09	0.167	0.234	268	286	33		
Red Rock Creek: Lower	OK621200-05-0010K	52704	10/21/2013	5.17	49.4	275	I	X	120	12.2	316.9	8.04	19.6	21.4		1.29	0.08	1.49	1.37	2.86	0.224	0.36	122	360	59	0.156	
Red Rock Creek: Lower	OK621200-05-0010K	52926	12/2/2013	8.05	65.9	109	I	X	165	5.3	392.6	7.3	27.6	31.9		0.43	< 0.02	1.24	0.45	1.69	0.466	0.546	224	310	17	0.667	
Red Rock Creek: Lower	OK621200-05-0010K	53414	2/19/2014	11.54	91.1	35.7	Both		260	6.4	94	6.55	86.6	82.8		< 0.02	0.17	0.88	0.19	1.07	0.092	0.161	416	530	31	0.36	
Red Rock Creek: Lower	OK621200-05-0010K	53239	3/25/2014	7.24	61.9	30.2	Both		214	8.9	1059	8.39	107.1	87.2		< 0.02	< 0.02	0.86	0.04	0.90	0.071	0.145	298	600	11	0.1	
Red Rock Creek: Lower	OK621200-05-0010K	53531	4/28/2014	3.62	37.4	52.2	I	X	412	17.4	1129	8.24	154.9	112.7		< 0.02	< 0.02	1.09	0.04	1.13	0.145	0.243	500	750	22	0.1	
Red Rock Creek: Upper	OK621200-05-0160G	50207	6/12/2012	5.46	67.3	50.1	I	X	409	24.5	1588	7.91	208	152.9	< 0.02	0.19	< 0.02	0.95	0.23	1.16	0.242	0.305	478	926	55	0.712	
Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	7.71	38.3	84.1			145	27.6	1424	8.35	179	94.1	< 0.02	< 0.02	< 0.02	1.3	0.06	1.34	0.417	0.514	450	847	43	0.193	
Red Rock Creek: Upper	OK621200-05-0160G	50534	7/25/2012																								
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	3.66	43.8	77.4	I		417	24.2	1489	8.31											460				
Red Rock Creek: Upper	OK621200-05-0160G	50671	8/21/2012	3.48	41	104	I	X	470	21.9	1489	8.61	195.6	89	0.02	< 0.02	< 0.02	1.47	0.06	1.51	0.447	0.6	436	< 10	61	0	
Red Rock Creek: Upper	OK621200-05-0160G	50830	9/24/2012	4.2	44.5	85.2	I	X	484	19.1	1435	8.36	220.5	84		< 0.02	< 0.02	1.75	0.04	1.79	0.357	0.448	368	700	< 10	0	
Red Rock Creek: Upper	OK621200-05-0160G	51031	10/30/2012	1.71	15.4	20.1	O		589	8.5	1509	8.22	166.9	85.4		< 0.02	< 0.02	1.27	0.04	1.31	0.479	0.541	805	884	12	0	
Red Rock Creek: Upper	OK621200-05-0160G	51171	12/10/2012	2.22	17.2	25.8	O	X	314	4.4	1563	7.67	148	30.8		< 0.02	< 0.02	1.11	0.04	1.15	0.839	0.925	699	913	13	0	
Red Rock Creek: Upper	OK621200-05-0160G	51313	1/22/2013	7.75	60.4	7.07	O		506	3.7	1383	8.29	139.5	78.1		< 0.02	< 0.02	0.55	0.04	0.59	0.233	0.25	845	786	< 10	0	
Red Rock Creek: Upper	OK621200-05-0160G	51442	2/19/2013	8.01	66.4	104	I	X	341	6.1	751.1	8.48	58.4	41.8		< 0.02	< 0.02	1.24	0.04	1.28	0.159	0.281	534	435	38	0	
Red Rock Creek: Upper	OK621200-05-0160G	51584	3/25/2013	9.02	70.6	40.6	I	X	319	4.2	806.4	8.44	87.9	47		< 0.02	< 0.02	1.02	0.04	1.06	0.186	0.295	374	465	< 10	0.157	
Red Rock Creek: Upper	OK621200-05-0160G	51802	4/29/2013	6.14	67.2	168	I	X	204	17.3	623	7.96	59.2	49.1		0.24	0.11	1.46	0.35	1.81	0.177	0.292	308	435	56	0.836	
Red Rock Creek: Upper	OK621200-05-0160G	51960	6/3/2013	6.43	74.3	333	I	X	84	20.8	225	7.7	18.6	13	0.13	1.05	< 0.02	2.06	1.20	3.13	0.457	0.56	100	241	189		
Red Rock Creek: Upper	OK621200-05-0160G	52164	7/1/2013	4.07	48.5	164	I	X	243	22.7	536	8.1	37.1	29.1	0.03	< 0.02	< 0.02	1.52	0.07	1.56	0.389	0.523	226	378	78	0.111	
Red Rock Creek: Upper	OK621200-05-0160G	52388	7/31/2013																								
Red Rock Creek: Upper	OK621200-05-0160G	52408	8/12/2013			242	I	X	108	26.2	324.2	8.36	26.3	17.9	0.07	0.3	0.05	1.59	0.42	1.94	0.558	0.653	128	315	108		
Red Rock Creek: Upper	OK621200-05-0160G	52557	9/17/2013	2.53	31.1	103	I	X	264	22.4	637	7.97	49.3	39.2	0.05	< 0.02	< 0.02	1.39	0.09	1.43	0.236	0.331	224	420	31	0.5	
Red Rock Creek: Upper	OK621200-05-0160G	52705	10/21/2013	6.44	61.3	140	I	X	206	11.9	593.9	8.3	80	40.1		0.35	< 0.02	0.86	0.37	1.23	0.215	0.283	140	400	44	0.1	
Red Rock Creek: Upper	OK621200-05-0160G	52927	12/2/2013	7.87	64.3	66.2	I	X	227	6.1	691	7.65	53.9	59.6		0.17	< 0.02	1.13	0.19	1.32	0.299	0.386	273	450	< 10	1	
Red Rock Creek: Upper	OK621200-05-0160G	53080	1/14/2014	11.24	81.6	20.3	I	X	277	2.9	997	8.31	91.5	87.2		0.06	0.14	0.68	0.20	0.88	0.115	0.156	566	580	< 10	4.011	
Red Rock Creek: Upper	OK621200-05-0160G	53415	2/19/2014	10.52	82.3	29.3	O		354	5.8	1189	6.55	108.4	115.5		< 0.02	0.21	0.72	0.23	0.95	0.059	0.134	478	660	23	0.1	
Red Rock Creek: Upper	OK621200-05-0160G	53240	3/25/2014	6.35	53.7	68.8	Both		502	8.7	1396	8.51	150.1	129.3		< 0.02	< 0.02	1.17	0.04	1.21	0.149	0.251	556	830	50	0.779	
Red Rock Creek: Upper	OK621200-05-0160G	53532	4/28/2014	2.69	29.1	36.6	I	X	528	19.2	1347	8.23	146	95.5		< 0.02	< 0.02	1.3	0.04	1.34	0.36	0.494	490	840	26	0	
Salt Creek (Kingfisher)	OK620910-02-0100D	50324	5/17/2012	8	87.9	3.57	O		132	19.4	2461	7.7											2160			9.643	
Salt Creek (Kingfisher)	OK620910-02-0100D	50192	6/11/2012	5.92	71.1	3.79	O		164	24.4	20170	7.62	8828.6	1093.7	< 0.02	2.44	< 0.02	0.51	2.48	2.97	0.021	0.045	1250	16040	< 10	7.674	
Salt Creek (Kingfisher)	OK620910-02-0100D	50417	7/9/2012																								
Salt Creek (Kingfisher)	OK620910-02-0100D	50505	7/23/2012	3.72	52.9	5.29			167	25.7	41587	7.49	15794	1057.6	< 0.02	< 0.02	< 0.02	0.68	0.06	0.72	0.014	0.102	2780	26300	120	2.187	
Salt Creek (Kingfisher)	OK620910-02-0100D	50656	8/20/2012	5.8	75.1	612	I	X	175	19.1	47105	7.42	17213	1644.7	0.35	< 0.02	< 0.02	1.14	0.39	1.18	0.216	0.279	2550	33150	625	5.166	
Salt Creek (Kingfisher)	OK620910-02-0100D	50838	9/24/2012	6.62	82.2	7.78	O		178	17.8	42536	7.51	15833	1339.4		< 0.02	< 0.02	0.64	0.04	0.68	0.007	0.03	2470	29780	< 10	3.519	
Salt Creek (Kingfisher)	OK620910-02-0100D	51011	10/29/2012	11.17	107.8	7.89	O																				

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Salt Creek (Kingfisher)	OK620910-02-0100D	51949	6/3/2013	8.66	99.3	8.47	0		202	18.7	21393	7.87	7583.3	1090.9	0.04	0.47	< 0.02	0.57	0.53	1.06	0.044	0.062	1560	13320	< 10	6.615	
Salt Creek (Kingfisher)	OK620910-02-0100D	52225	7/8/2013	5.93	79.9	2.51	0		188	23.2	38534	7.53	14003	1396.9	< 0.02	< 0.02	< 0.02	0.44	0.06	0.48	0.011	0.036	2200	24800	400	4.794	
Salt Creek (Kingfisher)	OK620910-02-0100D	52488	8/12/2013	7.07	88	41.3	1	x	189	25.1	8347	7.91	2638.9	771.8	< 0.02	0.67	< 0.02	0.74	0.71	1.43	0.152	0.204	710	5040	40	32.848	
Salt Creek (Kingfisher)	OK620910-02-0100D	52525	9/16/2013	5.36	67.9	4.45	1	x	203	22.5	26803	7.48	9839.7	1040.7	< 0.02	< 0.02	< 0.02	0.61	0.06	0.65	0.01	0.045	1700	16000	15		
Salt Creek (Kingfisher)	OK620910-02-0100D	52694	10/21/2013	10.25	106.6	1.82	0		2000	11.4	32301	7.35	11156	1181.8		< 0.5	< 0.5	0.33	1.00	1.33	< 0.005	0.01	208	21000	< 10	10.361	
Salt Creek (Kingfisher)	OK620910-02-0100D	52916	12/2/2013	12.95	110.1	3.05	1		263	4	27290	7.49	9063.4	1165.1		0.6	< 0.02	0.31	0.62	0.93	0.007	0.017	2010	17000	65	3.826	
Salt Creek (Kingfisher)	OK620910-02-0100D	53034	1/13/2014	11.65	99.6	2.42	1		278	4.1	28325	7.8	9249.1			3.2	< 0.02	0.32	3.22	3.54	< 0.005	0.018	1470	18000	< 10	6.645	
Salt Creek (Kingfisher)	OK620910-02-0100D	53155	2/18/2014	10.41	93.5	2.25	1		200	5.8	28927	7.32	9645.8	1338.5		1.26	< 0.02	0.4	1.28	1.68	< 0.005	0.027	1850	18000	< 10	4.329	
Salt Creek (Kingfisher)	OK620910-02-0100D	53242	3/24/2014	12.05	105.8	1.69	1		170	4.8	31363	7.12	11417	1372.3		0.04	< 0.02	0.37	0.06	0.43	< 0.005	0.018	2380	20000	< 10	4.954	
Salt Creek (Kingfisher)	OK620910-02-0100D	53539	4/28/2014	6.82	72.3	7.33	1		263	13.6	30210	7.13	10530	1627.9		0.54	< 0.02	1.01	0.56	1.57	0.009	0.032	2840	19000	< 10	8.226	
Salt Creek (Payne)	OK620900-02-0020D	50281	5/17/2012	8.4	92.8	14.2	0		244	20.3	958	7.6											324				
Salt Creek (Payne)	OK620900-02-0020D	50217	6/12/2012	5.02	57.6	10.8	0		262	22.4	891	7.41	132.9	31.8	< 0.02	< 0.02	< 0.02	0.73	0.06	0.77	0.005	0.005	320	537	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	50522	7/24/2012	4.23	52.9	11.8			255	26.8	815	7.39	109.7	20.5	0.04	< 0.02	< 0.02	0.78	0.08	0.82	0.006	0.041	254	454	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	50616	8/14/2012				0																				0
Salt Creek (Payne)	OK620900-02-0020D	50690	8/21/2012	5.82	65.8	7.54	0	x	229	21.6	812	7.69	111	22.5	0.03	< 0.02	< 0.02	0.59	0.07	0.63	< 0.005	0.033	260	420	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	50821	9/24/2012	6.6	71.9	9.53	0		223	19.6	754	7.66	91.3	31.4		< 0.02	< 0.02	0.68	0.04	0.72	< 0.005	0.024	253	460	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	51062	10/30/2012	8.66	76.2	3.45	0	x	261	9.8	827	7.46	86.7	39.4		< 0.02	< 0.02	0.58	0.04	0.62	< 0.005	0.023	301	442	< 10	0.01	
Salt Creek (Payne)	OK620900-02-0020D	51190	12/10/2012	10.87	82	2.69	0	x	325	3.6	790	8.09	48.8	24.3		< 0.02	< 0.02	0.25	0.04	0.29	0.005	0.021	346	405	< 10		
Salt Creek (Payne)	OK620900-02-0020D	51323	1/23/2013	11.77	91.8	3.08	0	x	317	6	787	7.44	37.6	24.8		< 0.02	< 0.02	0.26	0.04	0.30	0.009	0.027	325	419	< 10	< 0.1	
Salt Creek (Payne)	OK620900-02-0020D	51418	2/19/2013	10.98	96.1	5.33	0	x	322	8.4	749	8.01	41.8	25.7		< 0.02	< 0.02	0.33	0.04	0.37	0.006	0.04	314	420	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	51609	3/25/2013	12.05	94.8	4.29	0		303	6.5	745	8.03	42.1	25.6		< 0.02	< 0.02	0.39	0.04	0.43	< 0.005	0.037	314	478	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	51789	4/29/2013	8.88	95.6	23.9	1		186	17.8	739	7.47											245			0	
Salt Creek (Payne)	OK620900-02-0020D	51969	6/3/2013	5.21	61.6	47.1	1	x	110	23.2	329.2	7.35	18.4	16.4	0.06	0.29	< 0.02	1.05	0.37	1.36	0.05	0.099	136	40	180	0	
Salt Creek (Payne)	OK620900-02-0020D	52190	7/2/2013			23.3	0																			0	
Salt Creek (Payne)	OK620900-02-0020D	52219	7/9/2013	3.29	41.2	19.3	0		224	26.4	461	7.33	36.6	11.4	< 0.02	< 0.02	< 0.02	1.46	0.06	1.50	0.038	0.171	256	380	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	52500	8/12/2013	4.4	55.1	168	1	x	88	26.7	265	6.98	14.6	10.6	0.07	0.32	0.04	1.13	0.43	1.49	0.102	0.182	139	320	60	0	
Salt Creek (Payne)	OK620900-02-0020D	52537	9/16/2013	2.7	32.1	30.8	1		234	23.9	543	7.4	37.2	12.8	0.04	0.03	< 0.02	0.83	0.09	0.88	0.02	0.088	240	290	22	0	
Salt Creek (Payne)	OK620900-02-0020D	52714	10/21/2013	6.22	58.2	14	0		235	13	531	7.21	29.4	14.6		0.04	< 0.02	0.58	0.06	0.64	0.019	0.054	296	320	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	52936	12/2/2013	6.79	57.4	3.42	0		177	8.3	648	7.27	33.4	16.9		< 0.02	0.18	0.31	0.20	0.51	0.046	0.07	303	370	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	53046	1/13/2014	9.47	76.8	3.18	0		302	6.9	710	6.99	40.1	17.8		< 0.02	0.08	0.19	0.10	0.29	0.012	0.031	303	390	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	53147	2/18/2014	9.99	83.8	6.57	0		315	9.1	672	7.8	34	18.2		< 0.02	0.12	0.25	0.14	0.39	0.009	0.031	320	390	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	53232	3/25/2014	9.3	80	3.12	0		276	9.1	769	7.71	32.9	17.6		< 0.02	< 0.02	0.3	0.04	0.34	0.005	0.034	325	340	< 10	0	
Salt Creek (Payne)	OK620900-02-0020D	53523	4/28/2014	1.86	20.4	7.66	0		265	18.7	607	7.2	37.2	12.6		< 0.02	< 0.02	0.76	0.04	0.80	0.031	0.106	281	340	< 10	0	
Salt Creek: Lower	OK621200-04-0010F	50215	6/12/2012	8.58	106.5	19.7	0	x	112	27.4	350	8.04	14	10.8	< 0.02	< 0.02	0.25	0.87	0.29	1.14	0.01	0.063	141	232	15	7.698	
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	5.7	71.9	22.8	0		174	27	397	7.69											179			7.061	
Salt Creek: Lower	OK621200-04-0010F	50493	7/24/2012	3.87	44.2	5.99			208	27.9	558	7.41	33.5	18.3	< 0.02	< 0.02	< 0.02	0.6	0.06	0.64	0.013	0.056	248	305	27	0	
Salt Creek: Lower	OK621200-04-0010F	50638	8/14/2012																								0
Salt Creek: Lower	OK621200-04-0010F	50688	8/21/2012	11.77	142.3	41.3	0	x	176	26.4	467.1	8.07	35.5	16.7	< 0.02	< 0.02	< 0.02	1.51	0.06	1.55	0.032	0.157	284	272	36	0	
Salt Creek: Lower	OK621200-04-0010F	50835	9/25/2012	8.61	94.7	21.6	0	x	191	21.2	572	7.93	39.3	20.9		< 0.02	< 0.02	1.52	0.04	1.56	0.009	0.107	219	220	< 10	0	
Salt Creek: Lower	OK621200-04-0010F	51024	10/30/2012	7.11	61.6	6.68	0	x	260	9.3	647	7.48	39	20.3		< 0.02	< 0.02	0.87	0.04	0.91	0.007	0.077	380	373	< 10	0	
Salt Creek: Lower	OK621200-04-0010F	51176	12/11/2012	11.79	85.9	8.05	0	x	243	3	618	7.8	79.1	14.9		< 0.02	< 0.02	0.76	0.04	0.80	0.01	0.058	594	427	< 10		
Salt Creek: Lower	OK621200-04-0010F	51346	1/23/2013	9.92	74.3	4.94	0		301	3.1	820	6.88	80.4	18		0.09	< 0.02	0.73	0.11	0.84	0.005	0.052	411	236	< 10	0	
Salt Creek: Lower	OK621200-04-0010F	51425	2/19/2013	11.75	104.4	15.6	0	x	211	10.5	790	7.43	74	34.8		0.03	< 0.02	0.77	0.05	0.82	0.008	0.055	303	421	< 10	0	
Salt Creek: Lower	OK621200-04-0010F	51606	3/25/2013	13.38	113.1	4.39	0		196	8.7	527	7.81	37.8	21		< 0.02	< 0.02	0.57	0.04	0.61	0.011	0.056	288	359	< 10	5.774	
Salt Creek: Lower	OK621200-04-0010F	51814	4/30/2013	9.77	108.6	44.9	1	x	163	21.3	433.6	8.01	29.8	20		< 0.02	< 0.02	0.56	0.04	0.60	0.013	0.057	194	257	19	41.182	
Salt Creek: Lower	OK621200-04-0010F	51976	6/4/2013	8.25	99.3	40.3	1	x	63	24.7	367.4	17.7	17.7	12.9	< 0.02	0.37	< 0.02	0.56	0.41	0.95	0.049	0.082	198	223	24	221.89	
Salt Creek: Lower	OK621200-04-0010F	52189	7/2/2013			17.9	0																				0
Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	9.59	129.8	11.6	0		174	29.8	336.4	7.97	31.4	16	0.02	< 0.02	< 0.02	0.42	0.06	0.46	0.005	0.048	212	260	< 10		
Salt Creek: Lower	OK621200-04-0010F																										

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)
Salt Creek: Middle	OK621200-04-0010K	50213	6/12/2012	6.05	75.2	19.9	O	x	155	27.1	372.2	7.6	13.8		< 0.02	0.13		0.43	0.15	0.56	0.006	0.048	210	200	17	0
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	4.91	61	11.1	O		238	26.2	620	7.14											757			0
Salt Creek: Middle	OK621200-04-0010K	50496	7/24/2012	4.25	55.3	4.83			87	28.7	474	7.72	22.3	33.4	< 0.02	< 0.02	< 0.02	0.74	0.06	0.78	0.016	0.081	189	268	22	0
Salt Creek: Middle	OK621200-04-0010K	50639	8/14/2012																							0
Salt Creek: Middle	OK621200-04-0010K	50686	8/21/2012	7.9	86.3	18.4	O	x	162	24.4	402.7	7.83	31	18.7	< 0.02	< 0.02	< 0.02	0.84	0.06	0.88	0.01	0.077	170	252	10	0
Salt Creek: Middle	OK621200-04-0010K	50836	9/25/2012	7.24	82	8.29	O	x	172	22.3	466.9	7.01	36.2	19.8		< 0.02	< 0.02	0.68	0.04	0.72	< 0.005	0.041	192	180	20	0
Salt Creek: Middle	OK621200-04-0010K	51025	10/30/2012	9.89	87.7	3.97	O	x	184	10.8	472.8	7.45	35.7	21.4		< 0.02	< 0.02	0.6	0.04	0.64	< 0.005	0.029	244	261	< 10	0
Salt Creek: Middle	OK621200-04-0010K	51177	12/11/2012	7.98	61.8	6.77	O	x	207	4.5	539	7.87	37.8	22.9		< 0.02	< 0.02	0.45	0.04	0.49	< 0.005	0.036	244	291	< 10	0
Salt Creek: Middle	OK621200-04-0010K	51347	1/23/2013	10.85	84.1	5.03	O		222	4.7	571		37.1	23		< 0.02	< 0.02	0.45	0.04	0.49	< 0.005	0.021	277	307	< 10	0
Salt Creek: Middle	OK621200-04-0010K	51423	2/19/2013	9.94	84.4	12.1	O	x	205	9	532	7.87	34.3	23.5		< 0.02	< 0.02	0.5	0.04	0.54	< 0.005	0.032	261	279	< 10	0
Salt Creek: Middle	OK621200-04-0010K	51604	3/25/2013	12.22	99.6	7.73	I	x	157	7.2	682	8.04	99.6	29.7		0.03	< 0.02	0.4	0.05	0.45	< 0.005	0.03	274	436	116	7.557
Salt Creek: Middle	OK621200-04-0010K	51812	4/30/2013	9.59	103.1	27.8	I	x	166	19.4	427.2	8.05	24.7	18		< 0.02	< 0.02	0.5	0.04	0.54	0.007	0.039	242	241	10	38.054
Salt Creek: Middle	OK621200-04-0010K	51974	6/4/2013	7.76	90.8	40.8	I	x	176	23.1	360.9		14.3	11.7	< 0.02	< 0.02	0.59	0.22	0.79	0.045	0.084	193	221	21	140.22	
Salt Creek: Middle	OK621200-04-0010K	52187	7/2/2013			26.3	O																			
Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	9.46	122.1	21.4	O		178	28.6	384	8.17	22.2	40.2	< 0.02	< 0.02	< 0.02	0.59	0.06	0.63	0.01	0.058	184	320	< 10	1.074
Salt Creek: Middle	OK621200-04-0010K	52505	8/13/2013	7.2	85.8	419	I	x	69	24.2	162.5	7.59	3.6	2.5	< 0.02	0.08	< 0.02	1.64	0.12	1.74	0.219	0.403	95	425	386	
Salt Creek: Middle	OK621200-04-0010K	52542	9/17/2013	6.08	71.2	22.7	I	x	191	22	466.6	7.69	18.2	31.6	< 0.02	0.02	< 0.02	0.43	0.06	0.47	0.019	0.054	224	240	24	5.456
Salt Creek: Middle	OK621200-04-0010K	52719	10/22/2013	9.82	93.4	7.73	O		194	13.1	574	7.63	73.4	14		< 0.02	< 0.02	0.34	0.04	0.38	0.008	0.025	248	340	< 10	9.644
Salt Creek: Middle	OK621200-04-0010K	52943	12/23/2013	10.93	89.7	11.9	O		277	7.7	551	7.47	24.5	15.1		0.02	< 0.02	0.23	0.04	0.27	0.017	0.033	293	320	< 10	73.394
Salt Creek: Middle	OK621200-04-0010K	53051	1/14/2014	12.76	98.9	5.95	O		248	4.6	546	7.58	28.4	16.4		< 0.02	0.03	0.14	0.05	0.19	< 0.005	0.022	328	330	< 10	51.723
Salt Creek: Middle	OK621200-04-0010K	53152	2/19/2014	11.39	97.8	7.41	O		247	8.9	571	7.99	36.8	18.7		< 0.02	0.08	0.29	0.10	0.39	0.005	0.025	274	320	< 10	14.663
Salt Creek: Middle	OK621200-04-0010K	53227	3/24/2014	10.26	96.3	9.95	I	x	253	12.5	598	8.27	52.6	18.9		< 0.02	< 0.02	0.24	0.04	0.28	0.006	0.033	339	350	< 10	10.375
Salt Creek: Middle	OK621200-04-0010K	53528	4/29/2014	7.65	79.5	12.4	O		206	17.1	511	8.17	51.4	17.4		< 0.02	< 0.02	0.41	0.04	0.45	0.009	0.029	285	330	14	6.053
Sandy Creek	OK621010-02-0010D	50252	6/19/2012	4.55	56.6	4.42	O		331	24.9	971	7.61	106.7	74.7	< 0.02	< 0.02	< 0.02	0.58	0.06	0.62	0.08	0.096	320	566	< 10	0
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	5.26	69	28.4			172	27.2	798	8.09														0.873
Sandy Creek	OK621010-02-0010D	50473	7/18/2012																							
Sandy Creek	OK621010-02-0010D	50559	7/30/2012	6.2	88.7	94.5	O		181	31.7	796	8.8	105.1	54.8	0.03	< 0.02	< 0.02	1.3	0.07	1.34	0.116	0.237	160	419	74	0.309
Sandy Creek	OK621010-02-0010D	50649	8/7/2012				I																			
Sandy Creek	OK621010-02-0010D	50700	8/27/2012	6.65	87.4	38.7	I		288	27.8	844	8.48	115.5	58.9	< 0.02	< 0.02	< 0.02	1.05	0.06	1.09	0.09	0.214	610	496	41	0
Sandy Creek	OK621010-02-0010D	50939	10/1/2012	10.63	121.3	33.3	O		178	19.5	806	8.82	120	57.8		< 0.02	< 0.02	1.33	0.04	1.37	0.025	0.177	495	437	74	0
Sandy Creek	OK621010-02-0010D	52092	3/4/2013	9.03	93	3.28	I	x	177	14.4	815	8.34	90.9	83.6		< 0.02	< 0.02	0.43	0.04	0.47	0.026	0.055	270	438	< 10	1.054
Sandy Creek	OK621010-02-0010D	51628	4/1/2013	10.02	103.1	6.36	I		194	15.8	686	8.92	86.2	66.1		< 0.02	< 0.02	0.52	0.04	0.56	0.006	0.042	510	418	< 10	1.852
Sandy Creek	OK621010-02-0010D	51824	5/6/2013	9.5	103	10.1	I		182	17.6	682	8.85	85.3	75.1		< 0.02	< 0.02	1.01	0.04	1.05	0.011	0.048	322	405	< 10	7.403
Sandy Creek	OK621010-02-0010D	52012	6/10/2013	9.85	134.5	9.14	O		198	28.6	696	8.69	86	52.2	< 0.02	< 0.02	< 0.02	0.75	0.06	0.79	0.041	0.088	282	400	< 10	1.029
Sandy Creek	OK621010-02-0010D	52039	6/18/2013																							
Sandy Creek	OK621010-02-0010D	52257	7/15/2013	5.83	75.1	12.7	O		200	24.1	854	8.66	98.7	64.8	< 0.02	< 0.02	< 0.02	0.87	0.06	0.91	0.063	0.132	235	462	< 10	0
Sandy Creek	OK621010-02-0010D	52590	8/19/2013			12.7	I	x	199	26.8	730	8.46	82	67.3	0.02	0.07	< 0.02	0.88	0.11	0.97	0.259	0.311	310	431	< 10	17.331
Sandy Creek	OK621010-02-0010D	52569	9/23/2013	7.17	83.7	78.9	I	x	128	20.6	422.1	8.19	29.3	45		0.25	0.06	0.93	0.31	1.24	0.16	0.21	161	280	25	3.237
Sandy Creek	OK621010-02-0010D	52727	10/28/2013	11.86	125.6	19.4	O		274	16.4	890	8.96	173.5	69.8		< 0.02	< 0.02	2.83	0.04	2.87	0.034	0.36	425	640	31	0
Sandy Creek	OK621010-02-0010D	53065	12/16/2013	10.98	89.1	2.25	O		236	4.9	1002	8.27	94.4	82.8		< 0.02	< 0.02	0.34	0.04	0.38	0.084	0.102	330	550	< 10	
Sandy Creek	OK621010-02-0010D	53383	1/21/2014	12.11	95.8	2.49	O		282	4	999	8.62	111.2	90.8		< 0.02	0.13	0.34	0.15	0.49	0.095	0.11	630	550	< 10	
Sandy Creek	OK621010-02-0010D	53280	2/18/2014	13.26	125	4.99	O		198	10.6	714	8.64	69.6	62.8		0.14	0.14	0.5	0.28	0.78	0.012	0.039	380	380	< 10	
Sandy Creek	OK621010-02-0010D	53435	3/31/2014	10.73	123.7	7.45			195	20.8	803	8.68	97.8	64.9		< 0.02	< 0.02	0.45	0.04	0.49	0.068	0.101	220	440	< 10	
Sandy Creek	OK621010-02-0010D	53590	5/5/2014	9.92	120.9	16.1	O		178	22.5	714	8.7	103.8	58.1		< 0.02	< 0.02	0.52	0.04	0.56	0.013	0.039	198	380	< 10	0.593
Skeleton Creek: Upper	OK620910-03-0010S	50205	6/11/2012	9.59	126.5	70.1	I	x	237	27.7	1479	8.61	228.4	166.1	0.02	0.6	1.37	2.5	1.99	4.47	0.081	0.285	405	822	70	25.653
Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	7.19	101.3	37.6			204	31.3	1805	8.13	327.4	240	0.3	0.89	0.55	2.28	1.74	3.72	0.104	0.22	60	1020	40	8.824
Skeleton Creek: Upper	OK620910-03-0010S	50531	7/25/2012																							
Skeleton Creek: Upper	OK620910-03-0010S	50666	8/20/2012	8.66	110.9	68.3	I	x	272	26.1	1240	8.63	346	297.3	0.06	6.99	0.85	1.03	7.90	8.87	0.273	0.388	585	1152	64	17.901
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	6.72	81.2	61.4	O		244	25	2047	8.25											398			6.836
Skeleton Creek: Upper	OK620910-03-0010S	50824	9/25/2012	7.06	80.6	57.4	I		300	21.9	1742	8.23	284	219.9		2.61	0.35	1.71	2.96	4.67	1.286	1.365				

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)		
Skeleton Creek: Upper	OK620910-03-0010S	51805	4/30/2013	8.49	98.2	64.1	I	x	241	20.5	1656	8.46	267	227.2														
Skeleton Creek: Upper	OK620910-03-0010S	51962	6/3/2013	7.61	90.5	158	I	x	140	22.3	791	8.06	96.2	106.6	0.09	1.28	0.23	1.59	1.60	3.10	0.382	0.436	226	526	100			
Skeleton Creek: Upper	OK620910-03-0010S	52166	7/1/2013	9.58	124.4	150	I	x	101	27.3	1548	8.64	277.4	255.7	0.02	1.2	0.38	3.42	1.60	5.00	0.084	0.437	270	948	138	10.093		
Skeleton Creek: Upper	OK620910-03-0010S	52386	7/31/2013				I	x																				
Skeleton Creek: Upper	OK620910-03-0010S	52411	8/12/2013			115	I	x	206	26.9	849	8.28	97.8	89.7	0.03	1.14	< 0.02	1.42	1.19	2.58	0.352	0.412	286	552	66			
Skeleton Creek: Upper	OK620910-03-0010S	52560	9/17/2013	6.69	82.1	110	I	x	288	24	1656	8.58	281.7	198.8	0.33	2.68	0.63	1.93	3.64	5.24	0.458	0.599	344	980	138			
Skeleton Creek: Upper	OK620910-03-0010S	52708	10/22/2013	10.14	97.8	50.2	I		285	12.3	1388	8.65	200.9	152		3.28	< 0.02	0.62	3.30	3.92	0.438	0.476	414	830	23	12.031		
Skeleton Creek: Upper	OK620910-03-0010S	52930	12/3/2013	11.52	98.6	23	I		463	6.4	1864	8.42	288.1	231		6.7	< 0.02	0.84	6.72	7.56	0.581	0.601	583	1100	<	10		
Skeleton Creek: Upper	OK620910-03-0010S	53075	1/13/2014	12.9	94.5	11	O		358	3.1	1916	8.64	281.9	242.1		7.41	1.65	0.78	9.06	9.84	0.581	0.615	626	1100	<	10		
Skeleton Creek: Upper	OK620910-03-0010S	53410	2/18/2014	12.73	105.3	31.3	Both		344	7.9	2017	6.91	308.9	272.3		6.28	0.87	0.85	7.15	8.00	0.361	0.459	592	1200	150	11.42		
Skeleton Creek: Upper	OK620910-03-0010S	53235	3/24/2014	11.01	97.2	41.1	Both		372	10.5	2133	8.31	335	291		5.01	0.11	1.87	5.12	6.99	0.515	0.672	588	1300	47	14.097		
Skeleton Creek: Upper	OK620910-03-0010S	53535	4/29/2014	8.29	91.6	83.4	I	x	314	18.9	1999	9.15	332.3	239.5		0.67	0.7	2.93	1.37	4.30	0.373	0.704	346	1200	96	16.874		
Stillwater Creek: Upper	OK620900-04-0070T	50209	6/12/2012	3.12	38.2	45	I	x	202	23.9	474.7	7.58	34.2	24.2	0.08	0.25	< 0.02	0.92	0.35	1.19	0.074	0.128	212	277	32	0.215		
Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	5	68.9	27.8			211	31.3	496	7.71	36.4	22.9	0.1	0.08	< 0.02	1.02	0.20	1.12	0.097	0.148	154	293	20			
Stillwater Creek: Upper	OK620900-04-0070T	50536	7/25/2012																									
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	1.62	19.6	40.5	I		159	25	460.8	7.04											150			0.541		
Stillwater Creek: Upper	OK620900-04-0070T	50669	8/20/2012	4.31	54.4	18.5	O		210	25.5	485.3	7.68	36.7	21.1	0.17	0.14	0.07	0.86	0.38	1.07	0.081	0.104	2215	264	<	10		
Stillwater Creek: Upper	OK620900-04-0070T	50828	9/24/2012	2.47	25.8	23.3	I	x	222	18.3	611	7.51	36.5	53.4		0.03	< 0.02	1.15	0.05	1.20	0.056	0.118	274	310	23	0		
Stillwater Creek: Upper	OK620900-04-0070T	51169	12/10/2012	1.52	12.1	39.6	Both	x	305	6.2	767	6.99	49.2	8.5		< 0.02	< 0.02	1.74	0.04	1.78	0.152	0.275	381	480	20	0		
Stillwater Creek: Upper	OK620900-04-0070T	51444	2/19/2013	5.08	43.7	123	I	x	335	7.8	774	8.21	43.5	200.6		< 0.02	< 0.02	2.36	0.04	2.40	0.054	0.257	515	557	61	0		
Stillwater Creek: Upper	OK620900-04-0070T	51586	3/25/2013	4.18	35	18.7	I	x	399	7.1	1140	7.98	43.1	235		< 0.02	< 0.02	1.51	0.04	1.55	0.043	0.15	820	710	<	10		
Stillwater Creek: Upper	OK620900-04-0070T	51804	4/29/2013	4.26	44.8	20.4	I	x	241	15	543.3	7.89	25.2	41.7		< 0.02	< 0.02	0.79	0.04	0.83	0.091	0.181	280	335	<	10		
Stillwater Creek: Upper	OK620900-04-0070T	51966	6/3/2013	0.22	2	72.5	I	x	128	20.3	734.5	7.81	14.1	27	0.51	0.02	0.03	2.15	0.56	2.20	0.389	0.516	127	222	24	0		
Stillwater Creek: Upper	OK620900-04-0070T	52169	7/1/2013	2	20.6	68.2	I		280	24.1	635	7.37	29.6	28.6	0.35	< 0.02	0.08	2.47	0.45	2.57	0.334	0.546	253	400	65	0		
Stillwater Creek: Upper	OK620900-04-0070T	52390	7/31/2013				I	x																				
Stillwater Creek: Upper	OK620900-04-0070T	52410	8/12/2013			68.7	I	x	144	25.3	349.3	8.11	22.3	24.2	0.08	0.09	0.03	1.06	0.20	1.18	0.164	0.223	170	245	24			
Stillwater Creek: Upper	OK620900-04-0070T	52559	9/17/2013	2.55	30.4	10.2	I		336	22.2	569	8.13	27.8	19.4	0.16	0.04	0.09	1.12	0.29	1.25	0.098	0.135	390	350	<	10		
Stillwater Creek: Upper	OK620900-04-0070T	52707	10/21/2013	8.59	82.9	36.4	I		302	12.6	584.7	8.62	28.2	33.6		< 0.02	< 0.02	0.87	0.04	0.91	0.057	0.108	263	350	<	10		
Stillwater Creek: Upper	OK620900-04-0070T	52929	12/3/2013	1.8	15.2	65.3	O		317	6.4	583.6	7.7	21.3	16.9		< 0.02	0.05	1.37	0.07	1.44	0.488	0.586	372	340	35	0		
Stillwater Creek: Upper	OK620900-04-0070T	53074	1/13/2014	4.59	35.3	15.9	O		304	5.6	999	7.8	52.2	73.4		< 0.02	1.15	0.79	0.17	0.96	0.201	0.274	495	650	11	0.1		
Stillwater Creek: Upper	OK620900-04-0070T	53409	2/18/2014	6.41	51.1	15.8	Both		504	6.4	1172	6.98	59.6	107.2		< 0.02	0.2	0.59	0.22	0.81	0.06	0.115	564	670	<	10		
Stillwater Creek: Upper	OK620900-04-0070T	53234	3/24/2014	5.12	42.2	7.35	O		536	7.8	1128	8.29	60.1	95.6		< 0.02	< 0.02	0.69	0.04	0.73	0.066	0.125	756	680	<	10		
Stillwater Creek: Upper	OK620900-04-0070T	53534	4/28/2014	0.42	4.7	13.4	O		280	18.1	780	8.16	48.2	31.3		< 0.02	< 0.02	1.07	0.04	1.11	0.188	0.255	362	480	<	10		
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50196	6/11/2012	12.27	157.1	28.4			352	28.5	1134	8.52	240.6	103	<	0.02	0.65	<	0.02	1.26	0.69	1.93	0.328	0.418	352	1208	42	6.244
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	6.76	84.5	35.6	I		274	23.8	1784	8.57															2.256	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50421	7/9/2012																									
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50509	7/23/2012	12.8	172.2	5.84			284	31.7	1955	8.68	539.4	189.4	0.05	0.92	<	0.02	1.17	0.99	2.11	0.312	0.368	480	1403	<	10	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50660	8/20/2012	18.7	259.6	2.85	O		287	30.1	1992	8.85	437.6	141.8	0.06	2.66	<	0.02	0.99	2.74	3.67	0.245	0.286	320	1093	<	10	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50842	9/24/2012	12.9	154.4	17.7	O		320	24	1942	8.3	413.1	132.3		2.66	<	0.02	2.22	2.68	4.90	0.217	0.291	326	964	30	0.097	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51015	10/29/2012	18.13	178.7	3.79	O		326	14.5	1307	8.63	295.7	112.9		2.02	<	0.02	0.76	2.04	2.80	0.189	0.217	387	1003	<	10	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51183	12/10/2012	17.06	133.8	27.8	I		394	4.4	4051	8.62	969	400.7		0.98	<	0.02	1.59	1.00	2.59	0.078	0.236	625	2452	24	1.395	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51307	1/22/2013	18.62	141.6	7.84	O		329	3.8	1724	8.81	304.1	136.9		0.91	<	0.02	0.78	0.93	1.71	0.033	0.073	334	948	<	10	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51453	2/19/2013	17.5	154.2	13.3	O		311	9.5	1662	8.35	310.4	147.1		0.6	<	0.02	0.8	0.62	1.42	0.057	0.115	320	916	17	2.157	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51595	3/25/2013	17.21	147.5	8.7	O		315	8.4	1525	8.93	258.5	122.3		0.3	<	0.02	0.6	0.32	0.92	0.073	0.134	275	871	<	10	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51795	4/29/2013	11.77	140.4	46	I		312	24	1535	8.62	249.7	118.9		0.32	<	0.02	1.29	0.34	1.63	0.118	0.209	296	854	54	25.095	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51872	5/20/2013																									
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51953	6/3/2013	12.39	151.4	127	I	x	262	25.3	1220	8.63	195.7	81.8	0.03	0.49	0.39	2.57	0.91	3.45	0.496	0.671	250	702	105	5.825		
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52229	7/8/2013	15.32	207.8	26.9	O		350	31.2	1646	8.72	266.7	96	0.03	0.97	<	0.02	2.69	1.02	3.68	0.342	0.642	280	918	63	0.276	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52492	8/12/2013	7.06	89.3	146	I	x	185	27.3	892	8.09	129	65	0.08	0.79	0.35	1.9	1.22	3.04	0.61	0.723	193	558	76	18.827		
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52529	9/16/2013	11.85	145.8	12.4	O		330																			

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)
West Clay Creek	OK621010-01-0130R	51627	4/1/2013	8.4	95	5.6	O		740	15.6	22096	7.88	8912.7	1508.8		< 0.02	< 0.02	0.88	0.04	0.92	0.053	0.135	2370	16100	23	0.071
West Clay Creek	OK621010-01-0130R	51823	5/6/2013	15.67	206	7.52	O		445	23.7	21316	8.39	8090.8	1895.2		< 0.02	< 0.02	0.67	0.04	0.71	0.024	0.092	1945	1328	25	0.083
West Clay Creek	OK621010-01-0130R	52011	6/10/2013	9.6	143.2	9.75	O		480	31.2	17639	8.14	6290.5	1040.9	0.26	< 0.02	< 0.02	0.98	0.30	1.02	0.237	0.311	1500	10780	28	0.1
West Clay Creek	OK621010-01-0130R	52040	6/18/2013																							
West Clay Creek	OK621010-01-0130R	52256	7/15/2013	2.86	37.7	4.15	O		175	23.6	22000	7.88	10025	1751.9	< 0.02	< 0.02	< 0.02	0.96	0.06	1.00	0.012	0.095	2140	18500	< 10	0.2
West Clay Creek	OK621010-01-0130R	52589	8/19/2013			18.3	I	x	307	26.3	9312	8.02	2690.1	570	0.18	1.61	< 0.02	1.04	1.81	2.67	0.373	0.391	935	5420	80	0.596
West Clay Creek	OK621010-01-0130R	52568	9/23/2013	12.62	141.4	3.57	O		685	21	26706	8.16	9465.5	1470		< 0.02	< 0.02	0.64	0.04	0.68	0.087	0.142	1925	17000	50	0.276
West Clay Creek	OK621010-01-0130R	52726	10/28/2013	13.07	150.8	3.6	O		451	16.2	23652	8.29	7653.5	1328.4		< 0.02	< 0.02	0.48	0.04	0.52	0.053	0.091	1805	15000	< 10	0.083
West Clay Creek	OK621010-01-0130R	53064	12/16/2013	11.84	116.3	9.31	O		409	8.8	23044	7.72	6888.8	1341.3		0.29	< 0.02	0.52	0.31	0.83	0.083	0.111	1710	13000	< 10	
West Clay Creek	OK621010-01-0130R	53382	1/21/2014	14.93	134.7	3.15	O		8.13	5.7	22734	8.13	7093.1	1333.5		0.69	< 0.02	0.5	0.71	1.21	0.038	0.067	1890	14000	< 10	
West Clay Creek	OK621010-01-0130R	53279	2/18/2014	14.77	168	3.81	O		381	15.6	20743	8.05	6629.8	1066.3		0.06	< 0.02	0.76	0.08	0.84	0.06	0.112	1150	13000	< 10	0.1
West Clay Creek	OK621010-01-0130R	53434	3/31/2014	12.3	158.1	3.63			346	21.8	23672	8.14	7158.8	1258.1		0.54	< 0.02	0.91	0.56	1.47	0.042	0.109	1600	15000	< 10	< 0.1
West Clay Creek	OK621010-01-0130R	53589	5/5/2014	15.16	219.2	4.77	I		750	27.4	25144	7.93	8342.6	1864.3		0.91	< 0.02	1.84	0.93	2.77	0.066	0.296	16000	16000	< 10	0.05
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	3.92	49.9	6.41	I		328	25.1	2265	7.94	378.1	319.6	0.09	0.15	< 0.02	1.15	0.26	1.32	0.123	0.177	380	1283	< 10	0.226
Wildhorse Creek	OK621000-02-0040F	50476	7/18/2012																							
Wildhorse Creek	OK621000-02-0040F	50562	7/31/2012	4.69	60.3	12.2	O		471	26	1766	7.86	245.2	123.2	0.06	< 0.02	< 0.02	1.07	0.10	1.11	0.273	0.336	370	987	< 10	0.003
Wildhorse Creek	OK621000-02-0040F	50651	8/7/2012				O																			
Wildhorse Creek	OK621000-02-0040F	50703	8/28/2012	3.84	46.6	10.3	O		482	23.2	1769	8.26	272.5	118.9	< 0.02	< 0.02	< 0.02	0.85	0.06	0.89	0.332	0.389	270	1047	11	0
Wildhorse Creek	OK621000-02-0040F	50941	10/2/2012	3.06	32.5	20.9	I	x	526	16.1	1758	8.5	264.7	112.9		< 0.02	< 0.02	1.02	0.04	1.06	0.241	0.27	387	1016	28	0
Wildhorse Creek	OK621000-02-0040F	51084	11/6/2012	2.55	21.3	7.05	O		665	7	1515	8.08	260.8	86.8		< 0.02	< 0.02	1.09	0.04	1.13	0.556	0.598	915	1140	< 10	0
Wildhorse Creek	OK621000-02-0040F	51213	12/17/2012	4.02	35	31.7	I		571	6.7	1784	8.03	251.5	108.5		< 0.02	< 0.02	0.73	0.04	0.77	0.235	0.286	992	1108	< 10	0
Wildhorse Creek	OK621000-02-0040F	51340	1/28/2013	8.44	87.5	22.6	O		616	14.6	1618	8.29	227.3	98.8		< 0.02	< 0.02	1	0.04	1.04	0.107	0.198	535	993	10	0
Wildhorse Creek	OK621000-02-0040F	51548	3/4/2013	11.29	104.7	35.4	I	x	298		1180	8.3	150.5	200.1		1.63	0.33	1.28	1.96	3.24	0.132	0.21	408	753	28	0.506
Wildhorse Creek	OK621000-02-0040F	51630	4/2/2013	7.22	64.9	31.7	I	x	276	9.2	1752	8.4	290.3	274.9		< 0.02	< 0.02	0.89	0.04	0.93	0.077	0.14	825	1098	17	0
Wildhorse Creek	OK621000-02-0040F	51826	5/7/2013	8.12	86.9	15.3	I		234	16.8	1332	8.61	190.8	205.1		< 0.02	< 0.02	0.6	0.04	0.64	0.02	0.067	435	833	< 10	1
Wildhorse Creek	OK621000-02-0040F	52015	6/11/2013	3.01	39	44.8	I	x	290	26.3	888	8.05	142.7	151.7	0.7	0.03	< 0.02	2.25	0.75	2.30	0.342	0.445	308	711	83	0.5
Wildhorse Creek	OK621000-02-0040F	52037	6/18/2013																							
Wildhorse Creek	OK621000-02-0040F	52261	7/16/2013	4.85	58.1	160	O		297	22.7	1691	8.55	304.4	201.1	0.49	0.05	< 0.02	6.49	0.56	6.56	0.116	0.765	378	1040	173	0
Wildhorse Creek	OK621000-02-0040F	52592	8/20/2013			40.5	I	x	301	23.1	1319	8.46	197.9	185.2	0.04	0.57	< 0.02	1.23	0.63	1.82	0.339	0.388	370	818	22	1
Wildhorse Creek	OK621000-02-0040F	52571	9/24/2013	4.23	47.6	31.4	I		297	18.8	1437	8.61	247.4	249		< 0.02	< 0.02	1.14	0.04	1.18	0.143	0.198	385	940	24	0
Wildhorse Creek	OK621000-02-0040F	52729	10/29/2013	5.45	53.3	15.4	I		274	12.5	1654	8.86	252.3	252.2		0.08	< 0.02	0.56	0.10	0.66	0.054	0.087	645	990	< 10	0
Wildhorse Creek	OK621000-02-0040F	53068	12/17/2013	12.13	87	5.25			325	0.6	2134	8.23	288.7	353.2		4.46	< 0.02	0.42	4.48	4.90	0.013	0.045	510	1300	10	
Wildhorse Creek	OK621000-02-0040F	53386	1/22/2014	13.3	95.2	8.28	O		291	0.4	2168	8.44	304.7	364.8		3.34	0.42	0.62	3.76	4.38	0.01	0.042	502	1300	< 10	0
Wildhorse Creek	OK621000-02-0040F	53283	2/19/2014	9.1	78.8	23.8	O		280	7.1	2012	8.24	275.9	346.2		2.33	0.53	1.62	2.86	4.48	0.023	0.157	610	1200	19	0
Wildhorse Creek	OK621000-02-0040F	53438	4/1/2014	9.47	93.3					12.9	1940	8.65	289.1	324.9		< 0.02	< 0.02	1.12	0.04	1.16	0.034	0.123	1200	11	0	
Wildhorse Creek	OK621000-02-0040F	53592	5/6/2014	3.49	41.8	15.2	O		371	21.2	2418	8.34	403.1	358.2		< 0.02	< 0.02	1.94	0.04	1.98	0.048	0.209	540	1400	12	0
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	7.85	94.4	7.93	I		159	25.9	2776	8														0.524
Yellowstone Creek	OK621010-01-0270C	50249	6/18/2012	5.17	80.5	4.22	I		185	35.6	2036	7.9	58.3	2173	< 0.02	< 0.02	< 0.02	0.29	0.06	0.33	< 0.005	0.012	2172	3045	< 10	
Yellowstone Creek	OK621010-01-0270C	51623	4/1/2013	11.79	110.6	1.33	I	x	166	9.9	2943	8.15	62.3	1940.1		< 0.02	< 0.02	0.2	0.04	0.24	< 0.005	0.006	2620	2916	< 10	0.18
Yellowstone Creek	OK621010-01-0270C	51819	5/6/2013	9.34	107.8	2.75	I		132	19.6	2937	7.99	59.8	1944.7		< 0.02	< 0.02	0.14	0.04	0.18	< 0.005	0.006	2185	2828	< 10	0.198
Yellowstone Creek	OK621010-01-0270C	52007	6/10/2013	7.9	111	39.6	I		195	30	3014	8.04	56	1928.9	< 0.02	0.03	< 0.02	0.43	0.07	0.48	0.019	0.04	2685	3019	26	0.2
Yellowstone Creek	OK621010-01-0270C	52044	6/18/2013																							
Yellowstone Creek	OK621010-01-0270C	52586	8/19/2013			2.95	I		199	23.5	2267	8.05	65.1	2096.6	< 0.02	0.68	< 0.02	0.33	0.72	1.03	< 0.005	0.011	1982	2960	< 10	2.613
Yellowstone Creek	OK621010-01-0270C	52565	9/23/2013	7.4	79.7	3.76	I		188	19.4	2972	8.14	54.6	2394.5		0.04	< 0.02	0.27	0.06	0.33	< 0.005	0.011	2375	3000	< 10	0.15
Yellowstone Creek	OK621010-01-0270C	52723	10/28/2013	10.32	101.8	4.14	I		161	12.3	2959	8.23	51.5	1888.7		< 0.02	< 0.02	0.25	0.04	0.29	< 0.005	0.012	2330	2900	< 10	0.025
Yellowstone Creek	OK621010-01-0270C	53061	12/16/2013	11.51	100.8	0.97	O		169	7.2	2876	7.91	48.7	1765.2		0.09	< 0.02	0.19	0.11	0.30	< 0.005	0.007	2140	2700	< 10	0.034
Yellowstone Creek	OK621010-01-0270C	53379	1/21/2014	10.17	83.8	0.98	O		145	5.2	2983	8.25	52.2	2159.3		< 0.02	< 0.02	0.16	0.04	0.20	< 0.005	0.008	2070	2900	< 10	
Yellowstone Creek	OK621010-01-0270C	53276	2/18/2014	11.87	119.4	1.04	I		126	12.5	2859	7.93	60.9	1797.5		< 0.02	0.1	0.19	0.12	0.31	< 0.005	0.009	1940	2700	< 10	
Yellowstone Creek	OK621010-01-0270C	53431	3/31/2014	10.77	127.7	1.75	I		131	20.5	3088	8	59.1	1857.6	</											

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)
Bois d'Arc Creek - 031	CCA12-031	50488	7/23/2012	3.45	42.3	5.3			209	27	1419	7.51	133	396.5	0.06	0.07	< 0.02	0.61	0.15	0.70	0.145	0.163	547	941	< 10	0
Bug Creek - 052	CCA12-052	50330	6/22/2012	4.06	27.9	4.52	0		209	23	675	7.16											209			0
Bug Creek - 052	CCA12-052	50642	8/14/2012	4.01	47.7	25.9	0	x	177	26.4	1227	7.51	271.6	78.6	0.09	< 0.02	< 0.02	1.31	0.13	1.35	0.022	0.121	264	656	22	0
Camp Creek - 058	CCA12-058	50283	5/22/2012	6	80	21.2	I		332	26.1	2890	7.97														0.071
Camp Creek - 058	CCA12-058	50135	5/29/2012			60.8	I		400	23.3	2897	7.82	68.8	1895.2	0.02	< 0.02	< 0.02	1.67	0.06	1.71	0.296	0.423		2779	64	1.5
Camp Creek - 068	CCA12-068	50291	5/23/2012	4.25	45.1	2.49	0		257	19	473.4	7.55											249			0
Camp Creek - 068	CCA12-068	50516	7/23/2012	2.25	28.4	4.61			273	27.8	587	7.71	17.1	4.9	< 0.02	< 0.02	< 0.02	1.05	0.06	1.09	0.11	0.17	240	337	< 10	0
Canyon View Creek - 044	CCA12-044	50285	5/23/2012	13.5	171		I		24.4	1150	7.97															< 0.5
Canyon View Creek - 044	CCA12-044	50133	5/29/2012			6.57	I		434	21	1733	7.56	44.1	581.2	0.35	0.68	0.3	1.28	1.33	2.26	0.193	0.228		1294	< 10	0
Chilocco Creek - 011	CCA12-011	50331	6/25/2012	3.9	46.8	28.1	0		280	25.1	65	7.45											230			0
Chilocco Creek - 011	CCA12-011	50492	7/23/2012	2.98	37.6	9.01			278	27.4	772	7.86	56.8	18.8	0.12	0.04	< 0.02	0.92	0.18	0.98	0.253	0.307	292	422	< 10	0
Chilocco Creek - 039	CCA12-039	50332	6/26/2012	3.96	48.4	16.6	0		288	25.5	732	7.65											266			< 0.1
Chilocco Creek - 039	CCA12-039	50491	7/23/2012	5.03	60.1	6.47			263	25.9	758	7.74	62.1	34.9	0.04	< 0.02	< 0.02	0.76	0.08	0.80	0.169	0.2	257	431	< 10	0
Cimarron River - 013	CCA12-013	50721	7/19/2012	3.29	42.1	23.4	0		255		5911	8.67											510			88.269
Cimarron River - 013	CCA12-013	50520	7/23/2012	18.8	26.6	73.4			87	33.9	5270	9.97	1725.6	302.4	< 0.02	< 0.02	< 0.02	5.31	0.06	5.35	0.036	0.388	340	3540	< 10	88.467
Cimarron River - 016	CCA12-016	50277	6/26/2012	7.63	100.6	17.1	0		214	27.2	14102	8.15	5687.8	638.2	< 0.02	< 0.02	< 0.02	0.79	0.06	0.83	0.018	0.108	1810	8729	< 10	50.771
Cimarron River - 016	CCA12-016	50379	7/5/2012	11	155.9	8	0		155	30.8	17480	8.36											880			51.359
Cimarron River - 018	CCA12-018	50724	7/31/2012	11.99	156	5.73	0		168	28.9	5480	8.97											445			51.424
Cimarron River - 018	CCA12-018	50611	8/13/2012	16	195.2	11.1	0		154	25.5	5450	9.35	1713.3	345.4	0.3	1.26	< 0.02	2.25	1.58	3.53	0.777	0.892	458	3080	40	50.999
Cimarron River - 046	CCA12-046	50156	5/29/2012	7.83	102.9	2.47	0		133	29.8	36620	8.02	14568	1444.7	< 0.02	0.2	2	0.45	2.22	2.65	< 0.005	0.013	1940	24980	< 10	3.035
Cimarron River - 050	CCA12-050	50727	8/9/2012	4.99	59.6	7.36	0		127	24.3	11910	7.53											617			17.208
Cimarron River - 050	CCA12-050	50612	8/13/2012	11.16	139.2	7.71	0		112	26.1	13600	8.48	5090.4	625.7	< 0.02	0.05	< 0.02	1.61	0.09	1.68	0.017	0.142	668	8067	67	11.405
Cimarron River - 056	CCA12-056	50292	5/24/2012	9.68	117	20.9	I		216	22	9550	8.07											683			338.45
Cimarron River - 056	CCA12-056	50515	7/23/2012	3.49	44.3	51.2			109	27.6	6050	8.37	1756.2	338.5	0.12	< 0.02	< 0.02	3.24	0.16	3.28	0.107	0.343	366	3480	< 10	85.21
Cimarron River - 065	CCA12-065	50723	7/31/2012	2.01	24.2	6.49	0		199		5480	8.49											469			47.42
Cimarron River - 065	CCA12-065	50610	8/13/2012	9.95	114.7	8.41	0		191	22.3	4019	8.99	1604.7	330.6	0.19	0.63	< 0.02	2.3	0.84	2.95	0.744	0.882	425	2880	30	56.407
Clear Creek - 009	CCA12-009	50305	6/6/2012	6.07	69.2	2.1	0		165	21.7	661	7.88											220			2.309
Council Creek - 079	CCA12-079	50299	6/4/2012	6.1	71.1	25.5	0		349	22.9	810	7.69											362			0
Council Creek - 079	CCA12-079	50524	7/24/2012	1.94	24.2	9.77			319	27.5	630	7.49	99.8	2.1	0.2	< 0.02	< 0.02	1.14	0.24	1.18	0.08	0.137	265	472	< 10	0
Deer Creek - 063	CCA12-063	50385	7/11/2012	1.84	24.1	9.05	I		27.2	1789	7.79															0.017
Deer Creek - 063	CCA12-063	50472	7/18/2012	4.27	58	6.25			260	29.2	1170	7.72	338.5	155.4	< 0.02	< 0.02	< 0.02	1.01	0.06	1.05	0.105	0.174	142	1040	< 10	0.008
Deer Creek - 070	CCA12-070	50256	6/18/2012	7.84	108.8	12.1	I		260	30	973	8.41	122.1	73.2	< 0.02	< 0.02	< 0.02	0.68	0.06	0.72	0.115	0.145	280	544	10	0.682
Deer Creek - 070	CCA12-070	50339	6/28/2012	5.25	71	14.1	I		257	29	1089	8.22														0.014
Doe Creek - 026	CCA12-026	50115	5/21/2012	10.04	116.4	2.25			170	22.4	3555	7.78	210.5	2234.1	0.39	< 0.02	< 0.02	1.73	0.43	1.77	0.085	0.11	2820	3419	< 10	0
Dry Creek - 022	CCA12-022	50574	8/6/2012	5.11	66.2	16.3	I		228	26.5	1629	8.3	242.9	304.8	0.02	0.41	< 0.02	0.77	0.45	1.20	0.087	0.114		980	140	0.5
Dry Creek - 022	CCA12-022	50736	9/20/2012	6.69	76.5	15.3	I		102	20	949	7.79														0.966
Kingfisher Creek - 060	CCA12-060	50276	6/26/2012	0.84	10.2	8.74	0		323	24.9	1672	7.7	364.7	751.7	0.03	< 0.02	< 0.02	0.81	0.07	0.85	0.252	0.265	710	1713	< 10	0
Kingfisher Creek - 060	CCA12-060	50378	7/5/2012	2.06	25.9	5.09	0		397	26	3308	7.79											856			0
Lariat Creek - 078	CCA12-078	50166	6/5/2012	7.58	31.7	2.3	I		318	22.8	713	7.71	26	32.2	< 0.02	< 0.02	< 0.02	0.65	0.06	0.69	0.154	0.186	620	385	10	0.002
Lariat Creek - 078	CCA12-078	50308	6/6/2012	1.4	17.5	2.18	I		404	22.6	797	7.56														0
Little Turkey Creek - 072	CCA12-072	50278	6/26/2012	3.13	38.2	2.86	0		237	24.7	984	7.72	118.4	94.5	0.43	0.06	< 0.02	1.14	0.51	1.22	0.71	0.721	440	580	< 10	0
Little Turkey Creek - 072	CCA12-072	50712	7/16/2012	1.97	23.2	4.69	0		136	23.8	562	7.19											194			0
Medicine Lodge River - 007	CCA12-007	50105	5/21/2012			13	I		195	27.1	921	8.46	112.6	326	< 0.02	< 0.02	< 0.02	0.39	0.06	0.43	0.034	0.048		807	< 10	45.609
Nash Creek - 084	CCA12-084	50384	7/11/2012	2.2	27.6	9.04	0		572	24.2	4921	8.45														0
Nash Creek - 084	CCA12-084	50475	7/18/2012	14	208.3	9.19			468	33.6	5499	8.78	1075.9	911.3	< 0.02	< 0.02	< 0.02	1.33	0.06	1.37	0.008	0.075	490	3276	16	0
North Canadian River - 042	CCA12-042	50114	5/21/2012	8.26	89.9	2.83	0		216	19.4	1876	8.15	261.7	435.9	< 0.02	0.06	< 0.02	0.66	0.10	0.74	0.026	0.05	728	1326	< 10	44.142
North Canadian River - 042	CCA12-042	50298	6/4/2012	8.24	98.7	2.94			151	24.3	1557	8.06											700			39.192
North Canadian River - 062	CCA12-062	50286	5/24/2012	1.72	21.4	258	0		268	22.1	1475	7.46														20.56
North Canadian River - 062	CCA12-062	50134	5/29/2012			5.15	0		302	22.6	1975	7.53	287.8	481.9	0.11	< 0.02	< 0.02	0.99	0.15	1.03	0.528	0.58		1337	< 10	8.485
North Canadian River - 080	CCA12-080	50275	6/25/2012	8.68	105.8	1.48	0		215	25.4	2061	7.75	342.9	485.6	0.02	< 0.02	< 0.02	0.63	0.06	0.67	0.012	0.021	1118	1425	< 10	1.785
Palo Duro Creek - 057	CCA12-057	50118	5/22/2012	6.9	75.8	0.73			254	20.6	2955	7.08	737.9	340	< 0.02	< 0.02	< 0.02	0.63	0.06	0.67	< 0.005	0.016	720	1770	< 10	0
Palo Duro Creek - 057	CCA12-057	50302	6/5/2012	5.36	64.4	25.4	0		416	24.1	3392												7200			0
Pond Creek - 059	CCA12-059	50254	6/18/2012	5.13	66	30.3	I		322	25.7	1464	7.96	219.9	109.3	0.08	0.39	< 0.02	1.15	0.49	1.56	0.213	0.254	285	826	21	0.

Appendix A.1

Site Name	WBID	Sample ID	Date	DO (mg/L)	DO % Saturation	Turbidity (NTU)	Turbidity Cause	Rainfall/Affects Turbidity	Alkalinity (CaCO3)	Water Temp (°C)	Conductivity (µS/cm)	pH (SU)	Chloride (mg/L)	Sulfate (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Available N (mg/L)	Total N (mg/L)	OrthoP (mg/L)	Total P (mg/L)	Hardness (mg/L)	TDS (mg/L)	TSS (mg/L)	Flow (cfs)	
Salt Creek - 024	CCA12-024	50318	6/18/2012	6.57	83.3	15.4	O		164	27.7	400.3	7.78											136			8.182	
Salt Creek - 024	CCA12-024	50495	7/24/2012	4	49	6.01			186	29.7	428.2	7.54	25.3	16.4	< 0.02	< 0.02	< 0.02	0.45	0.06	0.49	0.009	0.046	207	239	< 10	0	
Salt Creek - 040	CCA12-040	50722	7/30/2012	4.44	55.3	30.1	O		151	26.1	287.3	7.42											125			0	
Salt Creek - 040	CCA12-040	50641	8/14/2012	4.61	53.9	24.4	O	x	184	24.2	356.2	7.39	4.5	7.4	< 0.02	< 0.02	< 0.02	0.76	0.06	0.80	0.015	0.089	187	222	38	0	
Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	7.21	88	10.1	I		112	22.7	1283	7.75	183.3	928.1	0.02	0.05	< 0.02	0.4	0.09	0.47	0.011	0.021		1640	< 10		
Salt Fork Arkansas River - 076	CCA12-076	50381	7/10/2012	3.67	45.1	39.3	I		211	23.5	1718	7.63														0	
Sand Creek - 035	CCA12-035	50296	5/31/2012	6.12	72.2	12.7	I		338	21.7	13350	8.25														4.743	
Sand Creek - 035	CCA12-035	50165	6/4/2012	13.76	190.6	8.58	I		291	29.5	9490	8.65	173.9	204.1	< 0.02	< 0.02	< 0.02	1.04	0.06	1.08	0.143	0.204	350	835	< 10	5.818	
Skeleton Creek - 004	CCA12-004	50106	5/21/2012			18.3	I		324	27.7	1372	8.87	270.5	202.1	0.02	3.85	< 0.02	1.86	3.89	5.73	0.241	0.398		1021	32	52.585	
Skeleton Creek - 004	CCA12-004	50329	6/21/2012	5.21	66	30.2	I		258	25	1613	8.6														3.253	
Skeleton Creek - 020	CCA12-020	50279	6/26/2012	12.5	161.6	1.57			120	30.1	1354	8.82	304	195.8	< 0.02	0.11	< 0.02	3.5	0.15	3.63	0.071	0.307	290	856	176	18.677	
Skeleton Creek - 020	CCA12-020	50714	7/18/2012	4.75	59.1	157	I		267	26.6	1848	8.59											340			0.41	
Skeleton Creek - 034	CCA12-034	50380	7/6/2012	3.81	49.4	131	I		186	28.9	1773	7.77											224			8.252	
Skeleton Creek - 034	CCA12-034	50613	8/13/2012	7.27	92.1	113	O		213	27.9	1941	8.35	407	268.6	0.02	2.14	< 0.02	1.38	2.18	3.54	0.122	0.246	315	1152	59	4.38	
Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	11.91	142.7	19			182	24.4	788	8.53	68.4	144.7	0.02	0.94	< 0.02	0.59	0.98	1.55	0.057	0.077	404	533	19	0.261	
Sleeping Bear Creek - 030	CCA12-030	50157	5/30/2012	6.19	67.1	35.3	O		199	19.2	1037	7.83											410				
Spring Creek - 023	CCA12-023	50164	6/4/2012	8.58	104.3	1.47	I		312	24.7	1417	8.09	74.2	1060.5	< 0.02	< 0.02	< 0.02	0.48	0.06	0.52	0.182	0.205	1200	1740	< 10	0.254	
Spring Creek - 023	CCA12-023	50311	6/7/2012	2.79	33	2.18	O		354	21	2309	7.76														1.937	
Spring Creek - 081	CCA12-081	50337	6/28/2012	1.93	23.6	6.47	O		291	25.6	1216	7.12											428			0	
Spring Creek - 081	CCA12-081	50636	8/13/2012	3.99	45.1	25.8	O	x	294	24.3	1345	7.66	233.2	164.6	0.05	< 0.02	< 0.02	0.82	0.09	0.86	0.258	0.323	421	800	22	0	
Stillwater Creek - 073	CCA12-073	50314	6/11/2012	6.43	77.3	37.1	I		56	24.6	1005	7.09											193			5.456	
Stillwater Creek - 073	CCA12-073	50519	7/23/2012	7.38	99.6	18.7			71	30.9	942	7.66	154.4	126.7	0.05	19.3	0.4	0.83	19.73	20.51	1.993	1.875	182	644	11	6.502	
Traders Creek - 077	CCA12-077	50158	5/30/2012	8.47	99.4	1.86	O		131	23.3	5760	7.97	1263	2187.4	< 0.02	0.02	0.1	0.47	0.14	0.59	0.006	0.014	2410	4632	< 10	1.585	
Turkey Creek - 003	CCA12-003	50107	5/21/2012			17.8	I		23	2292	8.38	435	185.4	< 0.02	0.39	< 0.02	1.15	0.43	1.56	0.187	0.251		1364	67			
Turkey Creek - 003	CCA12-003	50322	6/20/2012	7.8	102.3	74.8			266	25.8	1380	8.69														2.689	
Turkey Creek - 014	CCA12-014	50117	5/21/2012	17.09		2.74			175	27.2	378.3	8.58	12.1	15.4	< 0.02	0.79	< 0.02	0.59	0.83	1.40	0.008	0.024	160	249	< 10	0.006	
Turkey Creek - 036	CCA12-036	50289	5/21/2012	7.85	80.9	380	I		142	17.1	306.9	7.24											286			0	
Turkey Creek - 036	CCA12-036	50517	7/23/2012	1.96	24	140			232	27	234	7.53	16	7.6	0.81	0.02	0.09	2.48	0.92	2.59	0.039	0.139	197	355	66	0	
Turkey Creek - 082	CCA12-082	50163	6/4/2012			4.49	I	x	219	26	1367	8.24	43	568.2	< 0.02	< 0.02	< 0.02	0.45	0.06	0.49	0.026	0.047		1026	< 10	0.462	
Turkey Creek - 082	CCA12-082	50317	6/14/2012	5.45	67.7	1.96	I		227	21.9	2005	7.69														0.028	
Unnamed Trib of Cimarron River - 006	CCA12-006	50290	5/22/2012	11.44	112.5	4.77	O		330	14	786	7.67											384			0.2	
Unnamed Trib of Salt Fork of Arkansas	CCA12-043	50294	5/30/2012	8.2	101.2	30.9	I		305	22.2	1552	7.8															
Unnamed Trib of Salt Fork of Arkansas	CCA12-043	50255	6/18/2012	7.25	94.2	8.11	I		287	26.5	1441	8.17	214.4	126.3	< 0.02	< 0.02	< 0.02	0.8	0.06	0.84	0.205	0.235	298	818	10	0.002	
Unnamed Trib. of Trail Creek - 064	CCA12-064	50284	5/23/2012	7.22	85.9	2.31	I		143	20	2375	7.87														0.477	
Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012			2.22	I		154	22.8	2465	8.01	23.6	1918.5	< 0.02	< 0.02	< 0.02	0.34	0.06	0.38	0.016	0.026		2432	< 10	0.174	

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Fixed Sites				
Beaver Creek	OK620900-03-0230C	50203	6/11/2012	5
Beaver Creek	OK621210-00-0050L	50212	6/12/2012	40
Beaver Creek	OK620900-03-0230C	50482	7/23/2012	< 5
Beaver Creek	OK621210-00-0050L	50497	7/24/2012	25
Beaver Creek	OK620900-03-0230C	50532	7/25/2012	< 5
Beaver Creek	OK621210-00-0050L	50640	8/14/2012	5
Beaver Creek	OK620900-03-0230C	50668	8/20/2012	5
Beaver Creek	OK621210-00-0050L	50685	8/21/2012	25
Beaver Creek	OK620900-03-0230C	50826	9/25/2012	30
Beaver Creek	OK621210-00-0050L	50837	9/25/2012	440
Beaver Creek	OK620900-03-0230C	51964	6/3/2013	100
Beaver Creek	OK621210-00-0050L	51973	6/4/2013	120
Beaver Creek	OK620900-03-0230C	52168	7/1/2013	10
Beaver Creek	OK621210-00-0050L	52186	7/2/2013	5
Beaver Creek	OK621210-00-0050L	52213	7/8/2013	30
Beaver Creek	OK620900-03-0230C	52384	7/31/2013	1700
Beaver Creek	OK620900-03-0230C	52413	8/12/2013	260
Beaver Creek	OK621210-00-0050L	52504	8/13/2013	1300
Beaver Creek	OK620900-03-0230C	52562	9/17/2013	< 10
Beaver Creek	OK621210-00-0050L	52541	9/17/2013	250
Bent Creek	OK720500-01-0070D	50071	5/14/2012	240
Bent Creek	OK720500-01-0070D	50235	6/18/2012	45
Bent Creek	OK720500-01-0070D	50539	7/30/2012	95
Bent Creek	OK720500-01-0070D	50739	8/27/2012	100
Bent Creek	OK720500-01-0070D	51831	5/6/2013	20
Bent Creek	OK720500-01-0070D	51990	6/10/2013	240
Bent Creek	OK720500-01-0070D	52022	6/17/2013	> 1500
Bent Creek	OK720500-01-0070D	52243	7/15/2013	300
Bent Creek	OK720500-01-0070D	52604	8/19/2013	180
Bent Creek	OK720500-01-0070D	52833	9/23/2013	170
Bent Creek	OK720500-01-0070D	53551	5/5/2014	45
Bitter Creek	OK621100-00-0100G	50211	6/12/2012	15
Bitter Creek	OK621100-00-0100G	50490	7/23/2012	5
Bitter Creek	OK621100-00-0100G	50635	8/13/2012	30
Bitter Creek	OK621100-00-0100G	50684	8/21/2012	20
Bitter Creek	OK621100-00-0100G	50833	9/24/2012	10
Bitter Creek	OK621100-00-0100G	51972	6/4/2013	80
Bitter Creek	OK621100-00-0100G	52185	7/2/2013	55
Bitter Creek	OK621100-00-0100G	52212	7/8/2013	20
Bitter Creek	OK621100-00-0100G	52503	8/13/2013	1800
Bitter Creek	OK621100-00-0100G	52540	9/17/2013	20
Black Bear Creek: Upper	OK621200-03-0260B	50206	6/11/2012	10
Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	5

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Black Bear Creek: Upper	OK621200-03-0260B	50533	7/25/2012	110
Black Bear Creek: Upper	OK621200-03-0260B	50672	8/21/2012	5
Black Bear Creek: Upper	OK621200-03-0260B	50829	9/24/2012	10
Black Bear Creek: Upper	OK621200-03-0260B	51961	6/3/2013	< 50
Black Bear Creek: Upper	OK621200-03-0260B	52165	7/1/2013	110
Black Bear Creek: Upper	OK621200-03-0260B	52387	7/31/2013	2100
Black Bear Creek: Upper	OK621200-03-0260B	52409	8/12/2013	200
Black Bear Creek: Upper	OK621200-03-0260B	52558	9/17/2013	40
Bois d'Arc Creek	OK621000-03-0010C	50210	6/12/2012	35
Bois d'Arc Creek	OK621000-03-0010C	50489	7/23/2012	165
Bois d'Arc Creek	OK621000-03-0010C	50634	8/13/2012	< 5
Bois d'Arc Creek	OK621000-03-0010C	50683	8/21/2012	15
Bois d'Arc Creek	OK621000-03-0010C	50832	9/24/2012	< 5
Bois d'Arc Creek	OK621000-03-0010C	51971	6/4/2013	220
Bois d'Arc Creek	OK621000-03-0010C	52184	7/2/2013	45
Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	60
Bois d'Arc Creek	OK621000-03-0010C	52502	8/13/2013	170
Bois d'Arc Creek	OK621000-03-0010C	52539	9/17/2013	160
Buffalo Creek: Lower	OK620920-05-0010G	50074	5/14/2012	< 10
Buffalo Creek: Lower	OK620920-05-0010G	50237	6/18/2012	5
Buffalo Creek: Lower	OK620920-05-0010G	50542	7/30/2012	5
Buffalo Creek: Lower	OK620920-05-0010G	50742	8/27/2012	5
Buffalo Creek: Lower	OK620920-05-0010G	51834	5/6/2013	< 10
Buffalo Creek: Lower	OK620920-05-0010G	51993	6/10/2013	210
Buffalo Creek: Lower	OK620920-05-0010G	52025	6/17/2013	360
Buffalo Creek: Lower	OK620920-05-0010G	52246	7/15/2013	200
Buffalo Creek: Lower	OK620920-05-0010G	52607	8/19/2013	50
Buffalo Creek: Lower	OK620920-05-0010G	52838	9/23/2013	< 10
Buffalo Creek: Lower	OK620920-05-0010G	53554	5/5/2014	< 5
Clear Creek	OK720500-02-0070G	50075	5/15/2012	70
Clear Creek	OK720500-02-0300F	50078	5/15/2012	110
Clear Creek	OK720500-02-0070G	50239	6/19/2012	50
Clear Creek	OK720500-02-0300F	50242	6/19/2012	590
Clear Creek	OK720500-02-0070G	50543	7/31/2012	20
Clear Creek	OK720500-02-0300F	50546	7/31/2012	45
Clear Creek	OK720500-02-0070G	50743	8/28/2012	5
Clear Creek	OK720500-02-0300F	50746	8/28/2012	< 5
Clear Creek	OK720500-02-0070G	51835	5/7/2013	< 10
Clear Creek	OK720500-02-0300F	51838	5/7/2013	70
Clear Creek	OK720500-02-0070G	51994	6/11/2013	< 5
Clear Creek	OK720500-02-0300F	51997	6/11/2013	30
Clear Creek	OK720500-02-0070G	52026	6/18/2013	70
Clear Creek	OK720500-02-0300F	52029	6/18/2013	15
Clear Creek	OK720500-02-0070G	52247	7/16/2013	40

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Clear Creek	OK720500-02-0300F	52250	7/16/2013	110
Clear Creek	OK720500-02-0070G	52608	8/20/2013	40
Clear Creek	OK720500-02-0300F	52611	8/20/2013	95
Clear Creek	OK720500-02-0070G	52839	9/24/2013	10
Clear Creek	OK720500-02-0300F	52842	9/24/2013	30
Clear Creek	OK720500-02-0070G	53559	5/6/2014	45
Clear Creek	OK720500-02-0300F	53557	5/6/2014	55
Cooper Creek	OK620910-02-0040C	50200	6/12/2012	10
Cooper Creek	OK620910-02-0040C	50415	7/9/2012	220
Cooper Creek	OK620910-02-0040C	50513	7/24/2012	< 5
Cooper Creek	OK620910-02-0040C	50664	8/21/2012	25
Cooper Creek	OK620910-02-0040C	50846	9/25/2012	70
Cooper Creek	OK620910-02-0040C	51866	5/20/2013	40
Cooper Creek	OK620910-02-0040C	51958	6/4/2013	4900
Cooper Creek	OK620910-02-0040C	52234	7/9/2013	5
Cooper Creek	OK620910-02-0040C	52494	8/12/2013	120
Cooper Creek	OK620910-02-0040C	52534	9/17/2013	80
Cottonwood Creek	OK620910-04-0010E	50202	6/11/2012	1840
Cottonwood Creek	OK620910-04-0010E	50529	7/24/2012	45
Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	330
Cottonwood Creek	OK620910-04-0010E	50673	8/21/2012	375
Cottonwood Creek	OK620910-04-0010E	50827	9/25/2012	50
Cottonwood Creek	OK620910-04-0010E	51965	6/3/2013	150
Cottonwood Creek	OK620910-04-0010E	52170	7/1/2013	50
Cottonwood Creek	OK620910-04-0010E	52383	7/31/2013	1600
Cottonwood Creek	OK620910-04-0010E	52414	8/12/2013	500
Cottonwood Creek	OK620910-04-0010E	52563	9/17/2013	> 5000
Council Creek	OK620900-02-0050H	50219	6/12/2012	20
Council Creek	OK620900-02-0050H	50523	7/24/2012	290
Council Creek	OK620900-02-0050H	50618	8/14/2012	20
Council Creek	OK620900-02-0050H	50692	8/21/2012	65
Council Creek	OK620900-02-0050H	50822	9/24/2012	> 2000
Council Creek	OK620900-02-0050H	51968	6/3/2013	60
Council Creek	OK620900-02-0050H	52191	7/2/2013	100
Council Creek	OK620900-02-0050H	52218	7/9/2013	5
Council Creek	OK620900-02-0050H	52499	8/12/2013	140
Council Creek	OK620900-02-0050H	52536	9/16/2013	2600
Crooked Creek	OK620930-00-0100G	50077	5/15/2012	10
Crooked Creek	OK620930-00-0100G	50241	6/18/2012	20
Crooked Creek	OK621000-06-0010C	50245	6/18/2012	320
Crooked Creek	OK621000-06-0010C	50474	7/18/2012	15
Crooked Creek	OK620930-00-0100G	50545	7/31/2012	105
Crooked Creek	OK621000-06-0010C	50563	7/31/2012	100
Crooked Creek	OK621000-06-0010C	50650	8/7/2012	15

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Crooked Creek	OK620930-00-0100G	50745	8/28/2012	185
Crooked Creek	OK621000-06-0010C	50704	8/28/2012	30
Crooked Creek	OK620930-00-0100G	51837	5/7/2013	320
Crooked Creek	OK621000-06-0010C	51825	5/7/2013	70
Crooked Creek	OK620930-00-0100G	51996	6/11/2013	35
Crooked Creek	OK621000-06-0010C	52016	6/11/2013	30
Crooked Creek	OK620930-00-0100G	52028	6/18/2013	300
Crooked Creek	OK621000-06-0010C	52038	6/18/2013	90
Crooked Creek	OK621000-06-0010C	52258	7/15/2013	160
Crooked Creek	OK620930-00-0100G	52249	7/16/2013	> 1200
Crooked Creek	OK621000-06-0010C	52591	8/19/2013	140
Crooked Creek	OK620930-00-0100G	52610	8/20/2013	25
Crooked Creek	OK620930-00-0100G	52843	9/24/2013	< 10
Crooked Creek	OK620930-00-0100G	53556	5/6/2014	130
Dead Indian Creek	OK620910-05-0080A	50198	6/12/2012	550
Dead Indian Creek	OK620910-05-0080A	50413	7/9/2012	15
Dead Indian Creek	OK620910-05-0080A	50511	7/24/2012	< 5
Dead Indian Creek	OK620910-05-0080A	50662	8/21/2012	140
Dead Indian Creek	OK620910-05-0080A	50844	9/25/2012	15
Dead Indian Creek	OK620910-05-0080A	51864	5/20/2013	450
Dead Indian Creek	OK620910-05-0080A	51955	6/4/2013	3700
Dead Indian Creek	OK620910-05-0080A	52232	7/9/2013	90
Dead Indian Creek	OK620910-05-0080A	52496	8/13/2013	190
Dead Indian Creek	OK620910-05-0080A	52531	9/17/2013	60
Deep Creek	OK620910-02-0250C	50193	6/11/2012	200
Deep Creek	OK620910-02-0250C	50418	7/9/2012	435
Deep Creek	OK620910-02-0250C	50506	7/23/2012	320
Deep Creek	OK620910-02-0250C	50657	8/20/2012	285
Deep Creek	OK620910-02-0250C	50839	9/24/2012	15
Deep Creek	OK620910-02-0250C	51869	5/20/2013	920
Deep Creek	OK620910-02-0250C	51950	6/3/2013	310
Deep Creek	OK620910-02-0250C	52226	7/8/2013	< 5
Deep Creek	OK620910-02-0250C	52489	8/12/2013	210
Deep Creek	OK620910-02-0250C	52526	9/16/2013	20
Deer Creek	OK621000-04-0010D	50253	6/19/2012	15
Deer Creek	OK621000-04-0010D	50471	7/18/2012	10
Deer Creek	OK621000-04-0010D	50560	7/31/2012	5
Deer Creek	OK621000-04-0010D	50653	8/7/2012	240
Deer Creek	OK621000-04-0010D	50701	8/28/2012	540
Deer Creek	OK621000-04-0010D	51828	5/7/2013	20
Deer Creek	OK621000-04-0010D	52013	6/11/2013	20
Deer Creek	OK621000-04-0010D	52035	6/18/2013	40
Deer Creek	OK621000-04-0010D	52259	7/16/2013	220
Deer Creek	OK621000-04-0010D	52594	8/20/2013	200

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Doga Creek	OK621200-02-0020C	50214	6/12/2012	520
Doga Creek	OK621200-02-0020C	50494	7/24/2012	30
Doga Creek	OK621200-02-0020C	50637	8/14/2012	10
Doga Creek	OK621200-02-0020C	50687	8/21/2012	5
Doga Creek	OK621200-02-0020C	50834	9/25/2012	40
Doga Creek	OK621200-02-0020C	51975	6/4/2013	20
Doga Creek	OK621200-02-0020C	52188	7/2/2013	5
Doga Creek	OK621200-02-0020C	52215	7/8/2013	< 5
Doga Creek	OK621200-02-0020C	52506	8/13/2013	10
Doga Creek	OK621200-02-0020C	52543	9/17/2013	> 5000
Driftwood Creek	OK621010-03-0030C	50250	6/19/2012	300
Driftwood Creek	OK621010-03-0030C	50556	7/30/2012	10
Driftwood Creek	OK621010-03-0030C	50572	8/1/2012	380
Driftwood Creek	OK621010-03-0030C	50647	8/7/2012	45
Driftwood Creek	OK621010-03-0030C	50698	8/27/2012	155
Driftwood Creek	OK621010-03-0030C	51822	5/6/2013	< 10
Driftwood Creek	OK621010-03-0030C	52010	6/10/2013	470
Driftwood Creek	OK621010-03-0030C	52042	6/18/2013	160
Driftwood Creek	OK621010-03-0030C	52255	7/15/2013	130
Driftwood Creek	OK621010-03-0030C	52588	8/19/2013	340
Duck Pond Creek	OK720500-02-0250F	50079	5/15/2012	210
Duck Pond Creek	OK720500-02-0250F	50243	6/19/2012	550
Duck Pond Creek	OK720500-02-0250F	50547	7/31/2012	140
Duck Pond Creek	OK720500-02-0250F	50747	8/28/2012	25
Duck Pond Creek	OK720500-02-0250F	51839	5/7/2013	90
Duck Pond Creek	OK720500-02-0250F	51998	6/11/2013	1200
Duck Pond Creek	OK720500-02-0250F	52030	6/18/2013	> 1500
Duck Pond Creek	OK720500-02-0250F	52251	7/16/2013	460
Duck Pond Creek	OK720500-02-0250F	52612	8/20/2013	35
Duck Pond Creek	OK720500-02-0250F	52841	9/24/2013	100
Duck Pond Creek	OK720500-02-0250F	53558	5/6/2014	65
Eagle Chief Creek: Lower	OK620920-04-0010C	50195	6/11/2012	5
Eagle Chief Creek: Lower	OK620920-04-0010C	50420	7/9/2012	5
Eagle Chief Creek: Lower	OK620920-04-0010C	50508	7/23/2012	5
Eagle Chief Creek: Lower	OK620920-04-0010C	50659	8/20/2012	80
Eagle Chief Creek: Lower	OK620920-04-0010C	50841	9/24/2012	15
Eagle Chief Creek: Lower	OK620920-04-0010C	51871	5/20/2013	25
Eagle Chief Creek: Lower	OK620920-04-0010C	51952	6/3/2013	< 5
Eagle Chief Creek: Lower	OK620920-04-0010C	52228	7/8/2013	520
Eagle Chief Creek: Lower	OK620920-04-0010C	52491	8/12/2013	460
Eagle Chief Creek: Lower	OK620920-04-0010C	52528	9/16/2013	40
Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	15
Eagle Chief Creek: Upper	OK620920-04-0010G	50553	7/30/2012	190
Eagle Chief Creek: Upper	OK620920-04-0010G	50570	8/1/2012	680

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Eagle Chief Creek: Upper	OK620920-04-0010G	50645	8/7/2012	160
Eagle Chief Creek: Upper	OK620920-04-0010G	50696	8/24/2012	45
Eagle Chief Creek: Upper	OK620920-04-0010G	51818	5/6/2013	10
Eagle Chief Creek: Upper	OK620920-04-0010G	52006	6/10/2013	110
Eagle Chief Creek: Upper	OK620920-04-0010G	52045	6/18/2013	20
Eagle Chief Creek: Upper	OK620920-04-0010G	52252	7/15/2013	85
Eagle Chief Creek: Upper	OK620920-04-0010G	52585	8/19/2013	200
Euchee Creek	OK620900-01-0290D	50220	6/12/2012	65
Euchee Creek	OK620900-01-0290D	50526	7/24/2012	15
Euchee Creek	OK620900-01-0290D	50619	8/14/2012	< 5
Euchee Creek	OK620900-01-0290D	50693	8/21/2012	95
Euchee Creek	OK620900-01-0290D	50823	9/24/2012	10
Euchee Creek	OK620900-01-0290D	51967	6/3/2013	40
Euchee Creek	OK620900-01-0290D	52192	7/2/2013	10
Euchee Creek	OK620900-01-0290D	52217	7/9/2013	120
Euchee Creek	OK620900-01-0290D	52333	8/6/2013	60
Euchee Creek	OK620900-01-0290D	52498	8/12/2013	70
Euchee Creek	OK620900-01-0290D	52535	9/16/2013	10
Griever Creek	OK620920-01-0130G	50070	5/14/2012	110
Griever Creek	OK620920-01-0130G	50234	6/18/2012	90
Griever Creek	OK620920-01-0130G	51830	5/6/2013	20
Griever Creek	OK620920-01-0130G	51989	6/10/2013	20
Griever Creek	OK620920-01-0130G	52021	6/17/2013	360
Griever Creek	OK620920-01-0130G	52242	7/15/2013	> 1200
Griever Creek	OK620920-01-0130G	52603	8/19/2013	65
Griever Creek	OK620920-01-0130G	52835	9/23/2013	< 10
Griever Creek	OK620920-01-0130G	53550	5/5/2014	50
Indian Creek	OK620910-02-0310C	50194	6/11/2012	95
Indian Creek	OK620910-02-0310C	50419	7/9/2012	45
Indian Creek	OK620910-02-0310C	50507	7/23/2012	60
Indian Creek	OK620910-02-0310C	50658	8/20/2012	25
Indian Creek	OK620910-02-0310C	50840	9/24/2012	5
Indian Creek	OK620910-02-0310C	51870	5/20/2013	20
Indian Creek	OK620910-02-0310C	51951	6/3/2013	25
Indian Creek	OK620910-02-0310C	52227	7/8/2013	70
Indian Creek	OK620910-02-0310C	52490	8/12/2013	160
Indian Creek	OK620910-02-0310C	52527	9/16/2013	1100
Kingfisher Creek	OK620910-05-0010J	50199	6/12/2012	980
Kingfisher Creek	OK620910-05-0010J	50414	7/9/2012	10
Kingfisher Creek	OK620910-05-0010J	50512	7/24/2012	190
Kingfisher Creek	OK620910-05-0010J	50663	8/21/2012	15
Kingfisher Creek	OK620910-05-0010J	50845	9/25/2012	15
Kingfisher Creek	OK620910-05-0010J	51865	5/20/2013	640
Kingfisher Creek	OK620910-05-0010J	51956	6/4/2013	6900

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Kingfisher Creek	OK620910-05-0010J	52233	7/9/2013	180
Kingfisher Creek	OK620910-05-0010J	52497	8/13/2013	170
Kingfisher Creek	OK620910-05-0010J	52532	9/17/2013	60
Kiowa Creek: Harper Co.	OK720500-02-0130C	50076	5/15/2012	200
Kiowa Creek: Harper Co.	OK720500-02-0130C	50240	6/19/2012	105
Kiowa Creek: Harper Co.	OK720500-02-0130C	51836	5/7/2013	30
Kiowa Creek: Harper Co.	OK720500-02-0130C	51995	6/11/2013	10
Kiowa Creek: Harper Co.	OK720500-02-0130C	52027	6/18/2013	15
Kiowa Creek: Harper Co.	OK720500-02-0130C	52248	7/16/2013	70
Kiowa Creek: Harper Co.	OK720500-02-0130C	52609	8/20/2013	45
Kiowa Creek: Harper Co.	OK720500-02-0130C	52840	9/24/2013	760
Kiowa Creek: Harper Co.	OK720500-02-0130C	53555	5/6/2014	120
Lagoon Creek	OK620900-01-0180J	50216	6/12/2012	110
Lagoon Creek	OK620900-01-0180J	50521	7/24/2012	< 5
Lagoon Creek	OK620900-01-0180J	50615	8/14/2012	< 5
Lagoon Creek	OK620900-01-0180J	50689	8/21/2012	< 5
Lagoon Creek	OK620900-01-0180J	50820	9/24/2012	< 5
Lagoon Creek	OK620900-01-0180J	51970	6/3/2013	120
Lagoon Creek	OK620900-01-0180J	52183	7/2/2013	140
Lagoon Creek	OK620900-01-0180J	52220	7/9/2013	65
Lagoon Creek	OK620900-01-0180J	52501	8/12/2013	300
Lagoon Creek	OK620900-01-0180J	52538	9/16/2013	20
Long Creek	OK620920-02-0080D	50073	5/14/2012	210
Long Creek	OK620920-02-0080D	50238	6/18/2012	40
Long Creek	OK620920-02-0080D	50541	7/30/2012	> 2000
Long Creek	OK620920-02-0080D	50741	8/27/2012	50
Long Creek	OK620920-02-0080D	51833	5/6/2013	< 10
Long Creek	OK620920-02-0080D	51992	6/10/2013	5
Long Creek	OK620920-02-0080D	52024	6/17/2013	160
Long Creek	OK620920-02-0080D	52245	7/15/2013	> 25000
Long Creek	OK620920-02-0080D	52606	8/19/2013	160
Long Creek	OK620920-02-0080D	52837	9/23/2013	40
Long Creek	OK620920-02-0080D	53553	5/5/2014	10
Main Creek	OK620920-01-0180F	50069	5/14/2012	200
Main Creek	OK620920-01-0180F	50233	6/18/2012	260
Main Creek	OK620920-01-0180F	50537	7/30/2012	> 2000
Main Creek	OK620920-01-0180F	50737	8/27/2012	85
Main Creek	OK620920-01-0180F	51829	5/6/2013	10
Main Creek	OK620920-01-0180F	51988	6/10/2013	20
Main Creek	OK620920-01-0180F	52020	6/17/2013	50
Main Creek	OK620920-01-0180F	52241	7/15/2013	85
Main Creek	OK620920-01-0180F	52602	8/19/2013	55
Main Creek	OK620920-01-0180F	52836	9/23/2013	30
Main Creek	OK620920-01-0180F	53549	5/5/2014	50

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	280
Medicine Lodge River	OK621010-03-0010D	50557	7/30/2012	90
Medicine Lodge River	OK621010-03-0010D	50573	8/1/2012	65
Medicine Lodge River	OK621010-03-0010D	50648	8/7/2012	65
Medicine Lodge River	OK621010-03-0010D	50699	8/27/2012	20
Medicine Lodge River	OK621010-03-0010D	51821	5/6/2013	< 10
Medicine Lodge River	OK621010-03-0010D	52009	6/10/2013	5
Medicine Lodge River	OK621010-03-0010D	52041	6/18/2013	5
Medicine Lodge River	OK621010-03-0010D	52254	7/15/2013	80
Medicine Lodge River	OK621010-03-0010D	52587	8/19/2013	35
Otter Creek	OK620910-03-0040C	50204	6/11/2012	25
Otter Creek	OK620910-03-0040C	50481	7/23/2012	5
Otter Creek	OK620910-03-0040C	50530	7/25/2012	5
Otter Creek	OK620910-03-0040C	50667	8/20/2012	< 5
Otter Creek	OK620910-03-0040C	50825	9/25/2012	60
Otter Creek	OK620910-03-0040C	51963	6/3/2013	100
Otter Creek	OK620910-03-0040C	52167	7/1/2013	1600
Otter Creek	OK620910-03-0040C	52385	7/31/2013	800
Otter Creek	OK620910-03-0040C	52412	8/12/2013	60
Otter Creek	OK620910-03-0040C	52561	9/17/2013	230
Persimmon Creek	OK720500-01-0150G	50072	5/14/2012	60
Persimmon Creek	OK720500-01-0150G	50236	6/18/2012	40
Persimmon Creek	OK720500-01-0150G	50540	7/30/2012	15
Persimmon Creek	OK720500-01-0150G	50740	8/27/2012	420
Persimmon Creek	OK720500-01-0150G	51832	5/6/2013	10
Persimmon Creek	OK720500-01-0150G	51991	6/10/2013	65
Persimmon Creek	OK720500-01-0150G	52023	6/17/2013	1100
Persimmon Creek	OK720500-01-0150G	52244	7/15/2013	280
Persimmon Creek	OK720500-01-0150G	52605	8/19/2013	50
Persimmon Creek	OK720500-01-0150G	52834	9/23/2013	80
Persimmon Creek	OK720500-01-0150G	53552	5/5/2014	15
Pond Creek	OK621000-05-0010D	50244	6/18/2012	55
Pond Creek	OK621000-05-0010D	50477	7/18/2012	25
Pond Creek	OK621000-05-0010D	50561	7/31/2012	20
Pond Creek	OK621000-05-0010D	50652	8/7/2012	15
Pond Creek	OK621000-05-0010D	50702	8/28/2012	140
Pond Creek	OK621000-05-0010D	51827	5/7/2013	10
Pond Creek	OK621000-05-0010D	52014	6/11/2013	40
Pond Creek	OK621000-05-0010D	52036	6/18/2013	40
Pond Creek	OK621000-05-0010D	52260	7/16/2013	110
Pond Creek	OK621000-05-0010D	52593	8/20/2013	1600
Red Rock Creek: Lower	OK621200-05-0010K	50208	6/12/2012	410
Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	55
Red Rock Creek: Lower	OK621200-05-0010K	50535	7/25/2012	25

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Red Rock Creek: Lower	OK621200-05-0010K	52389	7/31/2012	2800
Red Rock Creek: Lower	OK621200-05-0010K	50670	8/21/2012	5
Red Rock Creek: Lower	OK621200-05-0010K	50831	9/24/2012	5
Red Rock Creek: Lower	OK621200-05-0010K	51959	6/3/2013	100
Red Rock Creek: Lower	OK621200-05-0010K	52163	7/1/2013	1100
Red Rock Creek: Lower	OK621200-05-0010K	52407	8/12/2013	60
Red Rock Creek: Lower	OK621200-05-0010K	52556	9/17/2013	90
Red Rock Creek: Upper	OK621200-05-0160G	50207	6/12/2012	45
Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	130
Red Rock Creek: Upper	OK621200-05-0160G	50534	7/25/2012	10
Red Rock Creek: Upper	OK621200-05-0160G	50671	8/21/2012	30
Red Rock Creek: Upper	OK621200-05-0160G	50830	9/24/2012	120
Red Rock Creek: Upper	OK621200-05-0160G	51960	6/3/2013	60
Red Rock Creek: Upper	OK621200-05-0160G	52164	7/1/2013	50
Red Rock Creek: Upper	OK621200-05-0160G	52388	7/31/2013	1400
Red Rock Creek: Upper	OK621200-05-0160G	52408	8/12/2013	200
Red Rock Creek: Upper	OK621200-05-0160G	52557	9/17/2013	20
Salt Creek	OK620910-02-0100D	50192	6/11/2012	25
Salt Creek	OK620900-02-0020D	50217	6/12/2012	275
Salt Creek	OK620910-02-0100D	50417	7/9/2012	160
Salt Creek	OK620910-02-0100D	50505	7/23/2012	55
Salt Creek	OK620900-02-0020D	50522	7/24/2012	145
Salt Creek	OK620900-02-0020D	50616	8/14/2012	55
Salt Creek	OK620910-02-0100D	50656	8/20/2012	490
Salt Creek	OK620900-02-0020D	50690	8/21/2012	2900
Salt Creek	OK620900-02-0020D	50821	9/24/2012	70
Salt Creek	OK620910-02-0100D	50838	9/24/2012	15
Salt Creek	OK620910-02-0100D	51868	5/20/2013	280
Salt Creek	OK620900-02-0020D	51969	6/3/2013	40
Salt Creek	OK620910-02-0100D	51949	6/3/2013	85
Salt Creek	OK620900-02-0020D	52190	7/2/2013	280
Salt Creek	OK620910-02-0100D	52225	7/8/2013	45
Salt Creek	OK620900-02-0020D	52219	7/9/2013	30
Salt Creek	OK620900-02-0020D	52500	8/12/2013	330
Salt Creek	OK620910-02-0100D	52488	8/12/2013	140
Salt Creek	OK620900-02-0020D	52537	9/16/2013	> 3000
Salt Creek	OK620910-02-0100D	52525	9/16/2013	60
Salt Creek: Lower	OK621200-04-0010F	50215	6/12/2012	35
Salt Creek: Lower	OK621200-04-0010F	50493	7/24/2012	< 5
Salt Creek: Lower	OK621200-04-0010F	50638	8/14/2012	10
Salt Creek: Lower	OK621200-04-0010F	50688	8/21/2012	5
Salt Creek: Lower	OK621200-04-0010F	50835	9/25/2012	5
Salt Creek: Lower	OK621200-04-0010F	51976	6/4/2013	20
Salt Creek: Lower	OK621200-04-0010F	52189	7/2/2013	95

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	15
Salt Creek: Lower	OK621200-04-0010F	52507	8/13/2013	> 2500
Salt Creek: Lower	OK621200-04-0010F	52544	9/17/2013	520
Salt Creek: Middle	OK621200-04-0010K	50213	6/12/2012	40
Salt Creek: Middle	OK621200-04-0010K	50496	7/24/2012	< 5
Salt Creek: Middle	OK621200-04-0010K	50639	8/14/2012	< 5
Salt Creek: Middle	OK621200-04-0010K	50686	8/21/2012	< 5
Salt Creek: Middle	OK621200-04-0010K	50836	9/25/2012	5
Salt Creek: Middle	OK621200-04-0010K	51974	6/4/2013	< 10
Salt Creek: Middle	OK621200-04-0010K	52187	7/2/2013	25
Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	5
Salt Creek: Middle	OK621200-04-0010K	52505	8/13/2013	> 2500
Salt Creek: Middle	OK621200-04-0010K	52542	9/17/2013	330
Sandy Creek	OK621010-02-0010D	50252	6/19/2012	25
Sandy Creek	OK621010-02-0010D	50473	7/18/2012	60
Sandy Creek	OK621010-02-0010D	50559	7/30/2012	20
Sandy Creek	OK621010-02-0010D	50649	8/7/2012	130
Sandy Creek	OK621010-02-0010D	50700	8/27/2012	5
Sandy Creek	OK621010-02-0010D	51824	5/6/2013	10
Sandy Creek	OK621010-02-0010D	52012	6/10/2013	< 5
Sandy Creek	OK621010-02-0010D	52039	6/18/2013	< 10
Sandy Creek	OK621010-02-0010D	52257	7/15/2013	5
Sandy Creek	OK621010-02-0010D	52590	8/19/2013	95
Skeleton Creek: Upper	OK620910-03-0010S	50205	6/11/2012	20
Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	15
Skeleton Creek: Upper	OK620910-03-0010S	50531	7/25/2012	10
Skeleton Creek: Upper	OK620910-03-0010S	50666	8/20/2012	25
Skeleton Creek: Upper	OK620910-03-0010S	50824	9/25/2012	5
Skeleton Creek: Upper	OK620910-03-0010S	51962	6/3/2013	60
Skeleton Creek: Upper	OK620910-03-0010S	52166	7/1/2013	10
Skeleton Creek: Upper	OK620910-03-0010S	52386	7/31/2013	1300
Skeleton Creek: Upper	OK620910-03-0010S	52411	8/12/2013	460
Skeleton Creek: Upper	OK620910-03-0010S	52560	9/17/2013	180
Stillwater Creek: Upper	OK620900-04-0070T	50209	6/12/2012	85
Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	30
Stillwater Creek: Upper	OK620900-04-0070T	50536	7/25/2012	255
Stillwater Creek: Upper	OK620900-04-0070T	50669	8/20/2012	195
Stillwater Creek: Upper	OK620900-04-0070T	50828	9/24/2012	55
Stillwater Creek: Upper	OK620900-04-0070T	51966	6/3/2013	< 20
Stillwater Creek: Upper	OK620900-04-0070T	52169	7/1/2013	< 10
Stillwater Creek: Upper	OK620900-04-0070T	52390	7/31/2013	300
Stillwater Creek: Upper	OK620900-04-0070T	52410	8/12/2013	500
Stillwater Creek: Upper	OK620900-04-0070T	52559	9/17/2013	30
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50196	6/11/2012	100

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50421	7/9/2012	40
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50509	7/23/2012	25
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50660	8/20/2012	45
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50842	9/24/2012	60
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51872	5/20/2013	540
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	51953	6/3/2013	460
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52229	7/8/2013	220
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52492	8/12/2013	1200
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52529	9/16/2013	600
Turkey Creek: Lower	OK620910-06-0010B	50201	6/12/2012	125
Turkey Creek: Lower	OK620910-06-0010B	50416	7/9/2012	15
Turkey Creek: Lower	OK620910-06-0010B	50514	7/24/2012	15
Turkey Creek: Lower	OK620910-06-0010B	50665	8/21/2012	15
Turkey Creek: Lower	OK620910-06-0010B	50847	9/25/2012	50
Turkey Creek: Lower	OK620910-06-0010B	51867	5/20/2013	2300
Turkey Creek: Lower	OK620910-06-0010B	51957	6/4/2013	1600
Turkey Creek: Lower	OK620910-06-0010B	52230	7/8/2013	100
Turkey Creek: Lower	OK620910-06-0010B	52493	8/12/2013	120
Turkey Creek: Lower	OK620910-06-0010B	52533	9/17/2013	200
Uncle John's Creek	OK620910-05-0030C	50197	6/12/2012	185
Uncle John's Creek	OK620910-05-0030C	50412	7/9/2012	135
Uncle John's Creek	OK620910-05-0030C	50510	7/24/2012	250
Uncle John's Creek	OK620910-05-0030C	50661	8/21/2012	440
Uncle John's Creek	OK620910-05-0030C	50843	9/25/2012	30
Uncle John's Creek	OK620910-05-0030C	51863	5/20/2013	350
Uncle John's Creek	OK620910-05-0030C	51954	6/4/2013	11000
Uncle John's Creek	OK620910-05-0030C	52495	8/13/2013	2100
Uncle John's Creek	OK620910-05-0030C	52530	9/17/2013	190
West Clay Creek	OK621010-01-0130R	50246	6/18/2012	60
West Clay Creek	OK621010-01-0130R	50558	7/30/2012	5
West Clay Creek	OK621010-01-0130R	50571	8/1/2012	40
West Clay Creek	OK621010-01-0130R	50646	8/7/2012	50
West Clay Creek	OK621010-01-0130R	50697	8/24/2012	< 5
West Clay Creek	OK621010-01-0130R	51823	5/6/2013	< 10
West Clay Creek	OK621010-01-0130R	52011	6/10/2013	< 10
West Clay Creek	OK621010-01-0130R	52040	6/18/2013	10
West Clay Creek	OK621010-01-0130R	52256	7/15/2013	10
West Clay Creek	OK621010-01-0130R	52589	8/19/2013	25
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	100
Wildhorse Creek	OK621000-02-0040F	50476	7/18/2012	95
Wildhorse Creek	OK621000-02-0040F	50562	7/31/2012	415
Wildhorse Creek	OK621000-02-0040F	50651	8/7/2012	135
Wildhorse Creek	OK621000-02-0040F	50703	8/28/2012	170
Wildhorse Creek	OK621000-02-0040F	51826	5/7/2013	10

Appendix A.2

Site Name	WBID	Sample ID	Date	E. coli
Wildhorse Creek	OK621000-02-0040F	52015	6/11/2013	550
Wildhorse Creek	OK621000-02-0040F	52037	6/18/2013	1700
Wildhorse Creek	OK621000-02-0040F	52261	7/16/2013	> 1200
Wildhorse Creek	OK621000-02-0040F	52592	8/20/2013	270
Yellowstone Creek	OK621010-01-0270C	50249	6/18/2012	95
Yellowstone Creek	OK621010-01-0270C	51819	5/6/2013	10
Yellowstone Creek	OK621010-01-0270C	52007	6/10/2013	< 10
Yellowstone Creek	OK621010-01-0270C	52044	6/18/2013	25
Yellowstone Creek	OK621010-01-0270C	52586	8/19/2013	10
Probabilistic Sites				
Black Bear Creek	CCA12-074	50518	7/23/2012	5
Black Bear Creek	CCA12-015	50632	8/13/2012	5
Bois d'Arc Creek	CCA12-031	50488	7/23/2012	35
Bug Creek	CCA12-052	50642	8/14/2012	5
Camp Creek	CCA12-058	50135	5/29/2012	20
Camp Creek	CCA12-068	50516	7/23/2012	5
Chilocco Creek	CCA12-011	50492	7/23/2012	720
Chilocco Creek	CCA12-039	50491	7/23/2012	5
Cimarron River	CCA12-046	50156	5/29/2012	< 5
Cimarron River	CCA12-016	50277	6/26/2012	35
Cimarron River	CCA12-013	50520	7/23/2012	< 5
Cimarron River	CCA12-056	50515	7/23/2012	10
Cimarron River	CCA12-018	50611	8/13/2012	< 5
Cimarron River	CCA12-050	50612	8/13/2012	10
Cimarron River	CCA12-065	50610	8/13/2012	15
Council Creek	CCA12-079	50524	7/24/2012	930
Deer Creek	CCA12-070	50256	6/18/2012	25
Deer Creek	CCA12-063	50472	7/18/2012	5
Doe Creek	CCA12-026	50115	5/21/2012	3000
Dry Creek	CCA12-022	50574	8/6/2012	25
Kingfisher Creek	CCA12-060	50276	6/26/2012	15
Lariat Creek	CCA12-078	50166	6/5/2012	35
Little Turkey Creek	CCA12-072	50278	6/26/2012	305
Medicine Lodge River	CCA12-007	50105	5/21/2012	15
North Canadian River	CCA12-042	50114	5/21/2012	20
North Canadian River	CCA12-062	50134	5/29/2012	130
North Canadian River	CCA12-080	50275	6/25/2012	15
Palo Duro Creek	CCA12-057	50118	5/22/2012	10
Pond Creek	CCA12-059	50254	6/18/2012	150
Red Rock Creek	CCA12-047	50633	8/13/2012	< 5
Salt Creek	CCA12-024	50495	7/24/2012	< 5
Salt Creek	CCA12-040	50641	8/14/2012	1140
Salt Fork Arkansas River	CCA12-076	50257	6/19/2012	360
Sand Creek	CCA12-035	50165	6/4/2012	185

Appendix A.2

Site Name	WBID	Sample ID	Date	<i>E. coli</i>
Skeleton Creek	CCA12-004	50106	5/21/2012	5
Skeleton Creek	CCA12-020	50279	6/26/2012	235
Skeleton Creek	CCA12-034	50613	8/13/2012	< 5
Sleeping Bear Creek	CCA12-030	50116	5/21/2012	15
Spring Creek	CCA12-023	50164	6/4/2012	15
Spring Creek	CCA12-081	50636	8/13/2012	< 5
Stillwater Creek	CCA12-073	50519	7/23/2012	145
Traders Creek	CCA12-077	50158	5/30/2012	< 5
Turkey Creek	CCA12-003	50107	5/21/2012	90
Turkey Creek	CCA12-014	50117	5/21/2012	140
Turkey Creek	CCA12-082	50163	6/4/2012	120
Turkey Creek	CCA12-036	50517	7/23/2012	500
Unnamed Creek	CCA12-044	50133	5/29/2012	2900
Unnamed Creek	CCA12-064	50136	5/29/2012	130
Unnamed Creek	CCA12-043	50255	6/18/2012	45
Unnamed Creek	CCA12-084	50475	7/18/2012	10

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Alkalinity (CaCO	Beaver Creek (Logan)	OK620900-03-0230C	19	1	254.1	16.3	71.2	103	186	267	301	366
	Beaver Creek (Osage)	OK621210-00-0050L	19	2	199.11	9.34	40.71	124	172	184	237	265
	Bent Creek	OK720500-01-0070D	22	1	220.64	4.42	20.72	181	203.75	220	236.25	255
	Bitter Creek	OK621100-00-0100G	20	2	217.5	8.89	39.77	162	184.25	213	250	299
	Black Bear Creek: Upper	OK621200-03-0260B	18	1	241.8	17.7	75.1	110	188.5	225.5	292	404
	Bois d'Arc Creek	OK621000-03-0010C	20	2	210.8	14	62.5	105	184.8	202	250	399
	Buffalo Creek:	OK620920-05-0010G	21	2	122.71	9.35	42.83	7.96	98.5	124	156.5	184
	CGP Probabilistic		82	3	242.9	10.7	97	31.2	169.5	240	302.8	572
	Clear Creek (Beaver)	OK720500-02-0300F	21	1	236.6	10.2	46.6	114	214.5	250	267	311
	Clear Creek (Harper)	OK720500-02-0070G	21	1	206.76	5.01	22.98	165	194.5	205	219.5	257
	Cooper Creek	OK620910-02-0040C	18	2	282	13.7	58.2	168	235.3	271	342.8	363
	Cottonwood Creek	OK620910-04-0010E	14	1	209.1	16.5	61.7	117	170	201	269.3	320
	Council Creek	OK620900-02-0050H	21	2	249.4	23.7	108.5	114	171	218	311	485
	Crooked Creek (Beaver)	OK620930-00-0100G	18	1	198.1	16.6	70.6	20	172.5	222.5	248.3	261
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	348.1	10.8	48.3	241	333.5	340.5	373	464
	CT Probabilistic		4	0	177.8	24.4	48.9	109	126	193	214.3	216
	Dead Indian Creek	OK620910-05-0080A	18	2	234.8	10.6	45.2	155	201	240	259.8	321
	Deep Creek	OK620910-02-0250C	21	2	252.4	12	54.8	155	209.5	251	287	362
	Deer Creek	OK621000-04-0010D	19	5	258.4	19.3	84.2	21.9	212	283	330	350
	Doga Creek	OK621200-02-0020C	19	2	192.5	11.8	51.5	111	156	187	238	280
	Driftwood Creek	OK621010-03-0030C	20	3	381.9	40.3	180.4	237	309.8	349.5	383.8	1125
	Duck Pond Creek	OK720500-02-0250F	22	1	193.5	13	61.1	7.6	192	209	224.5	247
	Eagle Chief Creek: Lower	OK620920-04-0010C	20	2	245.8	7.34	32.82	160	220.5	254	270.75	290
	Eagle Chief Creek: Upper	OK620920-04-0010G	20	4	261.2	14.3	64	152	225	256.5	293.8	415
	Euchee Creek	OK620900-01-0290D	21	3	182	11.8	54.2	89	155.5	177	237.5	263
	FH Probabilistic		4	0	171.25	8.38	16.76	151	154.25	174	185.5	186
	Griever Creek	OK620920-01-0130G	19	0	178.3	13.8	60.2	37	150	168	209	285
	Indian Creek	OK620910-02-0310C	21	2	219.67	7.57	34.7	140	200	219	245	295
	Kingfisher Creek	OK620910-05-0010J	17	1	256	18.7	77.2	8.5	228.5	257	307.5	353
	Kiowa Creek: Harper Co.	OK720500-02-0130C	13	2	226.6	11.8	42.4	175	188.5	219	267	307
	Lagoon Creek	OK620900-01-0180J	21	2	158.1	9.77	44.77	78	117	160	187	257
	Long Creek	OK620920-02-0080D	21	2	144.8	11.2	51.2	8.1	130.5	156	165.5	265
	Main Creek	OK620920-01-0180F	21	1	157.8	10.1	46.1	80	120.5	153	191	250
	Medicine Lodge River	OK621010-03-0010D	20	3	212.5	12.3	55.2	133	164.5	211.5	237.3	377
	Otter Creek	OK620910-03-0040C	18	1	279.4	17.8	75.4	167	228.5	247.5	350	400
	Persimmon Creek	OK720500-01-0150G	21	0	224	7.11	32.58	135	209	233	248.5	263
	Pond Creek	OK621000-05-0010D	18	6	396.4	21.2	89.8	229	318.5	386	443	556
	Red Rock Creek: Lower	OK621200-05-0010K	18	1	274.6	27.7	117.4	120	159.3	251.5	398.5	454
	Red Rock Creek: Upper	OK621200-05-0160G	20	1	345.4	30.8	137.7	108	231	330	480.5	589
	Salt Creek (Kingfisher)	OK620910-02-0100D	20	2	284.4	90.7	405.7	132	167.3	194	220.5	2000
	Salt Creek (Payne)	OK620900-02-0020D	21	2	245.4	14.1	64.6	88	223.5	255	302.5	325
	Salt Creek: Lower	OK621200-04-0010F	19	2	210.4	10.5	45.7	112	176	208	243	301
	Salt Creek: Middle	OK621200-04-0010K	19	2	197.3	10.3	44.7	87	166	194	238	277
	Sandy Creek	OK621010-02-0010D	17	3	215.5	11.7	48.3	172	179.5	198	255	331
Skeleton Creek: Upper	OK620910-03-0010S	18	2	292.3	18.8	79.9	101	243.3	292	332	463	
Stillwater Creek: Upper	OK620900-04-0070T	18	2	287.4	26.4	112.1	128	208	291	335.3	536	
SWT Probabilistic		3	0	281.7	70.9	122.9	175	175	254	416	416	
Turkey Creek: Lower	OK620910-06-0010R	18	1	268.06	9.58	40.64	191	224.5	279	300	342	
Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	19	2	327.16	8.33	36.3	274	311	326	350	410	
Uncle John's Creek	OK620910-05-0030C	14	1	280.4	14.7	55.1	181	232.5	297.5	313.8	355	
West Clay Creek	OK621010-01-0130R	21	3	424.2	42.4	194.1	8.1	305.5	399	565.5	750	
Wildhorse Creek	OK621000-02-0040F	19	4	378.6	30.4	132.4	234	290	301	482	665	
Yellowstone Creek	OK621010-01-0270C	13	1	188.9	26.8	96.6	126	138.5	166	191.5	500	
Ammonia (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	5	15	0.0258	0.0108	0.0241	0.015	0.015	0.015	0.042	0.069
	Beaver Creek (Osage)	OK621210-00-0050L	6	15	0.0365	0.0185	0.0453	0.015	0.015	0.015	0.0553	0.128
	Bent Creek	OK720500-01-0070D	6	17	0.0872	0.026	0.0637	0.02	0.0313	0.077	0.1375	0.196
	Bitter Creek	OK621100-00-0100G	6	16	0.0988	0.0575	0.1409	0.015	0.0188	0.0475	0.1563	0.382
	Black Bear Creek: Upper	OK621200-03-0260B	5	14	0.092	0.0595	0.1329	0.015	0.015	0.015	0.2075	0.322
	Bois d'Arc Creek	OK621000-03-0010C	6	16	0.0717	0.0209	0.0513	0.015	0.0195	0.0695	0.1208	0.141
	Buffalo Creek:	OK620920-05-0010G	6	17	0.0303	0.0102	0.0249	0.015	0.015	0.015	0.055	0.073
	CGP Probabilistic		44	41	0.0848	0.0232	0.154	0.015	0.015	0.0165	0.062	0.808
	Clear Creek (Beaver)	OK720500-02-0300F	6	16	0.0343	0.0163	0.04	0.015	0.015	0.015	0.052	0.115
	Clear Creek (Harper)	OK720500-02-0070G	6	16	0.02267	0.00329	0.00807	0.015	0.015	0.0225	0.03025	0.031
	Cooper Creek	OK620910-02-0040C	5	15	0.0186	0.0036	0.00805	0.015	0.015	0.015	0.024	0.033
	Cottonwood Creek	OK620910-04-0010E	4	11	0.0423	0.0217	0.0433	0.015	0.015	0.024	0.0878	0.106
	Council Creek	OK620900-02-0050H	7	16	0.0469	0.0109	0.0288	0.015	0.016	0.04	0.079	0.086
	Crooked Creek (Beaver)	OK620930-00-0100G	6	13	0.15	0.0866	0.2121	0.015	0.015	0.015	0.392	0.476

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Crooked Creek (Grant)	OK621000-06-0010C	6	18	0.0858	0.0231	0.0566	0.015	0.015	0.1095	0.1325	0.134
	CT Probabilistic		2	2	0.104	0.011	0.0156	0.093	*	0.104	*	0.115
	Dead Indian Creek	OK620910-05-0080A	5	15	0.0282	0.00847	0.01894	0.015	0.015	0.02	0.0455	0.06
	Deep Creek	OK620910-02-0250C	7	16	0.1436	0.0554	0.1466	0.054	0.058	0.072	0.16	0.462
	Deer Creek	OK621000-04-0010D	5	19	0.0374	0.018	0.0403	0.015	0.015	0.015	0.071	0.108
	Doga Creek	OK621200-02-0020C	6	15	0.02483	0.00851	0.02085	0.015	0.015	0.015	0.03325	0.067
	Driftwood Creek	OK621010-03-0030C	5	18	0.0154	0.0004	0.000894	0.015	0.015	0.015	0.016	0.017
	Duck Pond Creek	OK720500-02-0250F	6	17	0.0457	0.0103	0.0252	0.015	0.015	0.0515	0.0703	0.071
	Eagle Chief Creek: Lower	OK620920-04-0010C	6	16	0.02417	0.00715	0.01751	0.015	0.015	0.0155	0.0335	0.059
	Eagle Chief Creek: Upper	OK620920-04-0010G	5	19	0.0504	0.0191	0.0427	0.015	0.019	0.025	0.0945	0.114
	Euchee Creek	OK620900-01-0290D	7	17	0.027	0.0109	0.0287	0.015	0.015	0.015	0.02	0.092
	FH Probabilistic		2	2	0.015	0	0	0.015	*	0.015	*	0.015
	Griever Creek	OK620920-01-0130G	4	15	0.0395	0.0245	0.049	0.015	0.015	0.015	0.0885	0.113
	Indian Creek	OK620910-02-0310C	7	16	0.04971	0.00953	0.0252	0.015	0.025	0.053	0.072	0.084
	Kingfisher Creek	OK620910-05-0010J	4	14	0.206	0.141	0.282	0.043	0.05	0.077	0.492	0.628
	Kiowa Creek: Harper Co.	OK720500-02-0130C	4	11	0.02075	0.00338	0.00675	0.015	0.015	0.02	0.02725	0.028
	Lagoon Creek	OK620900-01-0180J	7	16	0.024	0.009	0.02381	0.015	0.015	0.015	0.015	0.078
	Long Creek	OK620920-02-0080D	6	17	1.057	0.689	1.687	0.015	0.015	0.015	2.752	3.917
	Main Creek	OK620920-01-0180F	6	16	0.023	0.00593	0.01453	0.015	0.015	0.015	0.033	0.051
	Medicine Lodge River	OK621010-03-0010D	6	17	0.03433	0.00932	0.02282	0.015	0.015	0.0295	0.05325	0.069
	Otter Creek	OK620910-03-0040C	5	14	0.0152	0.0002	0.000447	0.015	0.015	0.015	0.0155	0.016
	Persimmon Creek	OK720500-01-0150G	6	15	0.015	0	0	0.015	0.015	0.015	0.015	0.015
	Pond Creek	OK621000-05-0010D	5	19	0.0772	0.0197	0.044	0.017	0.0355	0.09	0.1125	0.134
	Red Rock Creek: Lower	OK621200-05-0010K	5	14	0.0336	0.0069	0.01544	0.015	0.019	0.032	0.049	0.052
	Red Rock Creek: Upper	OK621200-05-0160G	6	15	0.03367	0.00902	0.02209	0.015	0.015	0.027	0.0525	0.072
	Salt Creek (Kingfisher)	OK620910-02-0100D	6	16	0.0747	0.0556	0.1361	0.015	0.015	0.015	0.115	0.352
	Salt Creek (Payne)	OK620900-02-0020D	7	16	0.03714	0.00777	0.02055	0.015	0.015	0.036	0.06	0.067
	Salt Creek: Lower	OK621200-04-0010F	5	16	0.0154	0.0004	0.000894	0.015	0.015	0.015	0.016	0.017
	Salt Creek: Middle	OK621200-04-0010K	5	16	0.015	0	0	0.015	0.015	0.015	0.015	0.015
	Sandy Creek	OK621010-02-0010D	6	14	0.01767	0.00229	0.00561	0.015	0.015	0.015	0.02	0.029
	Skeleton Creek: Upper	OK620910-03-0010S	5	15	0.147	0.0702	0.157	0.015	0.0195	0.061	0.3175	0.334
	Stillwater Creek: Upper	OK620900-04-0070T	7	13	0.2076	0.0619	0.1637	0.08	0.082	0.164	0.347	0.514
	SWT Probabilistic		2	1	0.015	0	0	0.015	*	0.015	*	0.015
	Turkey Creek: Lower	OK620910-06-0010R	5	14	0.0874	0.0302	0.0676	0.015	0.015	0.123	0.142	0.159
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	5	16	0.0398	0.00745	0.01665	0.015	0.024	0.045	0.053	0.059
	Uncle John's Creek	OK620910-05-0030C	4	11	0.0395	0.00539	0.01079	0.028	0.02925	0.0395	0.04975	0.051
	West Clay Creek	OK621010-01-0130R	6	18	0.0822	0.0436	0.1069	0.015	0.015	0.015	0.1973	0.255
	Wildhorse Creek	OK621000-02-0040F	6	17	0.233	0.118	0.289	0.015	0.034	0.077	0.539	0.701
	Yellowstone Creek	OK621010-01-0270C	3	11	0.015	0	0	0.015	0.015	0.015	0.015	0.015
Chloride (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	146.3	21.3	90.3	41.6	75	127.6	194	361.6
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	10.944	0.903	3.832	4.7	7.6	10.2	14.775	17.6
	Bent Creek	OK720500-01-0070D	20	3	29.69	0.861	3.851	24.3	26.6	28.45	32.55	37.1
	Bitter Creek	OK621100-00-0100G	19	3	576.8	29.2	127.4	245.9	528.9	590.8	653.2	849.3
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	779	108	445	137	498	822	890	2048
	Bois d'Arc Creek	OK621000-03-0010C	19	3	205.3	30.4	132.6	38.3	127.5	155.7	332.6	486.8
	Buffalo Creek:	OK620920-05-0010G	20	3	420.5	53	236.8	130.6	257.8	310.3	605.3	918.3
	CGP Probabilistic		44	41	893	362	2403	16	81	217	396	14568
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	292.8	10.3	44.7	242.3	261.8	282.2	313.4	428.1
	Clear Creek (Harper)	OK720500-02-0070G	18	4	78.19	1.27	5.38	69.6	73.43	77.2	83.7	86.1
	Cooper Creek	OK620910-02-0040C	17	3	489	27.6	113.9	250	423.5	495.8	556.5	713.3
	Cottonwood Creek	OK620910-04-0010E	12	3	142.86	8.24	28.54	80.2	118.63	148.65	168.23	174.9
	Council Creek	OK620900-02-0050H	20	3	82	11.2	50.2	18.8	43.2	71.3	97	227.2
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	1801	273	1094	1215	1367	1452	1495	5025
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	118.55	6.21	27.77	47.3	105.05	115.95	128.48	185.7
	CT Probabilistic		2	2	1014	742	1050	272	*	1014	*	1756
	Dead Indian Creek	OK620910-05-0080A	17	3	212	15.3	63.2	118	141.8	233.3	262.5	302.4
	Deep Creek	OK620910-02-0250C	20	3	107.18	9.91	44.34	39.5	66.3	96.4	151.43	180.6
	Deer Creek	OK621000-04-0010D	19	5	436.2	63.6	277.4	69.6	193.6	375.5	604.6	1186.2
	Doga Creek	OK621200-02-0020C	18	3	42.8	10.3	43.6	7.8	16.6	29.8	49.5	195.2
	Driftwood Creek	OK621010-03-0030C	19	4	199.9	14.2	61.7	111.9	149.4	187.3	239.7	315.5
	Duck Pond Creek	OK720500-02-0250F	20	3	220.56	3.62	16.2	192.1	208.58	223.95	230.65	256.8
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	72.52	1.35	5.89	61.1	70.3	74.5	76.2	81.3
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	107.55	5.41	23.58	49.8	93	110.7	124.4	142.5
	Euchee Creek	OK620900-01-0290D	20	4	41.07	5.35	23.94	7.8	18.33	39.85	62.1	84.6
	FH Probabilistic		2	2	14.9	10.4	14.7	4.5	*	14.9	*	25.3
	Griever Creek	OK620920-01-0130G	17	2	266	10.9	44.9	155.8	244.4	273.5	300.9	332.7
	Indian Creek	OK620910-02-0310C	20	3	189.92	3.1	13.85	152.2	181	193.15	197.48	213.8

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Kingfisher Creek	OK620910-05-0010J	16	2	254.6	20	80	94.1	191.5	251.5	315.5	410.2
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	124.51	5.13	17.75	79	117.88	126.65	138.55	144.2
	Lagoon Creek	OK620900-01-0180J	20	3	186.2	35.3	157.8	16	65.2	116.1	297	527.2
	Long Creek	OK620920-02-0080D	20	3	281.6	27.8	124.3	122.2	208.2	271.3	298	731.7
	Main Creek	OK620920-01-0180F	19	3	327.4	10.9	47.3	209.1	301.3	323.2	350.1	417.5
	Medicine Lodge River	OK621010-03-0010D	18	5	120.8	12	51	72.9	80.6	88.6	170.9	212.5
	Otter Creek	OK620910-03-0040C	17	2	91.4	10.8	44.6	36.1	53.5	67.3	136.8	169.9
	Persimmon Creek	OK720500-01-0150G	19	2	59.11	2.34	10.21	47.3	49.6	55.1	69.9	74.6
	Pond Creek	OK621000-05-0010D	19	5	118.8	12.2	53	50.6	77.9	110.3	167	223
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	141.7	27.9	111.5	19.6	27.3	134.8	218.2	390.5
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	116.1	14.1	61.4	26.3	58.4	108.4	166.9	220.5
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	12327	839	3658	5449	9249	11417	15794	18260
	Salt Creek (Payne)	OK620900-02-0020D	19	4	53.46	7.91	34.46	14.6	33.4	37.6	86.7	132.9
	Salt Creek: Lower	OK621200-04-0010F	18	3	43.57	4.52	19.18	14	32	38.4	53.08	80.4
	Salt Creek: Middle	OK621200-04-0010K	18	3	37.78	4.93	20.92	13.8	23.95	35	41.2	99.6
	Sandy Creek	OK621010-02-0010D	16	4	101.67	5.84	23.35	69.6	86.05	98.25	110.08	173.5
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	289.69	9.72	40.08	200.9	266.2	284	329.85	346
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	37.82	3.23	13.3	14.1	28	36.5	48.7	60.1
	SWT Probabilistic		2	1	375	363	513	12	*	375	*	738
	Turkey Creek: Lower	OK620910-06-0010R	17	2	219.97	8.91	36.76	138	200.3	220.3	249.7	284
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	352.3	42.1	178.6	226.2	247.4	285	419.2	969
	Uncle John's Creek	OK620910-05-0030C	14	1	89.56	6.03	22.56	61.5	71.53	78.35	112.43	129.8
	West Clay Creek	OK621010-01-0130R	20	4	8287	446	1995	2690	7110	8535	9621	12503
	Wildhorse Creek	OK621000-02-0040F	20	3	261.9	14.3	63.8	142.7	231.8	262.8	290	403.1
	Yellowstone Creek	OK621010-01-0270C	12	2	56.94	1.39	4.83	48.7	52.8	57.15	60.63	65.1
Conductivity (µS)	Beaver Creek (Logan)	OK620900-03-0230C	19	1	1018.7	96.7	421.5	536	634	929	1292	1919
	Beaver Creek (Osage)	OK621210-00-0050L	19	2	387.8	17.3	75.4	276	339.1	361	432.7	537
	Bent Creek	OK720500-01-0070D	22	1	1943	45.6	213.9	1495	1808.8	1928.5	2131.8	2257
	Bitter Creek	OK621100-00-0100G	20	2	3255	155	693	1472	2778	3397	3852	4070
	Black Bear Creek: Upper	OK621200-03-0260B	18	1	2578	268	1136	722	1833	2829	3056	5734
	Bois d'Arc Creek	OK621000-03-0010C	20	2	1480	110	492	326	1265	1594	1799	2325
	Buffalo Creek:	OK620920-05-0010G	22	1	4009	191	894	2290	3673	3864	4436	6274
	CGP Probabilistic		85	0	3066	538	4957	65	961	1538	2420	36620
	Clear Creek (Beaver)	OK720500-02-0300F	21	1	1834.2	70.2	321.7	1279	1575	1750	2098.5	2415
	Clear Creek (Harper)	OK720500-02-0070G	21	1	625.3	37.2	170.5	8.7	649.5	671.9	694.5	741
	Cooper Creek	OK620910-02-0040C	17	3	2570	148	610	1449	2082	2677	3164	3405
	Cottonwood Creek	OK620910-04-0010E	14	1	1228.4	44.6	167	740	1172	1273	1349	1379
	Council Creek	OK620900-02-0050H	21	2	677.2	57.1	261.8	312.3	450.1	634	827	1198
	Crooked Creek (Beaver)	OK620930-00-0100G	18	1	5754	690	2929	3538	4588	5083	5218	15639
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	969.1	39.4	176.3	576	812.8	975.5	1119.8	1225
	CT Probabilistic		4	0	4376	2105	4211	675	813	3639	8675	9550
	Dead Indian Creek	OK620910-05-0080A	17	3	1979.9	84.6	348.8	1423	1645	1960	2331.5	2460
	Deep Creek	OK620910-02-0250C	21	2	1704	177	811	382	1030	1718	2212	4163
	Deer Creek	OK621000-04-0010D	21	3	2008	177	812	612	1403	2010	2475	4021
	Doga Creek	OK621200-02-0020C	19	2	521.8	45.1	196.6	226.8	426.1	492	575	975
	Driftwood Creek	OK621010-03-0030C	20	3	2115.9	77.7	347.3	1563	1860.5	2101	2431.3	2641
	Duck Pond Creek	OK720500-02-0250F	22	1	1145.2	13.1	61.6	1031	1088.5	1161	1198.3	1230
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	1168.9	36.5	159.2	802	1116	1189	1251	1428
	Eagle Chief Creek: Upper	OK620920-04-0010G	20	4	1666	119	532	706	1316	1644	2219	2443
	Euchee Creek	OK620900-01-0290D	21	3	553.6	40.4	185.2	236.5	410	569	713.5	865
	FH Probabilistic		4	0	368	30.7	61.4	287.3	304.5	378.3	421.2	428.2
	Griever Creek	OK620920-01-0130G	19	0	3548.6	66.4	289.6	2931	3382	3595	3810	4031
	Indian Creek	OK620910-02-0310C	21	2	1255.6	28.4	130.1	855	1177	1279	1334	1442
	Kingfisher Creek	OK620910-05-0010J	16	2	2132	135	540	1028	1738	2087	2706	2783
	Kiowa Creek: Harper Co.	OK720500-02-0130C	14	1	820.1	42.5	158.8	389	800.8	869	909.8	950
	Lagoon Creek	OK620900-01-0180J	21	2	933	145	664	258	407	684	1402	2414
	Long Creek	OK620920-02-0080D	22	1	3465	156	733	2333	2991	3339	3813	5560
	Main Creek	OK620920-01-0180F	21	1	3548.8	54.9	251.7	2704	3472.5	3604	3695	3856
	Medicine Lodge River	OK621010-03-0010D	20	3	1023.3	59.7	266.8	609.5	821.3	917.5	1287.5	1575
	Otter Creek	OK620910-03-0040C	18	1	858.3	60.2	255.2	467.6	678.5	787.5	1020.5	1376
	Persimmon Creek	OK720500-01-0150G	21	0	880.4	33.5	153.3	389.2	846	910	960	1089
	Pond Creek	OK621000-05-0010D	20	4	1111	60.2	269.2	592	891.5	1135.5	1342.8	1518
	Red Rock Creek: Lower	OK621200-05-0010K	18	1	945	148	628	94	382	821	1459	2329
	Red Rock Creek: Upper	OK621200-05-0160G	20	1	1088.6	94.3	421.6	324.2	650.5	1268	1475.5	1588
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	32171	2721	11860	2461	26803	31363	41587	50801
	Salt Creek (Payne)	OK620900-02-0020D	21	2	685.8	38.4	176	265	575	745	801	958
	Salt Creek: Lower	OK621200-04-0010F	19	2	541.6	30	130.9	336.4	433.6	558	603	820

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Salt Creek: Middle	OK621200-04-0010K	19	2	513.8	19.1	83.2	372.2	466.6	532	571	682
	Sandy Creek	OK621010-02-0010D	17	3	811.8	25.6	105.5	682	714	803	872	1002
	Skeleton Creek: Upper	OK620910-03-0010S	19	1	1741.3	55.8	243.2	1240	1548	1741	1999	2133
	Stillwater Creek: Upper	OK620900-04-0070T	18	2	708	59.4	252.1	349.3	493.3	623	834.8	1172
	SWT Probabilistic		3	0	2242	940	1629	378	378	2955	3392	3392
	Turkey Creek: Lower	OK620910-06-0010R	17	2	1325.1	48.2	198.9	918	1207.5	1306	1478	1662
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	19	2	1786	139	606	1134	1485	1655	1955	4051
	Uncle John's Creek	OK620910-05-0030C	14	1	1298.4	56.5	211.4	930	1131.3	1270.5	1492.8	1641
	West Clay Creek	OK621010-01-0130R	21	3	23305	929	4259	9312	22048	23652	25781	30702
	Wildhorse Creek	OK621000-02-0040F	20	3	1720	84.8	379.3	888	1456.5	1755	1994	2418
	Yellowstone Creek	OK621010-01-0270C	13	1	2831	88	317.2	2036	2817.5	2943	2998.5	3093
DO (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	19	1	7.911	0.629	2.74	2.62	5.6	8.25	10.27	11.6
	Beaver Creek (Osage)	OK621210-00-0050L	19	2	7.564	0.764	3.329	3.34	4.65	7.16	10.33	13.56
	Bent Creek	OK720500-01-0070D	21	2	10.799	0.644	2.953	6.36	8.585	10.18	13.045	16.44
	Bitter Creek	OK621100-00-0100G	20	2	8.222	0.95	4.25	3.75	4.475	7.21	10.958	16.24
	Black Bear Creek: Upper	OK621200-03-0260B	18	1	7.947	0.726	3.08	2.6	5.498	7.28	11.053	12.47
	Bois d'Arc Creek	OK621000-03-0010C	20	2	7.956	0.925	4.138	2.78	4.428	7.405	11.115	17.46
	Buffalo Creek:	OK620920-05-0010G	21	2	10.608	0.592	2.711	4.33	9.095	11.03	12.43	15.4
	CGP Probabilistic		77	8	6.393	0.428	3.76	0.84	3.575	5.57	8.22	18.8
	Clear Creek (Beaver)	OK720500-02-0300F	20	2	6.889	0.68	3.042	3	3.89	6.53	9.288	13.11
	Clear Creek (Harper)	OK720500-02-0070G	20	2	8.458	0.466	2.084	6.03	6.415	8.57	9.613	13.58
	Cooper Creek	OK620910-02-0040C	18	2	9.88	1.09	4.61	1.76	5.39	11.45	12.82	18.63
	Cottonwood Creek	OK620910-04-0010E	14	1	9.51	0.698	2.613	5.59	6.78	9.78	12.06	13.64
	Council Creek	OK620900-02-0050H	21	2	7.223	0.667	3.055	1.86	4.94	7.45	9.31	14.82
	Crooked Creek (Beaver)	OK620930-00-0100G	17	2	6.424	0.899	3.709	1.13	2.7	7.07	9.95	12.1
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	9.691	0.986	4.409	4.11	5.458	8.84	13.415	19.05
	CT Probabilistic		4	0	5.31	1.46	2.92	3.49	3.62	4.04	8.28	9.68
	Dead Indian Creek	OK620910-05-0080A	18	2	8.23	1.08	4.57	2.17	4.47	8.55	10.91	17.48
	Deep Creek	OK620910-02-0250C	21	2	9	0.96	4.401	1.12	5.625	8.27	13.25	16.17
	Deer Creek	OK621000-04-0010D	20	4	9.34	1.05	4.69	4.45	6.29	7.51	11.84	20.8
	Doga Creek	OK621200-02-0020C	19	2	7.147	0.603	2.629	3.64	4.51	6.49	9.68	12.3
	Driftwood Creek	OK621010-03-0030C	20	3	9.421	0.645	2.886	4.52	7.535	9.08	11.548	14.96
	Duck Pond Creek	OK720500-02-0250F	21	2	7.886	0.896	4.107	1.45	4.64	7.35	10.48	19.3
	Eagle Chief Creek: Lower	OK620920-04-0010C	20	2	12.031	0.66	2.952	6.18	9.65	12.9	14.003	18.81
	Eagle Chief Creek: Upper	OK620920-04-0010G	20	4	9.786	0.677	3.026	5.5	7.443	9.975	11.303	15.85
	Euchee Creek	OK620900-01-0290D	21	3	8.525	0.724	3.318	1.15	6.015	8.4	11.85	14.27
	FH Probabilistic		4	0	4.905	0.57	1.139	4	4.11	4.525	6.08	6.57
	Griever Creek	OK620920-01-0130G	18	1	11.004	0.704	2.988	5.22	8.453	11.275	12.67	16.52
	Indian Creek	OK620910-02-0310C	21	2	10.446	0.711	3.26	4.25	7.15	10.85	13.32	15.35
	Kingfisher Creek	OK620910-05-0010J	17	1	8.653	0.841	3.469	3.26	5.18	9.56	10.915	14
	Kiowa Creek: Harper Co.	OK720500-02-0130C	13	2	8.562	0.822	2.963	4.3	6.04	8.42	10.93	13.73
	Lagoon Creek	OK620900-01-0180J	21	2	9.667	0.803	3.678	4.34	6.83	8.4	12.175	17.6
	Long Creek	OK620920-02-0080D	21	2	10.447	0.796	3.648	0.63	8.26	11.1	12.65	17.97
	Main Creek	OK620920-01-0180F	20	2	10.635	0.628	2.807	7.45	8.218	10.505	11.535	17.15
	Medicine Lodge River	OK621010-03-0010D	19	4	9.071	0.647	2.818	3.27	7.24	8.66	11.45	13.63
	Otter Creek	OK620910-03-0040C	18	1	8.996	0.687	2.913	2.95	6.628	9.75	11.44	13.58
	Persimmon Creek	OK720500-01-0150G	20	1	12.539	0.639	2.856	8.35	9.903	12.355	15.25	17.49
	Pond Creek	OK621000-05-0010D	20	4	9.64	1.02	4.57	1.6	6.58	8.51	13.07	19.05
	Red Rock Creek: Lower	OK621200-05-0010K	18	1	6.699	0.728	3.088	2.27	3.845	6.155	8.895	13.07
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	5.846	0.652	2.84	1.71	3.48	6.14	7.87	11.24
	Salt Creek (Kingfisher)	OK620910-02-0100D	20	2	9.317	0.709	3.169	3.72	6.103	9.455	12.23	13.88
	Salt Creek (Payne)	OK620900-02-0020D	21	2	7.262	0.67	3.071	1.86	4.71	6.79	9.73	12.05
	Salt Creek: Lower	OK621200-04-0010F	19	2	9.611	0.661	2.883	3.87	7.11	9.77	11.77	14.02
	Salt Creek: Middle	OK621200-04-0010K	19	2	8.904	0.555	2.42	4.25	7.24	9.59	10.85	12.76
	Sandy Creek	OK621010-02-0010D	16	4	9.149	0.662	2.649	4.55	6.313	9.885	10.918	13.26
	Skeleton Creek: Upper	OK620910-03-0010S	19	1	9.754	0.45	1.961	6.69	8.29	9.74	11.46	12.73
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	3.471	0.539	2.222	0.22	1.71	3.12	5.04	8.59
	SWT Probabilistic		3	0	9.78	3.68	6.37	5.36	5.36	6.9	17.09	17.09
	Turkey Creek: Lower	OK620910-06-0010R	18	1	9.546	0.792	3.361	2.6	6.563	9.73	12.853	14.67
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	19	2	15.001	0.699	3.047	6.76	12.8	15.82	17.21	18.7
	Uncle John's Creek	OK620910-05-0030C	14	1	9.164	0.865	3.236	3.27	6.268	10.335	12.04	12.81
	West Clay Creek	OK621010-01-0130R	19	5	10.842	0.853	3.718	2.86	8.4	11.84	14.35	15.67
	Wildhorse Creek	OK621000-02-0040F	19	4	6.431	0.772	3.367	2.55	3.84	4.85	9.1	13.3
	Yellowstone Creek	OK621010-01-0270C	12	2	9.581	0.603	2.087	5.17	7.863	10.245	11.353	11.87
DO % Saturation	Beaver Creek (Logan)	OK620900-03-0230C	19	1	76.13	6.03	26.28	4	67.9	76.1	99.1	119.3
	Beaver Creek (Osage)	OK621210-00-0050L	19	2	70.56	5.38	23.44	31.1	46.7	78.5	90.5	110.6

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Bent Creek	OK720500-01-0070D	21	2	103.3	3.25	14.92	70.8	93.1	107.4	115.1	125
	Bitter Creek	OK621100-00-0100G	20	2	74.17	6.2	27.72	36.5	50.1	69.7	95.45	131.1
	Black Bear Creek: Upper	OK621200-03-0260B	18	1	78.14	5.17	21.95	35	62.88	73.15	100.28	107.3
	Bois d'Arc Creek	OK621000-03-0010C	20	2	71.8	5.98	26.75	36.4	52.4	60.95	95.35	129.9
	Buffalo Creek:	OK620920-05-0010G	21	2	103.88	9.13	41.85	9.94	92.3	108.2	128.45	175.4
	CGP Probabilistic		77	8	75.41	5.27	46.28	10.2	40.3	66.2	100.9	208.3
	Clear Creek (Beaver)	OK720500-02-0300F	20	2	65.45	6.36	28.43	28.6	42.7	64.4	74.53	160
	Clear Creek (Harper)	OK720500-02-0070G	20	2	83.62	3.1	13.88	66.1	71.78	78.65	99.4	106.3
	Cooper Creek	OK620910-02-0040C	18	2	91.45	8.83	37.47	22.5	62.95	98.15	112.33	178
	Cottonwood Creek	OK620910-04-0010E	14	1	94.94	3.09	11.55	72.6	85.05	99.5	103.18	110.7
	Council Creek	OK620900-02-0050H	21	2	71.74	7.34	33.61	25.7	54.7	65.1	83	180
	Crooked Creek (Beaver)	OK620930-00-0100G	17	2	59.81	7.51	30.96	13	29.95	64.3	79.05	122.9
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	96.17	8.99	40.2	21.2	60.28	100.4	124.38	177.9
	CT Probabilistic		4	0	59.2	19.7	39.5	27.9	32	46	99.7	117
	Dead Indian Creek	OK620910-05-0080A	18	2	72.12	7.17	30.41	26.5	48.43	71.45	93.23	128.9
	Deep Creek	OK620910-02-0250C	21	2	84.3	5.89	26.99	13.8	70.85	91.7	107.65	121.2
	Deer Creek	OK621000-04-0010D	20	4	90	6.5	29.08	56.7	68.53	79.8	103.75	158
	Doga Creek	OK621200-02-0020C	19	2	74.22	6.91	30.11	27.1	43.2	75.6	97.9	137.1
	Driftwood Creek	OK621010-03-0030C	20	3	102.55	8.07	36.1	57	75.55	91.65	117.65	203
	Duck Pond Creek	OK720500-02-0250F	21	2	64.41	6.03	27.65	1.66	50.25	64.8	90.8	102.7
	Eagle Chief Creek: Lower	OK620920-04-0010C	20	2	111.15	6.76	30.25	13.37	104.25	113.85	123.75	167.3
	Eagle Chief Creek: Upper	OK620920-04-0010G	20	4	105.39	7.86	35.17	52.2	79.9	106.7	123.98	167.2
	Euchee Creek	OK620900-01-0290D	21	3	88.07	4.19	19.18	51.7	75.75	88.5	100.95	126
	FH Probabilistic		4	0	60.38	7.76	15.52	49	50.23	54.6	76.3	83.3
	Griever Creek	OK620920-01-0130G	18	1	102.62	3.1	13.17	60.1	96.43	105.4	111.68	115.9
	Indian Creek	OK620910-02-0310C	21	2	98.11	4.29	19.67	51.6	84.95	96.4	112.55	134
	Kingfisher Creek	OK620910-05-0010J	17	1	78.85	5.09	21	41.7	63.45	80.4	96.8	108.8
	Kiowa Creek: Harper Co.	OK720500-02-0130C	13	2	78.39	4.61	16.64	49.5	68.7	81.7	90.1	107.3
	Lagoon Creek	OK620900-01-0180J	21	2	96.74	8.73	40.01	36.5	69.15	95.8	108.95	232
	Long Creek	OK620920-02-0080D	21	2	107.51	5.79	26.52	8.3	103.95	111.1	120.7	138.3
	Main Creek	OK620920-01-0180F	20	2	100.52	1.91	8.52	86.1	94.9	98.5	108.68	118.5
	Medicine Lodge River	OK621010-03-0010D	19	4	99.39	6.18	26.94	41.1	90.1	103.7	124	141
	Otter Creek	OK620910-03-0040C	18	1	87.21	4.93	20.9	35.8	79.83	87.6	93.93	145
	Persimmon Creek	OK720500-01-0150G	20	1	128.28	6.19	27.66	95.1	103.28	120.7	147.8	198.7
	Pond Creek	OK621000-05-0010D	20	4	99.3	9.48	42.41	19	75.98	92.2	130.9	187
	Red Rock Creek: Lower	OK621200-05-0010K	18	1	61.74	4.75	20.14	20.4	47.55	60.75	74.5	96.9
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	51.79	4.55	19.83	15.4	38.3	53.7	67.2	82.3
	Salt Creek (Kingfisher)	OK620910-02-0100D	20	2	91.38	3.87	17.32	52.9	76.3	93.15	106.4	115.3
	Salt Creek (Payne)	OK620900-02-0020D	21	2	68.77	4.68	21.47	20.4	56.25	71.9	87.8	96.1
	Salt Creek: Lower	OK621200-04-0010F	19	2	93.47	5.71	24.91	44.2	71.9	94.7	108.6	142.3
	Salt Creek: Middle	OK621200-04-0010K	19	2	85.76	3.75	16.36	55.3	75.2	86.3	97.8	122.1
	Sandy Creek	OK621010-02-0010D	16	4	100.74	5.73	22.9	56.6	87.73	99.4	123.1	134.5
	Skeleton Creek: Upper	OK620910-03-0010S	19	1	98.45	2.89	12.58	80.6	90.3	97.8	105.3	126.5
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	34.24	5.31	21.91	2	17.4	35	47.4	82.9
	SWT Probabilistic		2	1	70.1	5.7	8.06	64.4	*	70.1	*	75.8
	Turkey Creek: Lower	OK620910-06-0010R	18	1	89.38	6.05	25.68	33.3	73.28	88.2	102.13	142.5
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	19	2	154	8.03	34.99	84.5	138.7	145.8	157.1	259.6
	Uncle John's Creek	OK620910-05-0030C	14	1	77.91	4.59	17.17	35.8	71.2	85.7	88.93	94.1
	West Clay Creek	OK621010-01-0130R	20	4	129.63	9.66	43.22	37.7	101.35	127.3	156.28	219.2
	Wildhorse Creek	OK621000-02-0040F	19	4	62.3	5.66	24.68	21.3	41.8	58.1	87	104.7
	Yellowstone Creek	OK621010-01-0270C	12	2	104.01	4.98	17.25	79.7	86.45	104.8	117.3	130.6
E. coli	Beaver Creek (Logan)	OK620900-03-0230C	7	13	10	3.45	9.13	5	5	5	10	30
	Beaver Creek (Osage)	OK621210-00-0050L	9	12	104.4	49.5	148.4	5	15	30	185	440
	Bent Creek	OK720500-01-0070D	11	12	267	126	419	20	45	170	240	1500
	Bitter Creek	OK621100-00-0100G	9	13	28.33	8.04	24.11	5	12.5	20	42.5	80
	Black Bear Creek: Upper	OK621200-03-0260B	7	12	41.4	18.3	48.4	5	5	10	110	110
	Bois d'Arc Creek	OK621000-03-0010C	9	13	78.9	27	80.9	5	10	45	162.5	220
	Buffalo Creek:	OK620920-05-0010G	11	12	79.1	36.7	121.6	5	5	10	200	360
	CGP Probabilistic		44	41	234.4	94.9	629.6	5	5	20	141.3	3000
	Clear Creek (Beaver)	OK720500-02-0300F	11	11	105	49.7	164.9	5	30	55	110	590
	Clear Creek (Harper)	OK720500-02-0070G	11	11	33.18	7.42	24.62	5	10	40	50	70
	Cooper Creek	OK620910-02-0040C	8	12	56.9	25.4	71.9	5	6.3	32.5	77.5	220
	Cottonwood Creek	OK620910-04-0010E	6	9	448	285	698	45	49	190	741	1840
	Council Creek	OK620900-02-0050H	10	13	530	300	947	5	20	83	718	2600
	Crooked Creek (Beaver)	OK620930-00-0100G	11	8	213	104	346	10	20	105	300	1200
	Crooked Creek (Grant)	OK621000-06-0010C	10	14	97	29.6	93.5	15	26.3	80	145	320
	CT Probabilistic		2	2	7.5	2.5	3.54	5	*	7.5	*	10

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Dead Indian Creek	OK620910-05-0080A	8	12	165.6	75.3	212.9	5	15	75	372.5	550
	Deep Creek	OK620910-02-0250C	10	13	272	85.7	270.9	5	18.8	247.5	348.8	920
	Deer Creek	OK621000-04-0010D	9	15	85.6	33.9	101.8	5	12.5	20	210	240
	Doga Creek	OK621200-02-0020C	9	12	71.7	56.2	168.6	5	5	10	35	520
	Driftwood Creek	OK621010-03-0030C	9	14	184.4	55	165	10	27.5	155	340	470
	Duck Pond Creek	OK720500-02-0250F	11	12	398	152	505	25	65	140	550	1500
	Eagle Chief Creek: Lower	OK620920-04-0010C	9	13	77.8	55.9	167.7	5	5	15	60	520
	Eagle Chief Creek: Upper	OK620920-04-0010G	9	15	146.1	70.1	210.4	10	17.5	85	175	680
	Euchee Creek	OK620900-01-0290D	11	13	45.5	11.9	39.5	5	10	40	70	120
	FH Probabilistic		2	2	573	568	803	5	*	573	*	1140
	Griever Creek	OK620920-01-0130G	8	11	196	144	407	10	20	58	105	1200
	Indian Creek	OK620910-02-0310C	10	13	161	105	333	5	24	53	111	1100
	Kingfisher Creek	OK620910-05-0010J	6	12	232	154	376	10	14	98	388	980
	Kiowa Creek: Harper Co.	OK720500-02-0130C	8	7	74.4	22.9	64.7	10	18.8	57.5	116.3	200
	Lagoon Creek	OK620900-01-0180J	10	13	77.5	30	94.7	5	5	42.5	125	300
	Long Creek	OK620920-02-0080D	11	12	2517	2255	7479	5	10	50	210	25000
	Main Creek	OK620920-01-0180F	11	11	259	176	583	10	30	55	200	2000
	Medicine Lodge River	OK621010-03-0010D	10	13	65.5	25.9	81.8	5	8.8	50	82.5	280
	Otter Creek	OK620910-03-0040C	7	12	276	223	590	5	5	25	230	1600
	Persimmon Creek	OK720500-01-0150G	10	11	103.5	43	136	10	15	55	130	420
	Pond Creek	OK621000-05-0010D	9	15	50.6	15	45.1	10	17.5	40	82.5	140
	Red Rock Creek: Lower	OK621200-05-0010K	7	12	241	153	405	5	5	55	410	1100
	Red Rock Creek: Upper	OK621200-05-0160G	8	13	75.6	23.7	67.1	10	22.5	47.5	127.5	200
	Salt Creek (Kingfisher)	OK620910-02-0100D	9	13	135	52.3	156.8	15	35	60	220	490
	Salt Creek (Payne)	OK620900-02-0020D	10	13	713	375	1185	30	51	210	973	3000
	Salt Creek: Lower	OK621200-04-0010F	8	13	86.3	62.9	177.9	5	5	12.5	80	520
	Salt Creek: Middle	OK621200-04-0010K	8	13	52.5	39.9	112.9	5	5	5	36.3	330
	Sandy Creek	OK621010-02-0010D	10	10	36.5	13.9	44.1	5	5	15	68.8	130
	Skeleton Creek: Upper	OK620910-03-0010S	7	13	37.9	23.8	63	5	10	15	25	180
	Stillwater Creek: Upper	OK620900-04-0070T	10	10	148	51.3	162.1	10	27.5	70	266.3	500
	SWT Probabilistic		2	1	75	65	91.9	10	*	75	*	140
	Turkey Creek: Lower	OK620910-06-0010R	7	12	74.3	26.8	70.9	15	15	50	125	200
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	8	13	203.8	83	234.7	25	41.3	80	460	600
	Uncle John's Creek	OK620910-05-0030C	5	10	208	68.2	152.6	30	82.5	185	345	440
	West Clay Creek	OK621010-01-0130R	10	14	22.5	6.42	20.31	5	8.75	10	42.5	60
	Wildhorse Creek	OK621000-02-0040F	10	13	465	176	556	10	99	220	713	1700
	Yellowstone Creek	OK621010-01-0270C	5	9	30	16.5	36.9	10	10	10	60	95
Hardness (mg/L a	Beaver Creek (Logan)	OK620900-03-0230C	19	1	491.9	99.8	435.2	156	240	422	500	2125
	Beaver Creek (Osage)	OK621210-00-0050L	19	2	249.9	17.9	77.9	150	196	225	287	430
	Bent Creek	OK720500-01-0070D	21	2	1208.3	83.7	383.5	7.9	950	1260	1480	1780
	Bitter Creek	OK621100-00-0100G	19	3	1385	100	438	576	1050	1255	1700	2390
	Black Bear Creek: Upper	OK621200-03-0260B	18	1	685.9	60.5	256.7	272	560.5	649	795.3	1420
	Bois d'Arc Creek	OK621000-03-0010C	20	2	565.5	47.6	213	195	412.3	548.5	688	944
	Buffalo Creek:	OK620920-05-0010G	22	1	2259.1	91.5	429.1	1450	1882.5	2290	2620	2900
	CGP Probabilistic		58	27	545.1	69.1	526	142	265.8	374	564.5	2820
	Clear Creek (Beaver)	OK720500-02-0300F	21	1	689.9	57	261.4	406	475	580	935	1270
	Clear Creek (Harper)	OK720500-02-0070G	21	1	254.62	9.18	42.06	204	220	240	285	360
	Cooper Creek	OK620910-02-0040C	18	2	634.7	82.5	350	25	371.3	575	942.5	1280
	Cottonwood Creek	OK620910-04-0010E	14	1	430	46.8	175.2	108	309.5	416	509.5	765
	Council Creek	OK620900-02-0050H	21	2	312.9	29.7	136.2	116	220	273	377.5	594
	Crooked Creek (Beaver)	OK620930-00-0100G	17	2	661.8	59.2	244.1	5.9	572.5	650	815	1024
	Crooked Creek (Grant)	OK621000-06-0010C	19	5	449	35.5	154.7	229	320	405	635	710
	CT Probabilistic		4	0	381	106	212	209	223	315	604	683
	Dead Indian Creek	OK620910-05-0080A	18	2	648.2	64	271.3	370	474.5	543.5	762.5	1430
	Deep Creek	OK620910-02-0250C	21	2	755.5	71.6	327.9	343	455.5	690	1020	1420
	Deer Creek	OK621000-04-0010D	18	6	687.4	74.1	314.3	186	511	660	801.3	1490
	Doga Creek	OK621200-02-0020C	19	2	238.1	18.6	81.2	137	173	210	289	437
	Driftwood Creek	OK621010-03-0030C	18	5	895.9	45.6	193.5	488	801.3	908.5	1016.3	1205
	Duck Pond Creek	OK720500-02-0250F	22	1	288.5	24.6	115.2	160	205.3	270	326.5	700
	Eagle Chief Creek: Lower	OK620920-04-0010C	20	2	525.5	30.4	135.9	358	422.8	468	660.3	780
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	970.6	88.4	385.3	340	610	1080	1170	1820
	Euchee Creek	OK620900-01-0290D	21	3	203.8	13.5	61.7	95	171.5	196	251	353
	FH Probabilistic		4	0	163.8	19.8	39.5	125	127.8	161.5	202	207
	Griever Creek	OK620920-01-0130G	19	0	2155.8	83.7	364.8	1480	1930	2170	2420	2850
	Indian Creek	OK620910-02-0310C	21	2	417.7	16.7	76.7	289	350.5	400	495	530
	Kingfisher Creek	OK620910-05-0010J	17	1	737.6	61.1	252	340	540	737	960	1200
	Kiowa Creek: Harper Co.	OK720500-02-0130C	14	1	291	17.9	67.1	150	244.3	292	352	394

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Lagoon Creek	OK620900-01-0180J	21	2	305.1	38.5	176.3	92	177.5	242	434.5	757
	Long Creek	OK620920-02-0080D	22	1	1928.2	91.2	427.9	1260	1575	1855	2292.5	2680
	Main Creek	OK620920-01-0180F	20	2	2212.5	94.1	421	1620	1867.5	2135	2462.5	3150
	Medicine Lodge River	OK621010-03-0010D	19	4	541.6	53.8	234.3	275	370	475	630	1265
	Otter Creek	OK620910-03-0040C	18	1	468	111	470	190	233	340	513	2280
	Persimmon Creek	OK720500-01-0150G	21	0	402.7	26	119.2	263	333.5	384	422.5	820
	Pond Creek	OK621000-05-0010D	16	8	451.3	55.6	222.4	139	334.3	434	507.3	1065
	Red Rock Creek: Lower	OK621200-05-0010K	18	1	371.9	35.9	152.3	122	263.8	361.5	456.5	730
	Red Rock Creek: Upper	OK621200-05-0160G	20	1	441.9	44.2	197.7	128	281.8	455	550.5	845
	Salt Creek (Kingfisher)	OK620910-02-0100D	20	2	2151	158	705	208	1738	2200	2530	3350
	Salt Creek (Payne)	OK620900-02-0020D	21	2	278.8	12.3	56.3	136	253.5	301	320	346
	Salt Creek: Lower	OK621200-04-0010F	19	2	287.7	23.8	103.8	141	212	286	345	594
	Salt Creek: Middle	OK621200-04-0010K	19	2	275.5	28.8	125.6	170	210	248	285	757
	Sandy Creek	OK621010-02-0010D	16	4	356.1	35.5	142	160	243.8	321	477.5	630
	Skeleton Creek: Upper	OK620910-03-0010S	18	2	487.8	48.6	206.3	60	358.8	476	585.8	1015
	Stillwater Creek: Upper	OK620900-04-0070T	18	2	471	113	479	127	202	367	527	2215
	SWT Probabilistic		3	0	2693	2259	3913	160	160	720	7200	7200
	Turkey Creek: Lower	OK620910-06-0010R	18	1	473	143	608	160	257	293	395	2830
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	342.6	21.8	92.3	190	292	326.5	360.5	625
	Uncle John's Creek	OK620910-05-0030C	14	1	566.1	61.3	229.3	331	420	465	812.5	1070
	West Clay Creek	OK621010-01-0130R	20	4	1825.5	76.6	342.8	935	1710	1882	2035	2370
	Wildhorse Creek	OK621000-02-0040F	19	4	482.4	38.7	168.5	270	378	408	540	915
	Yellowstone Creek	OK621010-01-0270C	12	2	2240.8	78.5	272	1850	2004	2178.5	2498.8	2685
Nitrate (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	0.1	0.0387	0.164	0.02	0.02	0.02	0.115	0.62
	Bent Creek	OK720500-01-0070D	20	3	0.134	0.0299	0.1338	0.02	0.0225	0.055	0.255	0.42
	Bitter Creek	OK621100-00-0100G	19	3	0.1411	0.0493	0.2148	0.02	0.02	0.03	0.31	0.84
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	0.03118	0.00717	0.02956	0.02	0.02	0.02	0.02	0.13
	Bois d'Arc Creek	OK621000-03-0010C	19	3	0.1679	0.0856	0.3729	0.02	0.02	0.02	0.16	1.54
	Buffalo Creek:	OK620920-05-0010G	20	3	0.028	0.008	0.03578	0.02	0.02	0.02	0.02	0.18
	CGP Probabilistic		44	41	0.708	0.444	2.945	0.02	0.02	0.02	0.178	19.28
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	Clear Creek (Harper)	OK720500-02-0070G	19	3	0.5442	0.0837	0.3649	0.13	0.21	0.53	0.74	1.34
	Cooper Creek	OK620910-02-0040C	17	3	0.349	0.103	0.424	0.02	0.02	0.23	0.55	1.25
	Cottonwood Creek	OK620910-04-0010E	12	3	6.469	0.695	2.408	3.03	4.615	6.26	8.613	10.78
	Council Creek	OK620900-02-0050H	20	3	0.058	0.0211	0.0942	0.02	0.02	0.02	0.02	0.34
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	0.1106	0.0665	0.2659	0.02	0.02	0.02	0.02	1.01
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	0.178	0.0459	0.2054	0.02	0.02	0.09	0.34	0.7
	CT Probabilistic		2	2	0.02	0	0	0.02	*	0.02	*	0.02
	Dead Indian Creek	OK620910-05-0080A	17	3	0.406	0.125	0.516	0.02	0.03	0.15	0.715	1.55
	Deep Creek	OK620910-02-0250C	20	3	0.856	0.144	0.646	0.02	0.23	0.875	1.37	2.31
	Deer Creek	OK621000-04-0010D	19	5	0.0679	0.0231	0.1006	0.02	0.02	0.02	0.02	0.33
	Doga Creek	OK621200-02-0020C	18	3	0.0633	0.024	0.1018	0.02	0.02	0.02	0.0525	0.39
	Driftwood Creek	OK621010-03-0030C	19	4	0.04053	0.00978	0.04262	0.02	0.02	0.02	0.03	0.16
	Duck Pond Creek	OK720500-02-0250F	20	3	0.03	0.00465	0.02077	0.02	0.02	0.02	0.035	0.09
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	2.027	0.256	1.115	0.46	1.16	1.87	2.97	3.84
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	1.969	0.182	0.791	1.01	1.31	1.88	2.65	3.76
	Eucler Creek	OK620900-01-0290D	20	4	0.127	0.043	0.1922	0.02	0.02	0.02	0.23	0.56
	FH Probabilistic		2	2	0.02	0	0	0.02	*	0.02	*	0.02
	Griever Creek	OK620920-01-0130G	17	2	0.0606	0.0346	0.1425	0.02	0.02	0.02	0.025	0.61
	Indian Creek	OK620910-02-0310C	20	3	4.522	0.35	1.566	1.28	3.68	5.105	5.728	6.35
	Kingfisher Creek	OK620910-05-0010J	16	2	0.563	0.141	0.562	0.02	0.078	0.3	1.153	1.71
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	0.2258	0.065	0.2251	0.02	0.02	0.115	0.4525	0.62
	Lagoon Creek	OK620900-01-0180J	20	3	0.046	0.0179	0.08	0.02	0.02	0.02	0.02	0.28
	Long Creek	OK620920-02-0080D	20	3	0.084	0.045	0.2013	0.02	0.02	0.02	0.02	0.9
	Main Creek	OK620920-01-0180F	19	3	0.1737	0.0371	0.1619	0.02	0.02	0.08	0.34	0.43
	Medicine Lodge River	OK621010-03-0010D	18	5	0.248	0.101	0.428	0.02	0.02	0.02	0.29	1.16
	Otter Creek	OK620910-03-0040C	17	2	0.0418	0.0205	0.0846	0.02	0.02	0.02	0.02	0.37
	Persimmon Creek	OK720500-01-0150G	19	2	0.2411	0.0491	0.2138	0.02	0.02	0.25	0.39	0.71
	Pond Creek	OK621000-05-0010D	19	5	0.935	0.147	0.641	0.03	0.45	1.03	1.17	2.58
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	0.1725	0.0835	0.3338	0.02	0.02	0.02	0.1475	1.29
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	0.0826	0.025	0.1091	0.02	0.02	0.02	0.17	0.35
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	0.547	0.206	0.899	0.02	0.02	0.02	0.6	3.2
	Salt Creek (Payne)	OK620900-02-0020D	19	4	0.0516	0.0206	0.0896	0.02	0.02	0.02	0.02	0.32
	Salt Creek: Lower	OK621200-04-0010F	18	3	0.035	0.00947	0.04018	0.02	0.02	0.02	0.0225	0.18
	Salt Creek: Middle	OK621200-04-0010K	18	3	0.02667	0.0061	0.0259	0.02	0.02	0.02	0.02	0.13
	Sandy Creek	OK621010-02-0010D	16	4	0.03063	0.00793	0.03172	0.02	0.02	0.02	0.02	0.14

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	4.555	0.651	2.683	0.6	1.905	5.83	6.645	9.14
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	0.05	0.015	0.0617	0.02	0.02	0.02	0.06	0.25
	SWT Probabilistic		2	1	0.405	0.385	0.544	0.02	*	0.405	*	0.79
	Turkey Creek: Lower	OK620910-06-0010R	17	2	0.628	0.119	0.491	0.02	0.275	0.53	0.905	1.62
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	0.946	0.181	0.77	0.09	0.425	0.645	1.098	2.66
	Uncle John's Creek	OK620910-05-0030C	14	1	0.989	0.251	0.94	0.04	0.275	0.71	1.57	3.16
	West Clay Creek	OK621010-01-0130R	20	4	0.243	0.0939	0.4199	0.02	0.02	0.02	0.4475	1.61
	Wildhorse Creek	OK621000-02-0040F	20	3	0.643	0.287	1.282	0.02	0.02	0.02	0.465	4.46
	Yellowstone Creek	OK621010-01-0270C	12	2	0.0833	0.0546	0.189	0.02	0.02	0.02	0.0375	0.68
Nitrite (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	0.0461	0.018	0.0762	0.02	0.02	0.02	0.02	0.27
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	0.02444	0.00271	0.01149	0.02	0.02	0.02	0.02	0.06
	Bent Creek	OK720500-01-0070D	20	3	0.025	0.005	0.02236	0.02	0.02	0.02	0.02	0.12
	Bitter Creek	OK621100-00-0100G	19	3	0.0642	0.0296	0.129	0.02	0.02	0.02	0.02	0.44
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	Bois d'Arc Creek	OK621000-03-0010C	19	3	0.03632	0.00906	0.03947	0.02	0.02	0.02	0.02	0.15
	Buffalo Creek:	OK620920-05-0010G	20	3	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	CGP Probabilistic		44	41	0.0834	0.0459	0.3041	0.02	0.02	0.02	0.02	2
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	0.0411	0.0211	0.0918	0.02	0.02	0.02	0.02	0.42
	Clear Creek (Harper)	OK720500-02-0070G	19	3	0.03421	0.0087	0.03791	0.02	0.02	0.02	0.02	0.14
	Cooper Creek	OK620910-02-0040C	17	3	0.1065	0.0478	0.1973	0.02	0.02	0.02	0.02	0.65
	Cottonwood Creek	OK620910-04-0010E	12	3	0.0675	0.0475	0.1645	0.02	0.02	0.02	0.02	0.59
	Council Creek	OK620900-02-0050H	20	3	0.032	0.00829	0.03708	0.02	0.02	0.02	0.02	0.15
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	0.043	0.0132	0.0589	0.02	0.02	0.02	0.02	0.23
	CT Probabilistic		2	2	0.02	0	0	0.02	*	0.02	*	0.02
	Dead Indian Creek	OK620910-05-0080A	17	3	0.0588	0.0269	0.111	0.02	0.02	0.02	0.02	0.4
	Deep Creek	OK620910-02-0250C	20	3	0.062	0.0172	0.0771	0.02	0.02	0.02	0.09	0.27
	Deer Creek	OK621000-04-0010D	19	5	0.02632	0.00632	0.02753	0.02	0.02	0.02	0.02	0.14
	Doga Creek	OK621200-02-0020C	18	3	0.02833	0.00776	0.03294	0.02	0.02	0.02	0.02	0.16
	Driftwood Creek	OK621010-03-0030C	19	4	0.02895	0.00895	0.039	0.02	0.02	0.02	0.02	0.19
	Duck Pond Creek	OK720500-02-0250F	20	3	0.0365	0.0165	0.0738	0.02	0.02	0.02	0.02	0.35
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	0.1026	0.0156	0.0679	0.02	0.02	0.13	0.15	0.21
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	0.1021	0.0208	0.0905	0.02	0.02	0.1	0.19	0.28
	Euchee Creek	OK620900-01-0290D	20	4	0.028	0.00516	0.02308	0.02	0.02	0.02	0.02	0.12
	FH Probabilistic		2	2	0.02	0	0	0.02	*	0.02	*	0.02
	Griever Creek	OK620920-01-0130G	17	2	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	Indian Creek	OK620910-02-0310C	20	3	0.214	0.0444	0.1984	0.02	0.02	0.195	0.3975	0.53
	Kingfisher Creek	OK620910-05-0010J	16	2	0.0619	0.0296	0.1186	0.02	0.02	0.02	0.02	0.44
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	0.03	0.01	0.0346	0.02	0.02	0.02	0.02	0.14
	Lagoon Creek	OK620900-01-0180J	20	3	0.0365	0.015	0.0671	0.02	0.02	0.02	0.02	0.32
	Long Creek	OK620920-02-0080D	20	3	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	Main Creek	OK620920-01-0180F	19	3	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	Medicine Lodge River	OK621010-03-0010D	18	5	0.02444	0.00444	0.01886	0.02	0.02	0.02	0.02	0.1
	Otter Creek	OK620910-03-0040C	17	2	0.0494	0.0202	0.0833	0.02	0.02	0.02	0.02	0.29
	Persimmon Creek	OK720500-01-0150G	19	2	0.02	0	0	0.02	0.02	0.02	0.02	0.02
	Pond Creek	OK621000-05-0010D	19	5	0.1253	0.0228	0.0995	0.02	0.02	0.16	0.2	0.27
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	0.035	0.00987	0.0395	0.02	0.02	0.02	0.02	0.17
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	0.0426	0.0121	0.0526	0.02	0.02	0.02	0.02	0.21
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	0.0453	0.0253	0.1101	0.02	0.02	0.02	0.02	0.5
	Salt Creek (Payne)	OK620900-02-0020D	19	4	0.03789	0.0099	0.04315	0.02	0.02	0.02	0.02	0.18
	Salt Creek: Lower	OK621200-04-0010F	18	3	0.0394	0.0134	0.0569	0.02	0.02	0.02	0.02	0.25
	Salt Creek: Middle	OK621200-04-0010K	17	4	0.02412	0.00354	0.0146	0.02	0.02	0.02	0.02	0.08
	Sandy Creek	OK621010-02-0010D	16	4	0.03438	0.00983	0.03932	0.02	0.02	0.02	0.02	0.14
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	0.467	0.103	0.426	0.02	0.02	0.38	0.775	1.37
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	0.0518	0.0128	0.0526	0.02	0.02	0.02	0.075	0.2
	SWT Probabilistic		2	1	0.02	0	0	0.02	*	0.02	*	0.02
	Turkey Creek: Lower	OK620910-06-0010R	17	2	0.1	0.0369	0.1522	0.02	0.02	0.02	0.15	0.46
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	0.0628	0.0294	0.1248	0.02	0.02	0.02	0.02	0.43
	Uncle John's Creek	OK620910-05-0030C	14	1	0.05	0.0168	0.0628	0.02	0.02	0.02	0.0425	0.21
	West Clay Creek	OK621010-01-0130R	20	4	0.068	0.033	0.1477	0.02	0.02	0.02	0.02	0.5
	Wildhorse Creek	OK621000-02-0040F	20	3	0.081	0.0341	0.1525	0.02	0.02	0.02	0.02	0.53
	Yellowstone Creek	OK621010-01-0270C	12	2	0.02667	0.00667	0.02309	0.02	0.02	0.02	0.02	0.1
TKN (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	0.791	0.103	0.438	0.37	0.518	0.66	0.908	2.17
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	0.969	0.132	0.559	0.28	0.505	0.81	1.39	2.06
	Bent Creek	OK720500-01-0070D	20	3	0.4235	0.0274	0.1223	0.27	0.3225	0.425	0.4575	0.77
	Bitter Creek	OK621100-00-0100G	19	3	0.805	0.134	0.584	0.24	0.48	0.67	0.98	2.81

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	0.985	0.116	0.479	0.43	0.695	0.84	1.19	2.43
	Bois d'Arc Creek	OK621000-03-0010C	19	3	0.89	0.0452	0.1972	0.47	0.75	0.88	1.06	1.29
	Buffalo Creek:	OK620920-05-0010G	20	3	0.757	0.114	0.512	0.26	0.355	0.58	0.99	1.85
	CGP Probabilistic		44	41	1.225	0.141	0.935	0.34	0.653	1	1.368	5.31
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	0.4974	0.0639	0.2786	0.22	0.3	0.46	0.53	1.38
	Clear Creek (Harper)	OK720500-02-0070G	19	3	0.3011	0.0232	0.1012	0.16	0.24	0.27	0.4	0.53
	Cooper Creek	OK620910-02-0040C	17	3	1.136	0.149	0.615	0.37	0.7	0.86	1.635	2.41
	Cottonwood Creek	OK620910-04-0010E	12	3	0.7742	0.0399	0.1383	0.61	0.665	0.745	0.885	1.04
	Council Creek	OK620900-02-0050H	20	3	1.582	0.379	1.697	0.29	0.603	0.935	1.493	6.37
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	1.388	0.659	2.637	0.18	0.33	0.435	0.628	9.02
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	1.11	0.129	0.576	0.53	0.72	1.08	1.243	3.28
	CT Probabilistic		2	2	2.275	0.965	1.365	1.31	*	2.275	*	3.24
	Dead Indian Creek	OK620910-05-0080A	17	3	0.7965	0.0962	0.3965	0.32	0.49	0.72	1.075	1.83
	Deep Creek	OK620910-02-0250C	20	3	0.749	0.0706	0.3159	0.32	0.47	0.715	0.8975	1.38
	Deer Creek	OK621000-04-0010D	19	5	0.94	0.0739	0.3222	0.31	0.78	0.95	1.06	1.54
	Doga Creek	OK621200-02-0020C	18	3	0.7767	0.0714	0.3029	0.18	0.585	0.75	1.035	1.43
	Driftwood Creek	OK621010-03-0030C	19	4	0.9958	0.0976	0.4256	0.45	0.66	0.91	1.45	1.79
	Duck Pond Creek	OK720500-02-0250F	20	3	0.5285	0.083	0.3713	0.24	0.32	0.39	0.62	1.58
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	0.5605	0.0534	0.2327	0.26	0.44	0.54	0.62	1.34
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	0.6537	0.0536	0.2335	0.35	0.51	0.6	0.74	1.31
	Euchee Creek	OK620900-01-0290D	20	4	0.871	0.0555	0.2481	0.46	0.6875	0.91	1.0675	1.32
	FH Probabilistic		2	2	0.605	0.155	0.219	0.45	*	0.605	*	0.76
	Griever Creek	OK620920-01-0130G	17	2	0.4812	0.0804	0.3314	0.19	0.305	0.36	0.57	1.63
	Indian Creek	OK620910-02-0310C	20	3	0.412	0.041	0.1835	0.11	0.2825	0.365	0.5875	0.77
	Kingfisher Creek	OK620910-05-0010J	16	2	0.856	0.122	0.487	0.38	0.468	0.725	1.085	1.96
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	0.3933	0.053	0.1835	0.21	0.27	0.305	0.515	0.74
	Lagoon Creek	OK620900-01-0180J	20	3	0.7465	0.0829	0.3706	0.18	0.4575	0.715	1.0175	1.37
	Long Creek	OK620920-02-0080D	20	3	1.414	0.632	2.826	0.24	0.37	0.505	0.645	9.68
	Main Creek	OK620920-01-0180F	19	3	0.3305	0.0329	0.1435	0.16	0.22	0.3	0.42	0.73
	Medicine Lodge River	OK621010-03-0010D	18	5	0.5428	0.0713	0.3025	0.23	0.3475	0.495	0.595	1.48
	Otter Creek	OK620910-03-0040C	17	2	0.872	0.102	0.42	0.43	0.605	0.72	0.995	1.94
	Persimmon Creek	OK720500-01-0150G	19	2	0.4758	0.0334	0.1456	0.31	0.37	0.46	0.53	0.89
	Pond Creek	OK621000-05-0010D	19	5	1.18	0.104	0.455	0.68	0.76	1.09	1.49	2.33
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	1.2688	0.0805	0.3219	0.86	1.0275	1.185	1.55	1.88
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	1.1832	0.0746	0.3251	0.55	0.95	1.24	1.46	1.75
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	0.4821	0.062	0.2701	0.11	0.31	0.41	0.64	1.14
	Salt Creek (Payne)	OK620900-02-0020D	19	4	0.6026	0.0798	0.3478	0.19	0.3	0.58	0.78	1.46
	Salt Creek: Lower	OK621200-04-0010F	18	3	0.6622	0.0866	0.3674	0.21	0.3775	0.585	0.795	1.52
	Salt Creek: Middle	OK621200-04-0010K	18	3	0.4589	0.043	0.1825	0.14	0.3275	0.44	0.5925	0.84
	Sandy Creek	OK621010-02-0010D	16	4	0.856	0.154	0.616	0.34	0.463	0.665	1.04	2.83
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	1.561	0.206	0.849	0.62	0.845	1.49	2.105	3.42
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	1.279	0.14	0.578	0.59	0.865	1.07	1.625	2.47
	SWT Probabilistic		2	1	0.61	0.02	0.0283	0.59	*	0.61	*	0.63
	Turkey Creek: Lower	OK620910-06-0010R	17	2	0.947	0.109	0.449	0.43	0.545	0.9	1.225	1.97
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	1.131	0.135	0.575	0.56	0.74	0.96	1.355	2.69
	Uncle John's Creek	OK620910-05-0030C	14	1	0.5093	0.0391	0.1463	0.26	0.415	0.52	0.585	0.76
	West Clay Creek	OK621010-01-0130R	20	4	0.8295	0.0711	0.3179	0.44	0.625	0.785	0.975	1.84
	Wildhorse Creek	OK621000-02-0040F	20	3	1.354	0.288	1.29	0.42	0.76	1.08	1.268	6.49
	Yellowstone Creek	OK621010-01-0270C	12	2	0.245	0.0235	0.0814	0.14	0.19	0.23	0.2875	0.43
Total N (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	0.8567	0.0989	0.4195	0.47	0.615	0.705	0.9475	2.21
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	1.093	0.146	0.621	0.33	0.555	0.95	1.705	2.34
	Bent Creek	OK720500-01-0070D	20	3	0.5825	0.0399	0.1783	0.32	0.455	0.55	0.695	1.02
	Bitter Creek	OK621100-00-0100G	19	3	1.011	0.164	0.714	0.28	0.65	0.75	1.15	2.85
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	1.036	0.117	0.482	0.47	0.735	0.88	1.23	2.47
	Bois d'Arc Creek	OK621000-03-0010C	19	3	1.094	0.12	0.522	0.74	0.79	0.99	1.1	2.98
	Buffalo Creek:	OK620920-05-0010G	20	3	0.805	0.113	0.507	0.3	0.418	0.62	1.03	1.89
	CGP Probabilistic		44	41	2.015	0.469	3.109	0.38	0.755	1.155	2.138	20.51
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	0.5584	0.0623	0.2715	0.27	0.36	0.55	0.64	1.42
	Clear Creek (Harper)	OK720500-02-0070G	19	3	0.8795	0.0837	0.3648	0.39	0.58	0.87	1.12	1.65
	Cooper Creek	OK620910-02-0040C	17	3	1.592	0.132	0.546	0.78	1.075	1.51	2.08	2.49
	Cottonwood Creek	OK620910-04-0010E	12	3	7.311	0.682	2.362	3.81	5.553	7	9.345	11.71
	Council Creek	OK620900-02-0050H	20	3	1.672	0.376	1.682	0.44	0.685	1.08	1.773	6.41
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	1.518	0.718	2.873	0.22	0.37	0.475	0.668	9.52
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	1.331	0.13	0.583	0.61	0.935	1.27	1.458	3.32
	CT Probabilistic		2	2	2.315	0.965	1.365	1.35	*	2.315	*	3.28
	Dead Indian Creek	OK620910-05-0080A	17	3	1.261	0.137	0.565	0.49	0.84	1.26	1.705	2.47
	Deep Creek	OK620910-02-0250C	20	3	1.667	0.126	0.563	0.71	1.275	1.77	2.045	3.05

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Deer Creek	OK621000-04-0010D	19	5	1.0342	0.0864	0.3768	0.35	0.82	0.99	1.31	1.86
	Doga Creek	OK621200-02-0020C	18	3	0.8683	0.0741	0.3143	0.23	0.65	0.89	1.09	1.47
	Driftwood Creek	OK621010-03-0030C	19	4	1.0653	0.0958	0.4176	0.51	0.75	0.97	1.49	1.83
	Duck Pond Creek	OK720500-02-0250F	20	3	0.595	0.0818	0.3657	0.3	0.3725	0.445	0.705	1.62
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	2.691	0.244	1.062	1.12	1.75	2.4	3.64	4.64
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	2.725	0.178	0.775	1.64	2.01	2.65	3.38	4.41
	Eucler Creek	OK620900-01-0290D	20	4	1.026	0.0744	0.3328	0.5	0.75	1.02	1.255	1.69
	FH Probabilistic		2	2	0.645	0.155	0.219	0.49	*	0.645	*	0.8
	Griever Creek	OK620920-01-0130G	17	2	0.562	0.112	0.462	0.23	0.355	0.44	0.615	2.26
	Indian Creek	OK620910-02-0310C	20	3	5.148	0.311	1.39	2.37	4.413	5.495	6.358	6.72
	Kingfisher Creek	OK620910-05-0010J	16	2	1.481	0.179	0.715	0.63	0.965	1.295	1.833	3.27
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	0.6492	0.0866	0.3001	0.28	0.3375	0.66	0.895	1.21
	Lagoon Creek	OK620900-01-0180J	20	3	0.829	0.088	0.3934	0.22	0.525	0.755	1.14	1.62
	Long Creek	OK620920-02-0080D	20	3	1.518	0.634	2.834	0.28	0.413	0.625	0.735	9.86
	Main Creek	OK620920-01-0180F	19	3	0.5242	0.0575	0.2507	0.2	0.3	0.46	0.68	1.11
	Medicine Lodge River	OK621010-03-0010D	18	5	0.815	0.13	0.553	0.27	0.403	0.57	1.145	1.94
	Otter Creek	OK620910-03-0040C	17	2	0.964	0.109	0.447	0.47	0.695	0.79	1.035	2.03
	Persimmon Creek	OK720500-01-0150G	19	2	0.7368	0.0744	0.3243	0.35	0.42	0.73	0.85	1.45
	Pond Creek	OK621000-05-0010D	19	5	2.241	0.172	0.748	1.32	1.78	2.08	2.56	4.56
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	1.476	0.134	0.535	0.9	1.09	1.295	1.69	2.86
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	1.3084	0.0756	0.3297	0.59	1.15	1.31	1.51	1.94
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	1.075	0.213	0.927	0.15	0.43	0.72	1.57	3.54
	Salt Creek (Payne)	OK620900-02-0020D	19	4	0.6921	0.0891	0.3884	0.29	0.37	0.63	0.82	1.5
	Salt Creek: Lower	OK621200-04-0010F	18	3	0.7367	0.088	0.3734	0.28	0.45	0.625	0.8725	1.56
	Salt Creek: Middle	OK621200-04-0010K	18	3	0.5083	0.0421	0.1788	0.19	0.3875	0.49	0.6325	0.88
	Sandy Creek	OK621010-02-0010D	16	4	0.921	0.151	0.604	0.38	0.508	0.785	1.08	2.87
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	6.584	0.508	2.096	3.72	4.57	6.84	7.895	10.97
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	1.381	0.133	0.549	0.73	1.015	1.19	1.665	2.57
	SWT Probabilistic		2	1	1.035	0.365	0.516	0.67	*	1.035	*	1.4
	Turkey Creek: Lower	OK620910-06-0010R	17	2	1.675	0.117	0.482	1.19	1.305	1.51	1.97	2.99
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	2.139	0.246	1.042	0.92	1.458	1.82	2.643	4.9
	Uncle John's Creek	OK620910-05-0030C	14	1	1.549	0.258	0.966	0.62	0.788	1.12	2.328	3.61
	West Clay Creek	OK621010-01-0130R	20	4	1.141	0.147	0.656	0.48	0.73	0.9	1.208	2.77
	Wildhorse Creek	OK621000-02-0040F	20	3	2.078	0.381	1.706	0.64	0.958	1.17	3.005	6.56
	Yellowstone Creek	OK621010-01-0270C	12	2	0.355	0.0652	0.226	0.18	0.2425	0.305	0.33	1.03
Available N (mg/)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	0.0744	0.0177	0.0752	0.04	0.04	0.04	0.06	0.29
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	0.1378	0.0431	0.1826	0.04	0.04	0.055	0.1425	0.68
	Bent Creek	OK720500-01-0070D	20	3	0.1855	0.0338	0.1514	0.04	0.05	0.12	0.3375	0.45
	Bitter Creek	OK621100-00-0100G	19	3	0.2368	0.0853	0.3716	0.04	0.04	0.11	0.36	1.64
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	0.0788	0.0252	0.1041	0.04	0.04	0.04	0.07	0.47
	Bois d'Arc Creek	OK621000-03-0010C	19	3	0.2268	0.0971	0.4233	0.04	0.04	0.06	0.2	1.83
	Buffalo Creek:	OK620920-05-0010G	20	3	0.058	0.0086	0.03847	0.04	0.04	0.04	0.06	0.2
	CGP Probabilistic		44	41	0.878	0.453	3.005	0.06	0.06	0.095	0.48	19.73
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	0.0732	0.0214	0.0931	0.04	0.04	0.04	0.06	0.44
	Clear Creek (Harper)	OK720500-02-0070G	19	3	0.5863	0.0863	0.3763	0.17	0.26	0.57	0.76	1.4
	Cooper Creek	OK620910-02-0040C	17	3	0.462	0.139	0.575	0.04	0.06	0.25	0.74	1.9
	Cottonwood Creek	OK620910-04-0010E	12	3	6.552	0.686	2.375	3.07	4.643	6.31	8.633	10.8
	Council Creek	OK620900-02-0050H	20	3	0.107	0.0263	0.1174	0.04	0.04	0.04	0.1375	0.44
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	0.1881	0.0991	0.3964	0.04	0.04	0.04	0.06	1.39
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	0.247	0.0515	0.2301	0.04	0.045	0.165	0.3975	0.72
	CT Probabilistic		2	2	0.145	0.015	0.0212	0.13	*	0.145	*	0.16
	Dead Indian Creek	OK620910-05-0080A	17	3	0.474	0.14	0.576	0.04	0.075	0.17	0.905	1.85
	Deep Creek	OK620910-02-0250C	20	3	0.968	0.147	0.656	0.1	0.33	0.985	1.43	2.58
	Deer Creek	OK621000-04-0010D	19	5	0.1047	0.0284	0.1236	0.04	0.04	0.04	0.06	0.39
	Doga Creek	OK621200-02-0020C	18	3	0.1011	0.0295	0.125	0.04	0.04	0.045	0.0725	0.48
	Driftwood Creek	OK621010-03-0030C	19	4	0.0747	0.0119	0.052	0.04	0.04	0.06	0.09	0.21
	Duck Pond Creek	OK720500-02-0250F	20	3	0.0805	0.0179	0.08	0.04	0.04	0.06	0.0975	0.4
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	2.139	0.259	1.128	0.57	1.18	1.89	3.17	3.99
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	2.085	0.191	0.835	1.05	1.34	1.91	2.83	4
	Eucler Creek	OK620900-01-0290D	20	4	0.1655	0.0448	0.2005	0.04	0.04	0.06	0.3125	0.58
	FH Probabilistic		2	2	0.06	0	0	0.06	*	0.06	*	0.06
	Griever Creek	OK620920-01-0130G	17	2	0.0906	0.0408	0.1681	0.04	0.04	0.04	0.06	0.74
	Indian Creek	OK620910-02-0310C	20	3	4.753	0.329	1.471	1.77	4.09	5.235	6.048	6.37
	Kingfisher Creek	OK620910-05-0010J	16	2	0.676	0.172	0.689	0.04	0.158	0.32	1.235	2.15
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	0.2642	0.0686	0.2377	0.04	0.06	0.15	0.495	0.64
	Lagoon Creek	OK620900-01-0180J	20	3	0.0925	0.0247	0.1104	0.04	0.04	0.04	0.06	0.38
	Long Creek	OK620920-02-0080D	20	3	0.422	0.227	1.014	0.04	0.04	0.04	0.06	3.96

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Main Creek	OK620920-01-0180F	19	3	0.2021	0.0375	0.1634	0.04	0.06	0.13	0.36	0.47
	Medicine Lodge River	OK621010-03-0010D	18	5	0.284	0.102	0.433	0.04	0.04	0.06	0.325	1.26
	Otter Creek	OK620910-03-0040C	17	2	0.0971	0.0272	0.1121	0.04	0.04	0.04	0.065	0.39
	Persimmon Creek	OK720500-01-0150G	19	2	0.2674	0.0493	0.2149	0.04	0.06	0.27	0.41	0.75
	Pond Creek	OK621000-05-0010D	19	5	1.081	0.155	0.674	0.11	0.54	1.15	1.4	2.69
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	0.2181	0.0858	0.3432	0.04	0.04	0.075	0.1975	1.37
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	0.1363	0.0295	0.1286	0.04	0.04	0.06	0.23	0.42
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	0.617	0.205	0.896	0.04	0.04	0.06	1	3.22
	Salt Creek (Payne)	OK620900-02-0020D	19	4	0.1042	0.0258	0.1126	0.04	0.04	0.06	0.1	0.43
	Salt Creek: Lower	OK621200-04-0010F	18	3	0.08	0.0164	0.0695	0.04	0.04	0.055	0.08	0.29
	Salt Creek: Middle	OK621200-04-0010K	18	3	0.055	0.00663	0.02813	0.04	0.04	0.04	0.06	0.15
	Sandy Creek	OK621010-02-0010D	16	4	0.0731	0.0158	0.063	0.04	0.04	0.05	0.0675	0.28
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	5.065	0.636	2.622	1.37	2.475	5.85	6.935	10.34
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	0.1871	0.0405	0.1671	0.04	0.04	0.17	0.32	0.56
	SWT Probabilistic		2	1	0.445	0.385	0.544	0.06	*	0.445	*	0.83
	Turkey Creek: Lower	OK620910-06-0010R	17	2	0.755	0.124	0.509	0.06	0.315	0.63	1.275	1.64
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	1.02	0.18	0.762	0.11	0.513	0.875	1.17	2.74
	Uncle John's Creek	OK620910-05-0030C	14	1	1.051	0.257	0.962	0.06	0.345	0.73	1.613	3.18
	West Clay Creek	OK621010-01-0130R	20	4	0.337	0.105	0.469	0.04	0.04	0.06	0.55	1.81
	Wildhorse Creek	OK621000-02-0040F	20	3	0.794	0.303	1.357	0.04	0.04	0.08	0.72	4.48
	Yellowstone Creek	OK621010-01-0270C	12	2	0.115	0.0556	0.1926	0.04	0.04	0.05	0.1	0.72
pH (SU)	Beaver Creek (Logan)	OK620900-03-0230C	19	1	8.233	0.121	0.527	6.47	8.13	8.31	8.55	8.76
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	7.627	0.106	0.449	6.62	7.278	7.625	7.965	8.33
	Bent Creek	OK720500-01-0070D	21	2	8.0562	0.0382	0.1749	7.64	7.945	8.06	8.155	8.48
	Bitter Creek	OK621100-00-0100G	19	3	7.6495	0.0623	0.2714	7.3	7.44	7.65	7.79	8.48
	Black Bear Creek: Upper	OK621200-03-0260B	18	1	8.002	0.121	0.513	6.71	7.625	8.15	8.368	8.63
	Bois d'Arc Creek	OK621000-03-0010C	19	3	7.71	0.0838	0.3653	6.88	7.42	7.81	7.95	8.39
	Buffalo Creek:	OK620920-05-0010G	21	2	8.0771	0.0757	0.3467	6.98	7.95	8.09	8.23	8.63
	CGP Probabilistic		85	0	8.0119	0.0546	0.503	7.09	7.69	7.88	8.325	9.97
	Clear Creek (Beaver)	OK720500-02-0300F	20	2	7.852	0.0632	0.2827	7.23	7.78	7.86	7.9875	8.62
	Clear Creek (Harper)	OK720500-02-0070G	20	2	7.9555	0.0619	0.2766	7.29	7.82	7.965	8.035	8.66
	Cooper Creek	OK620910-02-0040C	18	2	8.3689	0.0581	0.2465	8.06	8.18	8.34	8.4925	9.06
	Cottonwood Creek	OK620910-04-0010E	14	1	8.2071	0.0587	0.2198	7.85	8.0275	8.24	8.3475	8.57
	Council Creek	OK620900-02-0050H	21	2	7.7086	0.0818	0.3751	6.95	7.43	7.73	7.99	8.32
	Crooked Creek (Beaver)	OK620930-00-0100G	17	2	7.8041	0.0745	0.3071	7.47	7.515	7.67	8.06	8.38
	Crooked Creek (Grant)	OK621000-06-0010C	21	3	8.4429	0.0557	0.2552	7.82	8.33	8.41	8.64	8.93
	CT Probabilistic		4	0	7.778	0.272	0.545	7.16	7.248	7.79	8.295	8.37
	Dead Indian Creek	OK620910-05-0080A	18	2	8.0978	0.0785	0.3331	7.49	7.875	8.03	8.2725	8.94
	Deep Creek	OK620910-02-0250C	21	2	8.0943	0.0717	0.3284	7.53	7.875	8.07	8.29	8.72
	Deer Creek	OK621000-04-0010D	21	3	8.2314	0.0418	0.1917	7.85	8.1	8.24	8.34	8.58
	Doga Creek	OK621200-02-0020C	18	3	7.645	0.111	0.471	6.98	7.24	7.535	8.105	8.33
	Driftwood Creek	OK621010-03-0030C	20	3	8.2625	0.0464	0.2074	7.87	8.1	8.27	8.425	8.59
	Duck Pond Creek	OK720500-02-0250F	21	2	7.9024	0.0539	0.2469	7.38	7.775	7.88	8.055	8.42
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	8.1874	0.0338	0.1475	7.83	8.09	8.22	8.33	8.36
	Eagle Chief Creek: Upper	OK620920-04-0010G	20	4	7.9935	0.0352	0.1573	7.61	7.89	8.015	8.1175	8.25
	Euchee Creek	OK620900-01-0290D	21	3	7.961	0.113	0.516	7.08	7.51	7.96	8.31	9.29
	FH Probabilistic		4	0	7.5325	0.0886	0.1773	7.39	7.3975	7.48	7.72	7.78
	Griever Creek	OK620920-01-0130G	18	1	8.0589	0.0487	0.2067	7.7	7.8925	8.08	8.2075	8.55
	Indian Creek	OK620910-02-0310C	21	2	8.0519	0.0625	0.2864	7.36	7.9	8.08	8.255	8.52
	Kingfisher Creek	OK620910-05-0010J	17	1	8.1694	0.0516	0.2126	7.86	8.015	8.12	8.38	8.55
	Kiowa Creek: Harper Co.	OK720500-02-0130C	13	2	7.9169	0.0529	0.1908	7.49	7.785	7.94	8.07	8.15
	Lagoon Creek	OK620900-01-0180J	20	3	7.704	0.105	0.472	6.83	7.493	7.645	7.95	9.15
	Long Creek	OK620920-02-0080D	21	2	8.0481	0.0436	0.1996	7.52	7.965	8.07	8.12	8.61
	Main Creek	OK620920-01-0180F	20	2	7.86	0.0656	0.2935	7.03	7.795	7.875	7.995	8.5
	Medicine Lodge River	OK621010-03-0010D	20	3	8.3306	0.0677	0.3029	7.83	8.0525	8.425	8.5875	8.9
	Otter Creek	OK620910-03-0040C	18	1	8.342	0.116	0.49	6.73	8.145	8.465	8.66	8.87
	Persimmon Creek	OK720500-01-0150G	20	1	8.452	0.0421	0.1881	8	8.365	8.405	8.55	8.95
	Pond Creek	OK621000-05-0010D	20	4	8.183	0.0471	0.2105	7.82	7.985	8.15	8.37	8.52
	Red Rock Creek: Lower	OK621200-05-0010K	18	1	8.092	0.126	0.535	6.55	7.978	8.225	8.405	8.7
	Red Rock Creek: Upper	OK621200-05-0160G	20	1	8.129	0.102	0.455	6.55	7.963	8.295	8.36	8.61
	Salt Creek (Kingfisher)	OK620910-02-0100D	20	2	7.5885	0.0582	0.2603	7.12	7.435	7.52	7.8525	8.03
	Salt Creek (Payne)	OK620900-02-0020D	21	2	7.4995	0.068	0.3115	6.98	7.3	7.44	7.7	8.09
	Salt Creek: Lower	OK621200-04-0010F	19	2	7.7958	0.0757	0.3298	6.88	7.64	7.87	8.04	8.21
	Salt Creek: Middle	OK621200-04-0010K	18	3	7.7528	0.0818	0.3471	7.01	7.5525	7.775	8.0425	8.27
	Sandy Creek	OK621010-02-0010D	17	3	8.5641	0.0823	0.3393	7.61	8.4	8.66	8.81	8.96
	Skeleton Creek: Upper	OK620910-03-0010S	19	1	8.482	0.107	0.468	6.91	8.31	8.58	8.65	9.19
	Stillwater Creek: Upper	OK620900-04-0070T	18	2	7.759	0.11	0.465	6.98	7.475	7.755	8.138	8.62

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	SWT Probabilistic		2	1	7.83	0.75	1.061	7.08	*	7.83	*	8.58
	Turkey Creek: Lower	OK620910-06-0010R	18	1	8.4017	0.0437	0.1853	8.04	8.255	8.43	8.5325	8.72
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	19	2	8.5389	0.0526	0.2295	7.93	8.37	8.57	8.68	8.93
	Uncle John's Creek	OK620910-05-0030C	14	1	7.8436	0.0755	0.2824	7.2	7.67	7.895	8.0925	8.23
	West Clay Creek	OK621010-01-0130R	20	4	8.0425	0.0511	0.2283	7.67	7.88	8.04	8.1675	8.51
	Wildhorse Creek	OK621000-02-0040F	20	3	8.335	0.058	0.2596	7.86	8.1175	8.32	8.5375	8.86
	Yellowstone Creek	OK621010-01-0270C	13	1	8.0231	0.041	0.1477	7.71	7.92	8	8.145	8.25
OrthoP (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	0.02361	0.00359	0.01524	0.007	0.012	0.0215	0.03425	0.07
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	0.02033	0.00333	0.01412	0.005	0.0075	0.018	0.0295	0.055
	Bent Creek	OK720500-01-0070D	20	3	0.0836	0.016	0.0715	0.014	0.0275	0.055	0.121	0.25
	Bitter Creek	OK621100-00-0100G	19	3	0.0622	0.0129	0.0564	0.006	0.013	0.058	0.075	0.248
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	0.1761	0.0706	0.2911	0.022	0.0655	0.087	0.151	1.278
	Bois d'Arc Creek	OK621000-03-0010C	19	3	0.0723	0.0148	0.0647	0.005	0.015	0.048	0.122	0.191
	Buffalo Creek:	OK620920-05-0010G	20	3	0.0072	0.000872	0.003901	0.005	0.005	0.005	0.0085	0.018
	CGP Probabilistic		44	41	0.2499	0.0644	0.4269	0.005	0.0345	0.1185	0.2493	1.993
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	0.01068	0.0028	0.01221	0.005	0.005	0.006	0.01	0.058
	Clear Creek (Harper)	OK720500-02-0070G	19	3	0.00884	0.00102	0.00443	0.005	0.005	0.008	0.012	0.019
	Cooper Creek	OK620910-02-0040C	17	3	0.0474	0.0166	0.0686	0.005	0.008	0.022	0.049	0.273
	Cottonwood Creek	OK620910-04-0010E	12	3	1.627	0.175	0.606	0.826	1.088	1.498	2.013	2.768
	Council Creek	OK620900-02-0050H	20	3	0.0395	0.0085	0.03802	0.006	0.011	0.0195	0.06575	0.117
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	0.0115	0.00317	0.01268	0.005	0.005	0.005	0.014	0.048
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	0.0722	0.021	0.094	0.005	0.014	0.036	0.0693	0.329
	CT Probabilistic		2	2	0.0645	0.0425	0.0601	0.022	*	0.0645	*	0.107
	Dead Indian Creek	OK620910-05-0080A	17	3	0.0508	0.0116	0.0479	0.006	0.0125	0.022	0.101	0.137
	Deep Creek	OK620910-02-0250C	20	3	0.0602	0.0155	0.0695	0.009	0.0125	0.0325	0.0778	0.27
	Deer Creek	OK621000-04-0010D	19	5	0.0956	0.0167	0.073	0.006	0.03	0.078	0.162	0.268
	Doga Creek	OK621200-02-0020C	18	3	0.0356	0.0119	0.0507	0.005	0.0085	0.013	0.0443	0.219
	Driftwood Creek	OK621010-03-0030C	19	4	0.046	0.00674	0.02938	0.01	0.027	0.042	0.047	0.125
	Duck Pond Creek	OK720500-02-0250F	20	3	0.01195	0.00208	0.00931	0.005	0.005	0.008	0.01675	0.037
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	0.008211	0.000847	0.003691	0.005	0.005	0.007	0.011	0.017
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	0.01558	0.00682	0.02973	0.005	0.006	0.007	0.011	0.137
	Euchee Creek	OK620900-01-0290D	20	4	0.3558	0.0824	0.3683	0.052	0.1028	0.2245	0.4808	1.569
	FH Probabilistic		2	2	0.012	0.003	0.00424	0.009	*	0.012	*	0.015
	Griever Creek	OK620920-01-0130G	17	2	0.007294	0.000969	0.003996	0.005	0.005	0.005	0.0085	0.018
	Indian Creek	OK620910-02-0310C	20	3	0.029	0.0101	0.0451	0.005	0.006	0.0105	0.0248	0.184
	Kingfisher Creek	OK620910-05-0010J	16	2	0.0821	0.0319	0.1275	0.007	0.0188	0.037	0.072	0.479
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	0.01075	0.00366	0.01269	0.005	0.005	0.006	0.009	0.05
	Lagoon Creek	OK620900-01-0180J	20	3	0.0099	0.00256	0.01144	0.005	0.005	0.0055	0.01	0.056
	Long Creek	OK620920-02-0080D	20	3	0.01445	0.00548	0.02452	0.005	0.005	0.006	0.0085	0.106
	Main Creek	OK620920-01-0180F	19	3	0.01126	0.00248	0.01081	0.005	0.005	0.005	0.012	0.04
	Medicine Lodge River	OK621010-03-0010D	18	5	0.04711	0.00928	0.03939	0.007	0.01875	0.039	0.0565	0.167
	Otter Creek	OK620910-03-0040C	17	2	0.1004	0.0143	0.059	0.018	0.049	0.096	0.1455	0.195
	Persimmon Creek	OK720500-01-0150G	19	2	0.03263	0.00988	0.04305	0.005	0.007	0.016	0.037	0.153
	Pond Creek	OK621000-05-0010D	19	5	0.1689	0.0273	0.1191	0.049	0.075	0.127	0.231	0.522
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	0.1926	0.0272	0.1088	0.071	0.1033	0.169	0.2795	0.466
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	0.3114	0.0425	0.1854	0.059	0.177	0.242	0.417	0.839
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	0.0232	0.0111	0.0484	0.005	0.005	0.008	0.014	0.216
	Salt Creek (Payne)	OK620900-02-0020D	19	4	0.02016	0.00568	0.02474	0.005	0.005	0.009	0.031	0.102
	Salt Creek: Lower	OK621200-04-0010F	18	3	0.01606	0.00325	0.01379	0.005	0.00675	0.0105	0.02225	0.058
	Salt Creek: Middle	OK621200-04-0010K	18	3	0.00822	0.00108	0.00457	0.005	0.005	0.006	0.01	0.019
	Sandy Creek	OK621010-02-0010D	16	4	0.0639	0.0157	0.0627	0.006	0.016	0.052	0.0885	0.259
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	0.546	0.103	0.423	0.081	0.316	0.438	0.764	1.575
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	0.1531	0.032	0.132	0.043	0.0585	0.097	0.1945	0.488
	SWT Probabilistic		2	1	0.0065	0.0015	0.00212	0.005	*	0.0065	*	0.008
	Turkey Creek: Lower	OK620910-06-0010R	17	2	0.1249	0.026	0.1073	0.01	0.028	0.106	0.2005	0.351
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	0.1734	0.0302	0.1281	0.009	0.0615	0.1535	0.3105	0.381
	Uncle John's Creek	OK620910-05-0030C	14	1	0.1298	0.0282	0.1056	0.01	0.0373	0.1	0.221	0.325
	West Clay Creek	OK621010-01-0130R	20	4	0.0777	0.0187	0.0836	0.012	0.0383	0.0565	0.0805	0.373
	Wildhorse Creek	OK621000-02-0040F	20	3	0.1609	0.033	0.1474	0.01	0.0375	0.1195	0.265	0.556
	Yellowstone Creek	OK621010-01-0270C	12	2	0.00617	0.00117	0.00404	0.005	0.005	0.005	0.005	0.019
Total P (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	0.0873	0.0109	0.0464	0.044	0.059	0.072	0.0985	0.243
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	0.0984	0.0107	0.0455	0.035	0.0688	0.0925	0.1233	0.226
	Bent Creek	OK720500-01-0070D	20	3	0.1065	0.0151	0.0674	0.039	0.0543	0.0825	0.134	0.266
	Bitter Creek	OK621100-00-0100G	19	3	0.1182	0.0151	0.0656	0.027	0.077	0.104	0.143	0.329
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	0.2404	0.0686	0.2827	0.071	0.1075	0.156	0.2295	1.289
	Bois d'Arc Creek	OK621000-03-0010C	19	3	0.1384	0.0162	0.0705	0.054	0.08	0.113	0.215	0.257

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Buffalo Creek:	OK620920-05-0010G	20	3	0.0367	0.00637	0.02851	0.008	0.0175	0.0235	0.055	0.103
	CGP Probabilistic		44	41	0.3145	0.0636	0.4219	0.013	0.1085	0.202	0.319	2.087
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	0.02958	0.00543	0.02366	0.012	0.016	0.02	0.035	0.105
	Clear Creek (Harper)	OK720500-02-0070G	19	3	0.01953	0.00188	0.00821	0.007	0.013	0.018	0.029	0.032
	Cooper Creek	OK620910-02-0040C	17	3	0.1381	0.0243	0.1	0.024	0.063	0.099	0.2005	0.381
	Cottonwood Creek	OK620910-04-0010E	12	3	1.633	0.172	0.597	0.848	1.132	1.523	2.018	2.821
	Council Creek	OK620900-02-0050H	20	3	0.1637	0.0406	0.1815	0.027	0.043	0.0875	0.2178	0.739
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	0.0611	0.0273	0.1093	0.012	0.018	0.0195	0.0303	0.385
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	0.165	0.0216	0.0965	0.058	0.088	0.132	0.202	0.407
	CT Probabilistic		2	2	0.232	0.111	0.157	0.121	*	0.232	*	0.343
	Dead Indian Creek	OK620910-05-0080A	17	3	0.1071	0.0148	0.061	0.031	0.0605	0.08	0.1715	0.218
	Deep Creek	OK620910-02-0250C	20	3	0.1102	0.0186	0.0832	0.031	0.0488	0.089	0.1205	0.345
	Deer Creek	OK621000-04-0010D	19	5	0.1675	0.0186	0.081	0.039	0.103	0.16	0.215	0.363
	Doga Creek	OK621200-02-0020C	18	3	0.0849	0.0129	0.0549	0.032	0.0388	0.0765	0.1078	0.261
	Driftwood Creek	OK621010-03-0030C	19	4	0.1487	0.0175	0.0761	0.056	0.092	0.13	0.201	0.328
	Duck Pond Creek	OK720500-02-0250F	20	3	0.0497	0.0111	0.0498	0.015	0.0198	0.035	0.049	0.206
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	0.04116	0.00495	0.02156	0.021	0.025	0.037	0.051	0.111
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	0.0576	0.0106	0.0462	0.026	0.033	0.043	0.057	0.2
	Euchee Creek	OK620900-01-0290D	20	4	0.4229	0.0773	0.3456	0.105	0.1745	0.3215	0.5095	1.549
	FH Probabilistic		2	2	0.0675	0.0215	0.0304	0.046	*	0.0675	*	0.089
	Griever Creek	OK620920-01-0130G	17	2	0.02706	0.00557	0.02296	0.008	0.0135	0.021	0.032	0.105
	Indian Creek	OK620910-02-0310C	20	3	0.0488	0.0112	0.0501	0.011	0.0223	0.0335	0.0455	0.209
	Kingfisher Creek	OK620910-05-0010J	16	2	0.1356	0.0378	0.1512	0.024	0.0493	0.0905	0.1263	0.537
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	0.0295	0.00467	0.01617	0.016	0.02025	0.025	0.034	0.076
	Lagoon Creek	OK620900-01-0180J	20	3	0.04865	0.00693	0.031	0.011	0.02625	0.0395	0.07225	0.129
	Long Creek	OK620920-02-0080D	20	3	0.0752	0.0349	0.1561	0.012	0.0193	0.0335	0.036	0.66
	Main Creek	OK620920-01-0180F	19	3	0.02768	0.00438	0.01911	0.01	0.016	0.02	0.03	0.073
	Medicine Lodge River	OK621010-03-0010D	18	5	0.0769	0.0108	0.0458	0.034	0.0443	0.0635	0.0923	0.226
	Otter Creek	OK620910-03-0040C	17	2	0.1632	0.0172	0.071	0.062	0.102	0.168	0.1905	0.313
	Persimmon Creek	OK720500-01-0150G	19	2	0.0539	0.0102	0.0444	0.012	0.03	0.044	0.05	0.167
	Pond Creek	OK621000-05-0010D	19	5	0.2617	0.0285	0.1243	0.122	0.185	0.229	0.331	0.636
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	0.2918	0.0281	0.1124	0.145	0.2265	0.2575	0.3788	0.546
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	0.4033	0.0445	0.1941	0.134	0.281	0.331	0.523	0.925
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	0.0459	0.0141	0.0613	0.01	0.017	0.027	0.045	0.279
	Salt Creek (Payne)	OK620900-02-0020D	19	4	0.0588	0.0114	0.0497	0.005	0.027	0.037	0.088	0.182
	Salt Creek: Lower	OK621200-04-0010F	18	3	0.06511	0.0074	0.03141	0.023	0.0495	0.056	0.07325	0.157
	Salt Creek: Middle	OK621200-04-0010K	18	3	0.03961	0.00416	0.01764	0.021	0.028	0.033	0.0495	0.081
	Sandy Creek	OK621010-02-0010D	16	4	0.1344	0.0248	0.0992	0.039	0.0498	0.1015	0.2048	0.36
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	0.6689	0.0963	0.3972	0.22	0.4155	0.496	0.87	1.672
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	0.239	0.0389	0.1606	0.104	0.1215	0.15	0.2745	0.586
	SWT Probabilistic		2	1	0.02	0.004	0.00566	0.016	*	0.02	*	0.024
	Turkey Creek: Lower	OK620910-06-0010R	17	2	0.1994	0.0327	0.1347	0.047	0.0835	0.157	0.3295	0.435
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	0.2511	0.0376	0.1594	0.045	0.1203	0.2265	0.338	0.642
	Uncle John's Creek	OK620910-05-0030C	14	1	0.1462	0.0261	0.0978	0.043	0.066	0.109	0.234	0.327
	West Clay Creek	OK621010-01-0130R	20	4	0.15	0.0191	0.0853	0.067	0.0978	0.122	0.1495	0.391
	Wildhorse Creek	OK621000-02-0040F	20	3	0.2565	0.0419	0.1874	0.042	0.1273	0.2035	0.375	0.765
	Yellowstone Creek	OK621010-01-0270C	12	2	0.01208	0.00264	0.00915	0.006	0.00725	0.01	0.012	0.04
Sulfate (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	85.3	11.7	49.4	33.8	41.5	81.2	110.3	207.3
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	10.41	1.16	4.91	2.3	6.98	9.6	14.58	19.6
	Bent Creek	OK720500-01-0070D	20	3	1074	32.5	145.2	813.6	934.4	1109.8	1170.7	1418.9
	Bitter Creek	OK621100-00-0100G	19	3	1105.3	76.2	332.2	274.2	868	1058.6	1305.9	1715.8
	Black Bear Creek: Upper	OK621200-03-0260B	16	3	40.39	4.31	17.23	20.6	25.75	32.6	57.68	70.2
	Bois d'Arc Creek	OK621000-03-0010C	19	3	335.5	41.2	179.5	16.3	202.1	294.8	501.9	700.3
	Buffalo Creek:	OK620920-05-0010G	20	3	2013.5	80.8	361.3	1025.9	1865.5	2088.9	2220.1	2614.8
	CGP Probabilistic		44	41	489.8	89.5	593.6	2.1	113.6	285.5	614.6	2234.1
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	377.6	55.5	241.7	118	143.9	293.4	583.4	837.3
	Clear Creek (Harper)	OK720500-02-0070G	19	3	30.342	0.719	3.133	26.6	28.2	29	31.6	39
	Cooper Creek	OK620910-02-0040C	17	3	512.9	63	259.8	258.8	304.8	422	772.2	962.9
	Cottonwood Creek	OK620910-04-0010E	12	3	217.88	9.91	34.34	135.1	200.23	222.95	233.45	278.3
	Council Creek	OK620900-02-0050H	20	3	22.6	3.1	13.88	4.8	13.28	17.6	31.1	52.8
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	265.3	42.3	169.3	178.2	201.5	218.2	236	872
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	80.88	4.33	19.39	58.8	70.05	74	84.58	129.8
	CT Probabilistic		2	2	209	130	184	79	*	209	*	339
	Dead Indian Creek	OK620910-05-0080A	17	3	588.7	37.4	154.3	381.7	446.5	615.2	684.9	890.5
	Deep Creek	OK620910-02-0250C	20	3	553.5	74.7	334	161	226.5	510.4	859.9	1209.2
	Deer Creek	OK621000-04-0010D	19	5	149.9	14.4	62.9	31.9	114.8	155.2	186.4	253.8
	Doga Creek	OK621200-02-0020C	18	3	26.26	3.71	15.75	7.4	16.7	21.35	30.65	68.8

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Driftwood Creek	OK621010-03-0030C	19	4	675.7	35.2	153.5	474.7	533.6	702.8	802.7	905
	Duck Pond Creek	OK720500-02-0250F	20	3	48.14	1.68	7.49	33.4	42.75	49.6	55.15	61
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	318.2	16	69.9	224.2	248.9	307.9	375.5	442.5
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	712.3	72.5	315.9	240.1	446.1	699.3	912.5	1579.9
	Euchee Creek	OK620900-01-0290D	20	4	49.37	4.39	19.63	13.9	31.6	51.15	70.15	78.7
	FH Probabilistic		2	2	11.9	4.5	6.36	7.4	*	11.9	*	16.4
	Griever Creek	OK620920-01-0130G	17	2	1817.8	35.2	145.1	1529.9	1752.6	1828.4	1934.7	2052.4
	Indian Creek	OK620910-02-0310C	20	3	173.63	4.94	22.09	141.9	148.98	180.75	189.9	213.1
	Kingfisher Creek	OK620910-05-0010J	16	2	621	59.6	238.3	194.6	453.6	659.8	848.7	920.9
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	66.91	2.73	9.45	38.6	65.73	68.65	72.6	73.9
	Lagoon Creek	OK620900-01-0180J	20	3	47.71	7.63	34.12	7.9	22.9	41.6	67.2	153.4
	Long Creek	OK620920-02-0080D	20	3	1698.5	82.5	369.1	1153.9	1344.9	1742.2	1949.5	2450.1
	Main Creek	OK620920-01-0180F	19	3	1828.9	34.6	150.6	1575.3	1771.2	1793.4	1857.6	2242.1
	Medicine Lodge River	OK621010-03-0010D	18	5	232.4	10.7	45.3	159.1	195.7	226.2	272.8	300
	Otter Creek	OK620910-03-0040C	17	2	60.88	7.03	28.99	28.3	36.25	50.5	82.65	115.8
	Persimmon Creek	OK720500-01-0150G	19	2	200.22	5.5	23.98	138.4	185.1	197.2	220.3	244.5
	Pond Creek	OK621000-05-0010D	19	5	80.99	5.9	25.72	43.4	56.8	80.2	106.2	122
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	92.6	14.7	58.9	20.1	25.8	85	141.4	200.8
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	71.87	8.45	36.83	17.9	40.1	78.1	94.1	152.9
	Salt Creek (Kingfisher)	OK620910-02-0100D	18	4	1309.9	43.1	182.8	1040.7	1147.3	1339	1408.9	1644.7
	Salt Creek (Payne)	OK620900-02-0020D	19	4	20.78	1.78	7.75	10.6	14.6	18.2	25.6	39.4
	Salt Creek: Lower	OK621200-04-0010F	18	3	18.8	1.17	4.97	10.8	15.83	18.75	20.48	34.8
	Salt Creek: Middle	OK621200-04-0010K	18	3	21.85	1.77	7.53	10.6	17.15	19.35	25.05	40.2
	Sandy Creek	OK621010-02-0010D	16	4	67.78	2.77	11.07	52.2	58.3	65.5	75	90.8
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	230.6	11.3	46.8	152	197.1	227.2	264	323.2
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	60.2	16	65.8	8.5	22	28.6	84.5	235
	SWT Probabilistic		2	1	178	162	230	15	*	178	*	340
	Turkey Creek: Lower	OK620910-06-0010R	17	2	115.94	5.03	20.76	66.7	101.6	116.3	133.7	141.8
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	143.2	16.1	68.2	96	112.6	124.3	143.1	400.7
	Uncle John's Creek	OK620910-05-0030C	14	1	336.6	27.7	103.7	202.1	249.1	306	440.9	493
	West Clay Creek	OK621010-01-0130R	20	4	1459.3	71	317.7	570	1329.7	1512	1609.1	1895.2
	Wildhorse Creek	OK621000-02-0040F	20	3	221.8	21.9	97.9	86.8	120	203.1	323.6	364.8
	Yellowstone Creek	OK621010-01-0270C	12	2	2001.3	52.6	182.3	1765.2	1865.4	1942.4	2143.6	2394.5
Water Temp (°C)	Beaver Creek (Logan)	OK620900-03-0230C	19	1	15.97	2.15	9.35	4.2	7.3	13	25.3	32.7
	Beaver Creek (Osage)	OK621210-00-0050L	19	2	15.01	2.01	8.76	2.7	6.4	12.3	22.7	28.4
	Bent Creek	OK720500-01-0070D	21	2	14.5	1.69	7.75	0	8.2	14.7	22.2	25.1
	Bitter Creek	OK621100-00-0100G	20	2	13.78	2.07	9.24	2	4.93	12.05	22.05	27.8
	Black Bear Creek: Upper	OK621200-03-0260B	18	1	16.08	2.12	8.99	3.5	7.43	15.15	24.4	30.7
	Bois d'Arc Creek	OK621000-03-0010C	20	2	14.56	2.02	9.02	3.1	6.05	13.8	22.45	28.6
	Buffalo Creek:	OK620920-05-0010G	21	2	18.67	1.93	8.86	1	11.15	20.4	26.85	31.8
	CGP Probabilistic		83	2	25.154	0.378	3.44	14	22.8	25.2	27.2	33.9
	Clear Creek (Beaver)	OK720500-02-0300F	20	2	14.6	1.85	8.26	0.7	7.68	15.4	22.33	26.9
	Clear Creek (Harper)	OK720500-02-0070G	21	1	14.8	1.38	6.32	4.4	8.55	16.3	21.25	22.6
	Cooper Creek	OK620910-02-0040C	18	2	14.27	2.11	8.96	1.7	5.58	13.55	24.05	26.3
	Cottonwood Creek	OK620910-04-0010E	14	1	16.31	2.49	9.32	4.4	8	12.95	25.65	30
	Council Creek	OK620900-02-0050H	21	2	15.27	1.85	8.48	3.4	7	17.6	23.55	27.5
	Crooked Creek (Beaver)	OK620930-00-0100G	17	2	14.58	2.2	9.07	-0.2	5.6	18	22.4	25.9
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	16.29	1.87	8.37	3.8	8.18	14.85	24.58	31.2
	CT Probabilistic		4	0	24.75	1.34	2.68	22	22.25	24.7	27.3	27.6
	Dead Indian Creek	OK620910-05-0080A	18	2	13.38	2.21	9.39	2.5	5.25	9.95	23.63	26.6
	Deep Creek	OK620910-02-0250C	21	2	14.35	2.05	9.37	0.2	4.95	14.1	23.65	26.6
	Deer Creek	OK621000-04-0010D	21	3	15.32	1.83	8.37	2.1	8.2	15.1	23.95	27.9
	Doga Creek	OK621200-02-0020C	19	2	17.53	2.22	9.67	2.3	7.8	16.7	27.3	29.4
	Driftwood Creek	OK621010-03-0030C	20	3	17.16	1.81	8.09	3.7	11.03	16.95	24.1	28.8
	Duck Pond Creek	OK720500-02-0250F	21	2	13.96	1.65	7.56	2.4	6.55	14.5	20.95	25.4
	Eagle Chief Creek: Lower	OK620920-04-0010C	20	2	14.67	1.92	8.61	2.1	6.33	14.15	22.75	27
	Eagle Chief Creek: Upper	OK620920-04-0010G	20	4	16.62	1.79	8	2.8	11.48	17.25	23.03	30.3
	Euchee Creek	OK620900-01-0290D	21	3	16.68	1.98	9.07	4.3	7.5	17.4	25.25	31.8
	FH Probabilistic		4	0	26.93	1.17	2.34	24.2	24.68	26.9	29.2	29.7
	Griever Creek	OK620920-01-0130G	18	1	13.37	1.99	8.44	-0.1	6.6	13.75	22.13	24.6
	Indian Creek	OK620910-02-0310C	21	2	14.4	1.88	8.6	3.6	5	14.1	23.1	27.1
	Kingfisher Creek	OK620910-05-0010J	17	1	14.04	2.26	9.31	3.2	6.1	10.4	24.25	28.1
	Kiowa Creek: Harper Co.	OK720500-02-0130C	13	2	13.29	2.34	8.44	0	5	14.9	21.55	22.5
	Lagoon Creek	OK620900-01-0180J	21	2	17.45	1.82	8.32	6.9	9.7	18.3	24.85	31.4
	Long Creek	OK620920-02-0080D	21	2	18.72	2.15	9.86	0.3	10.25	19.4	26.9	33.9
	Main Creek	OK620920-01-0180F	20	2	13.95	1.86	8.3	-0.1	8.28	13.7	22	24.2
	Medicine Lodge River	OK621010-03-0010D	20	3	19.58	1.7	7.62	2.5	13.7	20.85	24.7	33.2

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Otter Creek	OK620910-03-0040C	18	1	15.48	2.23	9.48	4.5	6.65	13.65	25.9	31.6
	Persimmon Creek	OK720500-01-0150G	20	1	17.02	1.96	8.76	0	11.55	18	24.05	29.4
	Pond Creek	OK621000-05-0010D	20	4	16.75	1.64	7.32	4.9	10.93	15.05	24.1	29.5
	Red Rock Creek: Lower	OK621200-05-0010K	18	1	14.49	2.09	8.85	3.4	5.28	14.4	21.93	28.3
	Red Rock Creek: Upper	OK621200-05-0160G	20	1	14.37	1.98	8.86	2.9	5.88	14.6	22.63	27.6
	Salt Creek (Kingfisher)	OK620910-02-0100D	20	2	12.06	2.02	9.03	-1.1	4.03	12.5	19.33	25.7
	Salt Creek (Payne)	OK620900-02-0020D	21	2	15.62	1.73	7.91	3.6	8.35	17.8	22.8	26.8
	Salt Creek: Lower	OK621200-04-0010F	19	2	16.03	2.14	9.32	3	8.4	14.1	26.4	29.8
	Salt Creek: Middle	OK621200-04-0010K	19	2	15.73	2.01	8.78	4.5	7.7	13.1	24.4	28.7
	Sandy Creek	OK621010-02-0010D	17	3	19.86	1.97	8.13	4	15.1	20.8	27	31.7
	Skeleton Creek: Upper	OK620910-03-0010S	19	1	16.01	2.09	9.11	3.9	7.2	12.3	25	31.3
	Stillwater Creek: Upper	OK620900-04-0070T	18	2	16.33	2.06	8.74	5.6	6.93	18.2	24.33	31.3
	SWT Probabilistic		3	0	23.97	1.91	3.3	20.6	20.6	24.1	27.2	27.2
	Turkey Creek: Lower	OK620910-06-0010R	18	1	13.71	2.41	10.24	1.2	4.88	9.85	24.38	28.6
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	19	2	17.08	2.3	10	3.8	8.4	14.5	25.63	31.7
	Uncle John's Creek	OK620910-05-0030C	14	1	10.84	2.48	9.26	0.1	3.08	6.9	21.1	25.2
	West Clay Creek	OK621010-01-0130R	21	3	20.18	1.68	7.69	5.7	14.6	21	26.85	32.6
	Wildhorse Creek	OK621000-02-0040F	19	4	15.28	1.92	8.36	0.4	7.1	16.1	23.1	26.3
	Yellowstone Creek	OK621010-01-0270C	13	1	18.65	2.49	8.99	5.2	11.1	19.6	24.7	35.6
TDS (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	593.1	55.1	233.7	304	423	534	732.5	1100
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	238.7	10.5	44.6	179	205.3	231	267.5	320
	Bent Creek	OK720500-01-0070D	20	3	1724.7	39.9	178.4	1410	1600.8	1720.5	1900	2000
	Bitter Creek	OK621100-00-0100G	19	3	2502	124	543	1140	2100	2600	3000	3211
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	1453	157	646	431	1052	1559	1653	3194
	Bois d'Arc Creek	OK621000-03-0010C	19	3	976.6	76	331.4	270	742	1071	1291	1400
	Buffalo Creek:	OK620920-05-0010G	20	3	3438	183	820	1910	3095	3450	3748	5380
	CGP Probabilistic		44	41	2225	594	3941	337	683	1027	2259	24980
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	1220.1	69.3	302.2	840	925	1210	1487	1683
	Clear Creek (Harper)	OK720500-02-0070G	19	3	390.3	19.2	83.7	57	390	410	419	450
	Cooper Creek	OK620910-02-0040C	17	3	1679.8	96.6	398.1	1095	1294	1679	2050	2300
	Cottonwood Creek	OK620910-04-0010E	12	3	776.3	42	145.3	485	691.8	801.5	871.3	1033
	Council Creek	OK620900-02-0050H	20	3	406.4	42.7	190.9	25	280	447.5	567.5	700
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	3513	520	2080	2560	2700	2784	2900	9960
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	605	21	93.9	380	552	607	657.5	760
	CT Probabilistic		2	2	2068	1412	1997	656	*	2068	*	3480
	Dead Indian Creek	OK620910-05-0080A	17	3	1315.5	70.2	289.6	714	1083	1370	1550	1720
	Deep Creek	OK620910-02-0250C	20	3	1150	108	483	514	684	1106	1575	1946
	Deer Creek	OK621000-04-0010D	19	5	1142	107	466	380	916	1111	1400	2200
	Doga Creek	OK621200-02-0020C	18	3	317.9	24.9	105.5	166	244.8	322	355.8	568
	Driftwood Creek	OK621010-03-0030C	19	4	1496.9	59	257.3	1100	1300	1533	1700	1930
	Duck Pond Creek	OK720500-02-0250F	20	3	653.65	7.5	33.53	586	632.25	660	677.5	710
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	810.5	26.7	116.2	628	725	800	880	1000
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	1395.1	91	396.6	596	996	1348	1700	2100
	Euchee Creek	OK620900-01-0290D	20	4	322.1	22.2	99.1	148	253.3	311	407.5	497
	FH Probabilistic		2	2	230.5	8.5	12.02	222	*	230.5	*	239
	Griever Creek	OK620920-01-0130G	17	2	3185.1	63.1	260.1	2690	3000	3191	3350	3700
	Indian Creek	OK620910-02-0310C	20	3	763.8	15.5	69.4	605	719.8	762	825	876
	Kingfisher Creek	OK620910-05-0010J	16	2	1480	109	435	683	1141	1522	1900	2000
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	521.6	12.6	43.8	407	506.3	535	546.8	576
	Lagoon Creek	OK620900-01-0180J	20	3	532.9	68.9	307.9	178	288.8	398	763.3	1216
	Long Creek	OK620920-02-0080D	20	3	2935	167	747	1813	2433	2900	3396	4680
	Main Creek	OK620920-01-0180F	19	3	3189.4	43	187.4	2782	3100	3160	3269	3774
	Medicine Lodge River	OK621010-03-0010D	18	5	717.2	39.9	169.4	528	581.8	630	867.8	1067
	Otter Creek	OK620910-03-0040C	17	2	489.5	37	152.4	223	353.5	470	615	760
	Persimmon Creek	OK720500-01-0150G	19	2	624.7	12.2	53.4	529	577	630	663	745
	Pond Creek	OK621000-05-0010D	19	5	664.6	33	143.8	420	520	650	756	906
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	666.6	74.9	299.5	286	378.5	665.5	850	1300
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	593.4	58	252.8	10	420	580	840	926
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	22132	1459	6361	10840	17000	21000	26640	33150
	Salt Creek (Payne)	OK620900-02-0020D	19	4	379.7	23.6	102.7	40	340	390	442	537
	Salt Creek: Lower	OK621200-04-0010F	18	3	316.2	15.5	65.9	220	255.3	317.5	363.3	427
	Salt Creek: Middle	OK621200-04-0010K	18	3	292.5	14.2	60.1	180	249.3	299	330	436
	Sandy Creek	OK621010-02-0010D	16	4	463.3	18.9	75.8	380	408.3	437.5	536.5	640
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	1060.3	35.2	145	822	978.5	1020	1176	1353
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	428.1	40.7	168	222	285	350	603.5	710
	SWT Probabilistic		2	1	1010	761	1076	249	*	1010	*	1770
	Turkey Creek: Lower	OK620910-06-0010R	17	2	755.9	26.7	110.3	510	675.5	790	840.5	924

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	1066.7	89.9	381.3	790	866.8	949	1125	2452
	Uncle John's Creek	OK620910-05-0030C	14	1	865.2	38.6	144.4	636	772.5	815	1025.5	1098
	West Clay Creek	OK621010-01-0130R	20	4	1461.0	996	4455	1328	13210	16050	16958	19040
	Wildhorse Creek	OK621000-02-0040F	20	3	1057.9	42.5	190.2	711	951.8	1043.5	1200	1400
	Yellowstone Creek	OK621010-01-0270C	12	2	2922.3	36.7	127.3	2700	2846	2938	3014.3	3100
TSS (mg/L)	Beaver Creek (Logan)	OK620900-03-0230C	18	2	20.39	7.13	30.26	10	10	10	19.25	140
	Beaver Creek (Osage)	OK621210-00-0050L	18	3	24.06	4.85	20.6	10	10	17	32.25	94
	Bent Creek	OK720500-01-0070D	20	3	10	0	0	10	10	10	10	10
	Bitter Creek	OK621100-00-0100G	19	3	60.1	42.4	184.6	10	10	10	29	820
	Black Bear Creek: Upper	OK621200-03-0260B	17	2	18.65	3.21	13.23	10	10	10	25.5	47
	Bois d'Arc Creek	OK621000-03-0010C	19	3	39.7	11.6	50.8	10	10	25	43	231
	Buffalo Creek:	OK620920-05-0010G	20	3	12.6	1.77	7.9	10	10	10	10	44
	CGP Probabilistic		44	41	28.66	5.36	35.59	10	10	10	31.5	176
	Clear Creek (Beaver)	OK720500-02-0300F	19	3	12	1.95	8.48	10	10	10	10	47
	Clear Creek (Harper)	OK720500-02-0070G	19	3	10.053	0.0526	0.229	10	10	10	10	11
	Cooper Creek	OK620910-02-0040C	17	3	15.47	3.31	13.64	10	10	10	13	64
	Cottonwood Creek	OK620910-04-0010E	12	3	35.83	7.96	27.57	10	10.25	26.5	57.25	85
	Council Creek	OK620900-02-0050H	20	3	32.45	9.3	41.57	10	10	10	47	170
	Crooked Creek (Beaver)	OK620930-00-0100G	16	3	16.69	4.81	19.24	10	10	10	10	80
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	17.25	2.19	9.78	10	10	14.5	21.75	50
	CT Probabilistic		2	2	16	6	8.49	10	*	16	*	22
	Dead Indian Creek	OK620910-05-0080A	17	3	17.18	3.61	14.9	10	10	10	15.5	56
	Deep Creek	OK620910-02-0250C	20	3	34.7	5.63	25.17	10	15	27.5	55.75	98
	Deer Creek	OK621000-04-0010D	19	5	33.68	5	21.78	10	18	32	39	87
	Doga Creek	OK621200-02-0020C	18	3	18.56	3.85	16.32	10	10	10	25	68
	Driftwood Creek	OK621010-03-0030C	19	4	88.6	32.2	140.5	10	31	49	81	635
	Duck Pond Creek	OK720500-02-0250F	20	3	14.55	2.98	13.34	10	10	10	10	66
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	12.632	0.995	4.336	10	10	10	16	24
	Eagle Chief Creek: Upper	OK620920-04-0010G	19	5	15.32	2.68	11.69	10	10	10	14	52
	Euclaw Creek	OK620900-01-0290D	20	4	15.95	1.94	8.68	10	10	12	20.25	44
	FH Probabilistic		2	2	24	14	19.8	10	*	24	*	38
	Griener Creek	OK620920-01-0130G	17	2	10.882	0.506	2.088	10	10	10	10	17
	Indian Creek	OK620910-02-0310C	20	3	11.25	0.867	3.878	10	10	10	10	24
	Kingfisher Creek	OK620910-05-0010J	16	2	18.31	2.23	8.9	10	10	17	25	35
	Kiowa Creek: Harper Co.	OK720500-02-0130C	12	3	11.67	1.2	4.14	10	10	10	10.75	24
	Lagoon Creek	OK620900-01-0180J	20	3	13.55	1.51	6.75	10	10	10	16.25	33
	Long Creek	OK620920-02-0080D	20	3	23.05	7.14	31.94	10	10	10	16.75	140
	Main Creek	OK620920-01-0180F	19	3	19.42	4.08	17.79	10	10	10	19	73
	Medicine Lodge River	OK621010-03-0010D	18	5	17.22	3.3	14	10	10	10	20.25	64
	Otter Creek	OK620910-03-0040C	17	2	13.24	1.42	5.84	10	10	10	14.5	27
	Persimmon Creek	OK720500-01-0150G	19	2	13.68	1.16	5.08	10	10	11	17	25
	Pond Creek	OK621000-05-0010D	19	5	28.37	2.68	11.68	10	16	29	36	46
	Red Rock Creek: Lower	OK621200-05-0010K	16	3	33.56	4.39	17.55	10	18.5	32.5	48.5	66
	Red Rock Creek: Upper	OK621200-05-0160G	19	2	36.21	6.27	27.31	10	10	31	55	108
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	115.9	38.7	168.9	10	10	44	180	625
	Salt Creek (Payne)	OK620900-02-0020D	19	4	22.21	9.16	39.94	10	10	10	10	180
	Salt Creek: Lower	OK621200-04-0010F	18	3	15.33	2.16	9.18	10	10	10	19.75	37
	Salt Creek: Middle	OK621200-04-0010K	18	3	18.5	5.84	24.78	10	10	10	17.75	116
	Sandy Creek	OK621010-02-0010D	16	4	21.25	5.62	22.46	10	10	10	25.75	74
	Skeleton Creek: Upper	OK620910-03-0010S	17	3	56.6	11.4	46.8	10	21.5	43	83	150
	Stillwater Creek: Upper	OK620900-04-0070T	17	3	22.65	4.19	17.28	10	10	20	28	65
	SWT Probabilistic		2	1	10	0	0	10	*	10	*	10
	Turkey Creek: Lower	OK620910-06-0010R	17	2	24.06	4.96	20.46	10	10	10	35.5	80
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	18	3	20.06	3.93	16.65	10	10	10	25.5	63
	Uncle John's Creek	OK620910-05-0030C	14	1	10.214	0.214	0.802	10	10	10	10	13
	West Clay Creek	OK621010-01-0130R	20	4	49.5	13.6	61	10	10	26.5	62.3	267
	Wildhorse Creek	OK621000-02-0040F	20	3	25.9	8.58	38.37	10	10	11	23.5	173
	Yellowstone Creek	OK621010-01-0270C	12	2	11.33	1.33	4.62	10	10	10	10	26
Turbidity (NTU)	Beaver Creek (Logan)	OK620900-03-0230C	19	1	36.85	8.08	35.23	10.8	15.4	26.6	44.6	161
	Beaver Creek (Osage)	OK621210-00-0050L	20	1	34.16	5.09	22.78	6.43	15.5	29.85	46.75	105
	Bent Creek	OK720500-01-0070D	22	1	2.419	0.188	0.883	1.05	1.708	2.4	3.073	4.18
	Bitter Creek	OK621100-00-0100G	21	1	21.14	5.06	23.18	2.46	6.85	15.1	23.4	104
	Black Bear Creek: Upper	OK621200-03-0260B	18	1	28.33	5.78	24.54	6.01	11.57	17.8	37.18	85.6
	Bois d'Arc Creek	OK621000-03-0010C	21	1	38.84	7.67	35.15	5.6	11.8	28.6	56.9	151
	Buffalo Creek:	OK620920-05-0010G	22	1	13.18	8.58	40.24	0.69	1.4	3.86	6.43	192
	CGP Probabilistic		84	1	29.92	6.17	56.51	1.47	4.71	9.48	27.88	380

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Clear Creek (Beaver)	OK720500-02-0300F	21	1	5.78	2.12	9.72	1.14	1.96	2.66	4.62	46.5
	Clear Creek (Harper)	OK720500-02-0070G	21	1	16.1	12.6	57.5	1	2.1	2.7	5	267
	Cooper Creek	OK620910-02-0040C	18	2	17.76	4.31	18.28	2.92	7.46	15.5	20.7	85.8
	Cottonwood Creek	OK620910-04-0010E	14	1	42.85	9.15	34.24	11	14.5	31.85	65.28	133
	Council Creek	OK620900-02-0050H	22	1	69.9	26.3	123.5	1.8	6.3	24.7	75.3	542
	Crooked Creek (Beaver)	OK620930-00-0100G	18	1	4.35	2.05	8.71	0.52	1.19	1.63	1.92	33.9
	Crooked Creek (Grant)	OK621000-06-0010C	20	4	16.56	2.07	9.26	4.75	7.53	16.55	24.58	36.6
	CT Probabilistic		4	0	25.63	9.67	19.34	4.52	8.62	23.4	44.88	51.2
	Dead Indian Creek	OK620910-05-0080A	18	2	29.72	8.25	35.02	3.46	9.83	17.2	33.63	147
	Deep Creek	OK620910-02-0250C	21	2	70.1	12.6	57.7	20	25.9	56.9	73.5	223
	Deer Creek	OK621000-04-0010D	19	5	39.51	8.16	35.56	10.5	14.7	30.8	43.3	135
	Doga Creek	OK621200-02-0020C	20	1	17.74	3.07	13.75	3.49	7.06	11.85	27.13	51.2
	Driftwood Creek	OK621010-03-0030C	20	3	64.3	9.59	42.89	7.56	31.65	63.25	78.53	165
	Duck Pond Creek	OK720500-02-0250F	22	1	6.825	0.838	3.932	2.62	3.66	5.775	8.345	16
	Eagle Chief Creek: Lower	OK620920-04-0010C	20	2	9.69	1.14	5.1	3.58	5.1	8.08	14.93	20
	Eagle Chief Creek: Upper	OK620920-04-0010G	20	4	27.56	9.26	41.39	3.8	6.87	9.77	22.6	162
	Euchee Creek	OK620900-01-0290D	23	1	37.03	6.94	33.3	9.15	18	27.7	48.4	169
	FH Probabilistic		4	0	18.98	5.28	10.55	6.01	8.36	19.9	28.68	30.1
	Griever Creek	OK620920-01-0130G	19	0	8.4	1.36	5.92	1.93	4.22	7.49	11.4	26.1
	Indian Creek	OK620910-02-0310C	21	2	6.29	1.42	6.53	1.46	2.76	4.42	6.52	29
	Kingfisher Creek	OK620910-05-0010J	17	1	34.43	7.56	31.16	5.37	13.65	28.9	41.8	136
	Kiowa Creek: Harper Co.	OK720500-02-0130C	14	1	7.19	1.66	6.21	2.23	2.71	5.87	7.88	23.8
	Lagoon Creek	OK620900-01-0180J	22	1	16.32	3.29	15.43	0.81	4.39	9.8	25.45	59.2
	Long Creek	OK620920-02-0080D	22	1	24.5	12.7	59.6	1.4	4.6	9.1	13.9	285
	Main Creek	OK620920-01-0180F	21	1	15.89	3.66	16.78	1.63	4.7	8.96	22.4	58.8
	Medicine Lodge River	OK621010-03-0010D	20	3	11.63	1.99	8.9	3	5.54	7.96	16.53	33.2
	Otter Creek	OK620910-03-0040C	18	1	25.98	6.18	26.23	7.72	15.8	21	26.08	127
	Persimmon Creek	OK720500-01-0150G	21	0	6.29	0.908	4.159	0.74	3.965	5.9	8.59	19.2
	Pond Creek	OK621000-05-0010D	18	6	50.5	12.7	54.1	6.8	26.3	39.9	49.7	260
	Red Rock Creek: Lower	OK621200-05-0010K	18	1	88.2	20.3	86.2	20.5	44.4	52.9	100.2	340
	Red Rock Creek: Upper	OK621200-05-0160G	20	1	81.8	13.5	60.2	7.1	31.1	73.1	104	242
	Salt Creek (Kingfisher)	OK620910-02-0100D	20	2	38.4	30.4	136	1.7	2.6	3.7	7.8	612
	Salt Creek (Payne)	OK620900-02-0020D	22	1	19.23	7.47	35.02	2.69	3.44	8.6	20.3	168
	Salt Creek: Lower	OK621200-04-0010F	20	1	16.61	2.78	12.44	4.27	6.27	13.15	21.13	44.9
	Salt Creek: Middle	OK621200-04-0010K	20	1	12.58	1.67	7.46	3.97	6.93	10.53	19.53	27.8
	Sandy Creek	OK621010-02-0010D	17	3	18.02	5.47	22.54	2.25	4.71	10.1	23.9	94.5
	Skeleton Creek: Upper	OK620910-03-0010S	18	2	57.68	7.92	33.59	15.4	35.5	53.8	71.05	150
	Stillwater Creek: Upper	OK620900-04-0070T	18	2	39.45	7.1	30.11	7.35	15.88	32.1	66.03	123
	SWT Probabilistic		3	0	9.62	7.91	13.7	0.73	0.73	2.74	25.4	25.4
	Turkey Creek: Lower	OK620910-06-0010R	18	1	23.58	4.77	20.26	3.81	5.21	16.2	39.45	64.7
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	19	2	15.44	2.8	12.22	2.85	5.84	12.4	26.9	46
	Uncle John's Creek	OK620910-05-0030C	14	1	7.01	1.09	4.06	2.23	3.77	5.16	11.05	14.9
	West Clay Creek	OK621010-01-0130R	21	3	6.951	0.847	3.882	3.15	3.98	6.13	8.535	18.3
	Wildhorse Creek	OK621000-02-0040F	19	4	28.33	7.82	34.08	5.25	10.3	20.9	31.7	160
	Yellowstone Creek	OK621010-01-0270C	13	1	5.73	2.87	10.36	0.97	1.19	2.95	4.18	39.6
Flow	Beaver Creek (Logan)	OK620900-03-0230C	17	3	0.841	0.352	1.453	0	0	0.3	0.776	5.29
	Beaver Creek (Osage)	OK621210-00-0050L	19	2	1.64	0.799	3.483	0	0	0	2.07	14.251
	Bent Creek	OK720500-01-0070D	21	2	3.246	0.504	2.309	0.033	1.311	3.044	4.602	8.245
	Bitter Creek	OK621100-00-0100G	19	3	3.474	0.677	2.951	0	0.633	3.686	4.763	12.161
	Black Bear Creek: Upper	OK621200-03-0260B	16	3	3.88	2.51	10.03	0	0.03	0.45	2.66	40.14
	Bois d'Arc Creek	OK621000-03-0010C	20	2	3.71	1.24	5.53	0	0.06	2.6	5.26	25.04
	Buffalo Creek:	OK620920-05-0010G	17	6	0.484	0.27	1.113	0	0	0.1	0.2	4.024
	CGP Probabilistic		76	9	11	2.42	21.08	0	0	0.44	7.81	88.47
	Clear Creek (Beaver)	OK720500-02-0300F	15	7	0.42	0.371	1.438	0	0	0	0.1	5.604
	Clear Creek (Harper)	OK720500-02-0070G	19	3	4.052	0.625	2.724	0.719	1.775	3.774	5.698	9.442
	Cooper Creek	OK620910-02-0040C	17	3	1.286	0.31	1.278	0	0.309	0.702	2.022	4.442
	Cottonwood Creek	OK620910-04-0010E	10	5	39.91	8.62	27.27	17.73	21.43	29.55	55.09	98.19
	Council Creek	OK620900-02-0050H	20	3	0.441	0.342	1.529	0	0	0	0.1	6.838
	Crooked Creek (Beaver)	OK620930-00-0100G	14	5	0.0648	0.0198	0.0741	0	0	0.0535	0.1	0.2
	Crooked Creek (Grant)	OK621000-06-0010C	18	6	0.861	0.269	1.14	0	0.045	0.514	1.085	4.35
	CT Probabilistic		4	0	105.9	80.1	160.1	0	0	42.6	275.1	338.5
	Dead Indian Creek	OK620910-05-0080A	15	5	2.299	0.633	2.453	0	0.1	1.544	3.921	7.237
	Deep Creek	OK620910-02-0250C	20	3	1.274	0.214	0.958	0	0.706	1.228	1.635	4.366
	Deer Creek	OK621000-04-0010D	16	8	1.406	0.401	1.603	0.025	0.187	0.984	1.768	5.635
	Doga Creek	OK621200-02-0020C	20	1	0.456	0.31	1.387	0	0	0	0.175	6.124
	Driftwood Creek	OK621010-03-0030C	19	4	0.0262	0.0144	0.063	0	0	0	0	0.25
	Duck Pond Creek	OK720500-02-0250F	12	11	0.2932	0.0653	0.2263	0.064	0.1203	0.209	0.3875	0.878

Variable	Site Name	WBID	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
	Eagle Chief Creek: Lower	OK620920-04-0010C	19	3	9.803	0.938	4.089	4.358	6.347	9.285	11.541	22.288
	Eagle Chief Creek: Upper	OK620920-04-0010G	17	7	1.455	0.315	1.297	0	0.525	1.456	1.794	4.939
	Euchee Creek	OK620900-01-0290D	24	0	0	0	0	0	0	0	0	0
	FH Probabilistic		4	0	2.05	2.05	4.09	0	0	0	6.14	8.18
	Griever Creek	OK620920-01-0130G	17	2	0.7456	0.0827	0.341	0.153	0.492	0.735	0.8875	1.374
	Indian Creek	OK620910-02-0310C	20	3	2.956	0.321	1.437	0.619	1.913	2.82	3.846	6.59
	Kingfisher Creek	OK620910-05-0010J	14	4	5.76	1.46	5.47	0.26	0.57	4.69	11.88	15.61
	Kiowa Creek: Harper Co.	OK720500-02-0130C	11	4	6.4	1.22	4.03	0.1	4.01	5.94	10.39	11.71
	Lagoon Creek	OK620900-01-0180J	22	1	0.0181	0.0129	0.0606	0	0	0	0	0.25
	Long Creek	OK620920-02-0080D	21	2	0.442	0.153	0.699	0	0.105	0.274	0.418	3.232
	Main Creek	OK620920-01-0180F	18	4	5.71	1.74	7.39	1.11	2.12	4.08	5.46	33.98
	Medicine Lodge River	OK621010-03-0010D	16	7	22.78	6.89	27.54	0	0.01	9.92	51.38	70.9
	Otter Creek	OK620910-03-0040C	18	1	1.533	0.655	2.777	0	0	0.268	2.039	9.445
	Persimmon Creek	OK720500-01-0150G	20	1	5.332	0.867	3.877	0.087	1.858	4.747	8.173	12.724
	Pond Creek	OK621000-05-0010D	14	10	0.972	0.363	1.358	0.074	0.252	0.608	1.029	5.414
	Red Rock Creek: Lower	OK621200-05-0010K	17	2	0.773	0.259	1.068	0	0	0.36	1.196	3.452
	Red Rock Creek: Upper	OK621200-05-0160G	18	3	0.472	0.223	0.947	0	0	0.106	0.729	4.011
	Salt Creek (Kingfisher)	OK620910-02-0100D	19	3	6.198	0.851	3.709	1.103	3.803	5.166	8.263	16.8
	Salt Creek (Payne)	OK620900-02-0020D	21	2	0.00524	0.00476	0.02182	0	0	0	0	0.1
	Salt Creek: Lower	OK621200-04-0010F	17	4	15.05	5.05	20.81	0	0	7.7	17.22	71.43
	Salt Creek: Middle	OK621200-04-0010K	19	2	11.47	4.7	20.48	0	0	1.07	10.38	73.39
	Sandy Creek	OK621010-02-0010D	13	7	2.34	1.37	4.92	0	0	0.59	1.45	17.33
	Skeleton Creek: Upper	OK620910-03-0010S	15	5	11.81	1.43	5.55	5.31	7.3	10.09	16.87	25.65
	Stillwater Creek: Upper	OK620900-04-0070T	16	4	0.1019	0.0437	0.1748	0	0	0	0.1	0.541
	SWT Probabilistic		2	1	0.003	0.003	0.00424	0	*	0.003	*	0.006
	Turkey Creek: Lower	OK620910-06-0010R	14	5	9.2	1.63	6.1	0.1	3.49	8.94	13.7	20.06
	Turkey Creek: Wheat Capital Rd.	OK620910-06-0010B	19	2	6.43	1.75	7.61	0.1	0.4	2.86	11.51	25.1
	Uncle John's Creek	OK620910-05-0030C	12	3	4.95	1.21	4.21	0.37	0.64	4.81	8.77	10.18
	West Clay Creek	OK621010-01-0130R	18	6	0.1369	0.031	0.1315	0	0.0675	0.1	0.1758	0.596
	Wildhorse Creek	OK621000-02-0040F	19	4	0.1703	0.0766	0.3339	0	0	0	0.226	1
	Yellowstone Creek	OK621010-01-0270C	10	4	0.392	0.252	0.796	0	0.019	0.165	0.281	2.613

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
Beaver Creek (Logan)	OK620900-03-0230C	Alkalinity (CaCO3)	1	18	225.89	64.47		0.213	0.051		
			2	16	282.94	61.51					
			3	19	254.11	71.18					
		DO	1	18	9.221	2.329		0.097	0.157		
			2	15	9.542	2.798					
			3	19	7.911	2.74					
		DO % Saturation	1	17	100.01	20.28		0.008 *	0.004 *		
			2	16	99.68	21.99					
			3	19	76.13	26.28					
		Nitrate	1	17	0.2259	0.2428		0.001 *	0.002 *		
			2	15	0.2526	0.258					
			3	18	0.02	0					
		TKN	1	17	0.6387	0.3192		0.062	0.133		
			2	15	0.544	0.2452					
			3	18	0.7906	0.4385					
		Available Nitrogen	1	17	0.2848	0.233		0.002 *	0.003 *		
			2	15	0.3056	0.2783					
			3	18	0.0744	0.0752					
		Sulfate	1	17	56.88	17.11		0.358	0.055		
			2	15	72.31	22.91					
			3	18	85.26	49.44					
		Flow	1	17	4.028	4.637		0.017 *	0.026 *		
			2	10	2.995	2.954					
			3	17	0.841	1.453					
		Beaver Creek (Osage)	OK621210-00-0050L	Alkalinity (CaCO3)	1	18	159.61	46.14		0.644	0.031 *
					2	12	191.33	51.64			
					3	19	199.11	40.71			
Chloride	1			17	7.632	3.06		0.698	0.011 *		
	2			12	10.45	2.56					
	3			18	10.944	3.83					
Conductivity	1			18	409.52	92.89		0.009 *	0.048 *		
	2			12	463.84	71.34					
	3			19	387.79	75.42					
DO	1			18	6.313	2.94		0.263	0.089		
	2			12	8.917	3.01					
	3			19	7.564	3.33					
DO % Saturation	1			17	61.49	25.26		0.019 *	0.007 *		
	2			12	89.68	15.84					
	3			19	70.56	23.44					
Hardness (CaCO3)	1			17	195.11	44.90		0.337	0.037 *		
	2			6	217.45	34.11					
	3			19	249.95	77.89					
TKN	1			17	0.4465	0.24		0.000 *	0.000 *		
	2			12	0.2424	0.19					
	3			18	0.9689	0.56					
Total Nitrogen	1			17	0.6965	0.38		0.002 *	0.001 *		
	2			12	0.4282	0.25					
	3			18	1.0933	0.62					
pH	1			17	8.0371	0.56		0.330	0.042 *		
	2			12	7.7775	0.33					
	3			18	7.6272	0.45					
Total P	1			17	0.09171	0.05		0.003 *	0.009 *		
	2			12	0.05183	0.02					
	3			18	0.09844	0.05					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Sulfate	1	17	8.796	3.75		0.078	0.019 *
			2	12	13.15	1.95			
			3	18	10.411	4.91			
		Flow	1	14	5.029	8.45		0.000 *	0.003 *
			2	10	10.933	7.96			
			3	19	1.64	3.48			
Bent Creek	OK720500-01-0070D	Alkalinity (CaCO3)	1	20	233.95	35.48		0.000 *	0.001 *
			2	19	254.37	20.3			
			3	22	220.64	20.72			
		Ammonia	1	18	0.06317	0.07704		0.002 *	0.039 *
			2	18	0.02357	0.02564			
			3	6	0.08717	0.06373			
		Chloride	1	19	38.018	9.663		0.000 *	0.000 *
			2	18	47.483	12.221			
			3	20	29.69	3.851			
		DO % Saturation	1	17	90.38	9.91		0.000 *	0.000 *
			2	19	87.1	9.01			
			3	21	103.3	14.92			
		Hardness (CaCO3)	1	19	1364.9	238.4		0.027 *	0.036 *
			2	10	1501.8	138.2			
			3	21	1208.3	383.5			
		Nitrate	1	19	0.6774	0.2389		0.000 *	0.000 *
			2	18	0.6794	0.2286			
			3	20	0.134	0.1338			
		TKN	1	18	0.4243	0.3925		0.000 *	0.043 *
			2	18	0.2405	0.1443			
			3	20	0.4235	0.1223			
		Total Nitrogen	1	19	1.1088	0.5494		0.000 *	0.000 *
			2	18	0.9506	0.261			
			3	20	0.5825	0.1783			
		Available Nitrogen	1	19	0.7667	0.2839		0.000 *	0.000 *
			2	18	0.7337	0.2422			
			3	20	0.1855	0.1514			
		TDS	1	19	1895.7	422.3		0.000 *	0.008 *
			2	18	2037.4	236.4			
			3	20	1724.7	178.4			
		TSS	1	19	27.32	35.38		0.919	0.017 *
			2	18	9.83	7.33			
			3	20	10	0			
		Turbidity	1	20	10.25	18.37		0.017 *	0.072
			2	12	3.64	1.97			
			3	22	2.42	0.88			
		Flow	1	19	9.924	7.559		0.002 *	0.002 *
			2	17	12.701	12.513			
3	21		3.246	2.309					
Bitter Creek	OK621100-00-0100G	Alkalinity (CaCO3)	1	16	172.13	38.1		0.548	0.005 *
			2	15	228.4	66.08			
			3	20	217.5	39.77			
		Hardness (CaCO3)	1	16	1341.9	337.5		0.094	0.163
			2	9	1070.9	461.8			
			3	19	1384.7	438.1			
		Nitrate	1	16	0.8537	0.8055		0.009 *	0.011 *
			2	14	0.9632	1.2666			
			3	19	0.1411	0.2148			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
		Total Nitrogen	1	16	1.729	0.955		0.082	0.075		
			2	14	1.657	1.337					
			3	19	1.011	0.714					
		Available Nitrogen	1	16	0.952	0.817		0.018 *	0.018 *		
			2	14	1.0154	1.2918					
			3	19	0.2368	0.3716					
		Sulfate	1	16	734.1	249.9		0.000 *	0.000 *		
			2	14	591.9	272.4					
			3	19	1105.3	332.2					
		TDS	1	16	2306.5	624.3		0.067	0.178		
			2	14	2091.4	700.5					
			3	19	2502.4	542.6					
		Turbidity	1	17	42.69	27.96		0.321	0.038 *		
			2	9	30.39	22.44					
			3	21	21.14	23.18					
		Flow	1	15	7.401	6.496		0.000 *	0.000 *		
			2	14	13.934	8.03					
			3	19	3.474	2.951					
		Bois d'Arc Creek	OK621000-03-0010C	Alkalinity (CaCO3)	1	13	179.38	62.62		0.066	0.013 *
					2	15	247	45.35			
					3	20	210.75	62.52			
				Ammonia	1	12	0.05	0.06134		0.002 *	0.048 *
					2	14	0.019	0.01478			
					3	6	0.07167	0.05128			
Chloride	1			12	119.34	34.9		0.027 *	0.012 *		
	2			14	122.36	15.1					
	3			19	205.33	132.63					
Nitrate	1			12	0.8742	0.5249		0.000 *	0.000 *		
	2			14	0.9336	0.5015					
	3			19	0.1679	0.3729					
TKN	1			12	0.5875	0.2648		0.000 *	0.000 *		
	2			14	0.5064	0.1725					
	3			19	0.89	0.1972					
Total Nitrogen	1			12	1.4775	0.5438		0.032 *	0.051		
	2			14	1.4893	0.4662					
	3			19	1.0942	0.5223					
Available Nitrogen	1			12	0.94	0.5091		0.000 *	0.000 *		
	2			14	1.0018	0.5092					
	3			19	0.2268	0.4233					
pH	1			13	8.1115	0.3555		0.814	0.006 *		
	2			15	7.7387	0.3305					
	3			19	7.71	0.365					
Flow	1			12	8.367	8.525		0.000 *	0.000 *		
	2			15	15.415	8.449					
	3			20	3.709	5.533					
Clear Creek (Beaver)	OK720500-02-0300F			Ammonia	1	20	0.02	0.01		0.013 *	0.015 *
					2	20	0.01133	0.00			
					3	6	0.03433	0.04			
		Chloride	1	20	208.71	36.92		0.658	0.000 *		
			2	20	286.36	44.66					
			3	19	292.75	44.73					
		Conductivity	1	21	1552.7	277.80		0.022 *	0.009 *		
			2	21	1600.3	311.70					
			3	21	1834.2	321.70					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
		DO	1	21	8.175	3.13		0.029 *	0.093		
			2	21	8.944	2.76					
			3	20	6.889	3.04					
		DO % Saturation	1	18	80.74	19.97		0.030 *	0.044 *		
			2	21	82.85	20.64					
			3	20	65.45	28.43					
		Nitrate	1	20	0.0795	0.15		0.444	0.050		
			2	20	0.01773	0.01					
			3	19	0.02	0.00					
		TKN	1	20	0.36	0.15		0.024 *	0.028 *		
			2	20	0.3294	0.15					
			3	19	0.4974	0.28					
		Total Nitrogen	1	20	0.4555	0.21		0.033 *	0.078		
			2	20	0.3921	0.19					
			3	19	0.5584	0.27					
		Total P	1	20	0.04785	0.02		0.330	0.001 *		
			2	20	0.02298	0.02					
			3	19	0.02958	0.02					
		Sulfate	1	20	198.5	158.30		0.008 *	0.004 *		
			2	20	196.2	151.80					
			3	19	377.6	241.70					
		TDS	1	20	920.8	328.10		0.006 *	0.005 *		
			2	20	957.7	265.40					
			3	19	1220.1	302.20					
		TSS	1	20	12.05	4.33		0.013 *	0.007 *		
			2	20	7.071	0.00					
			3	19	12	8.48					
		Clear Creek (Harper)	OK720500-02-0070G	Ammonia	1	19	0.02037	0.01		0.000 *	0.016 *
					2	20	0.01242	0.00			
					3	6	0.02267	0.01			
Chloride	1			19	69.46	4.09		0.008 *	0.000 *		
	2			20	97.84	29.07					
	3			18	78.19	5.38					
Conductivity	1			20	705.8	28.90		0.005 *	0.002 *		
	2			21	739.6	38.10					
	3			21	625.3	170.50					
Nitrate	1			19	1.1363	0.26		0.465	0.000 *		
	2			20	0.6145	0.21					
	3			19	0.5442	0.36					
Total Nitrogen	1			19	1.3679	0.24		0.902	0.001 *		
	2			20	0.8987	0.58					
	3			19	0.8795	0.36					
Available Nitrogen	1			19	1.1741	0.25		0.459	0.000 *		
	2			20	0.6634	0.26					
	3			19	0.5863	0.38					
pH	1			20	8.1445	0.14		0.484	0.061		
	2			21	8.0195	0.30					
	3			20	7.9555	0.28					
Total P	1			19	0.05242	0.03		0.034 *	0.006 *		
	2			20	0.04235	0.04					
	3			19	0.01953	0.01					
Sulfate	1			19	34.032	2.42		0.000 *	0.000 *		
	2			20	47.67	15.66					
	3			19	30.342	3.13					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
		TSS	1	19	18.421	14.43		0.726	0.005 *		
			2	20	9.51	6.68					
			3	19	10.053	0.23					
		Flow	1	19	6.709	1.83		0.032 *	0.003 *		
			2	18	5.882	2.21					
			3	19	4.052	2.72					
Cooper Creek	OK620910-02-0040C	Alkalinity (CaCO3)	1	18	293.61	81.66		0.069	0.295		
			2	17	316	47.81					
			3	18	282	58.22					
		Chloride	1	17	316	144.8		0.000 *	0.000 *		
			2	16	327.4	67.2					
			3	17	489	113.9					
		Nitrate	1	17	0.8541	0.665		0.001 *	0.006 *		
			2	16	0.9644	0.57					
			3	17	0.3494	0.4239					
		TKN	1	17	0.7951	0.4407		0.007 *	0.014 *		
			2	16	0.6594	0.2435					
			3	17	1.1359	0.6147					
		Available Nitrogen	1	17	0.9799	0.6764		0.007 *	0.016 *		
			2	16	1.0513	0.6013					
			3	17	0.4624	0.5746					
		pH	1	19	8.2242	0.2218		0.007 *	0.021 *		
			2	16	8.1794	0.0921					
			3	18	8.3689	0.2465					
		Sulfate	1	17	410.3	141		0.037 *	0.001 *		
			2	16	681.6	173.1					
			3	17	512.9	259.8					
		Flow	1	16	5.108	6.345		0.000 *	0.000 *		
			2	16	8.462	4.868					
			3	17	1.286	1.278					
		Cottonwood Creek	OK620910-04-0010D	Alkalinity (CaCO3)	1	19	165.21	36.85		0.057	0.000 *
					2	14	250.29	46.69			
					3	14	209.14	61.72			
Chloride	1			18	124.29	20.16		0.032 *	0.039 *		
	2			13	119.3	22.85					
	3			12	142.86	28.54					
DO % Saturation	1			17	104.18	16.77		0.376	0.034 *		
	2			13	90.86	11.93					
	3			14	94.94	11.55					
Hardness (CaCO3)	1			18	313.9	45.5		0.751	0.021 *		
	2			5	404.1	39.4					
	3			14	430	175.2					
Nitrate	1			18	5.613	2.112		0.007 *	0.023 *		
	2			13	4.178	1.391					
	3			12	6.469	2.408					
TKN	1			18	0.8303	0.3319		0.011 *	0.033 *		
	2			13	0.5846	0.1981					
	3			12	0.7742	0.1383					
Total Nitrogen	1			18	6.781	1.572		0.003 *	0.002 *		
	2			13	4.799	1.387					
	3			12	7.311	2.362					
Available Nitrogen	1			18	6.012	1.551		0.006 *	0.005 *		
	2			13	4.234	1.385					
	3			12	6.552	2.375					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		OrthoP	1	17	1.2117	0.5261		0.005 *	0.014 *
			2	13	1.0028	0.3845			
			3	12	1.627	0.6058			
		Total P	1	17	1.4408	0.4035		0.005 *	0.006 *
			2	13	1.0361	0.3494			
			3	12	1.633	0.5968			
		Sulfate	1	18	177.25	24.43		0.002 *	0.000 *
			2	13	173.16	29.47			
			3	12	217.88	34.34			
Council Creek	OK620900-02-0050H	Alkalinity (CaCO3)	1	21	168.3	41.8		0.514	0.018 *
			2	19	281.2	190.1			
			3	21	249.4	108.5			
		Ammonia	1	20	0.0394	0.05233		0.000 *	0.037 *
			2	17	0.0108	0.00107			
			3	7	0.0468	0.02879			
		DO	1	21	8.57	2.643		0.056	0.112
			2	19	9.03	2.698			
			3	21	7.223	3.055			
		Hardness (CaCO3)	1	20	207.1	52		0.911	0.005 *
			2	9	307	111.9			
			3	21	312.9	136.2			
		Nitrate	1	20	0.187	0.2395		0.062	0.058
			2	17	0.1265	0.1217			
			3	20	0.058	0.0942			
		TKN	1	20	0.596	0.315		0.006 *	0.001 *
			2	17	0.348	0.327			
			3	20	1.582	1.697			
		Total Nitrogen	1	20	0.801	0.457		0.009 *	0.004 *
			2	17	0.515	0.32			
			3	20	1.672	1.682			
		Available Nitrogen	1	20	0.2444	0.2518		0.089	0.062
			2	17	0.1784	0.131			
			3	20	0.107	0.1174			
		OrthoP	1	20	0.01485	0.00944		0.015 *	0.002 *
			2	17	0.01462	0.01308			
			3	20	0.0395	0.03802			
		Total P	1	20	0.069	0.0331		0.018 *	0.006 *
			2	17	0.053	0.033			
			3	20	0.1637	0.1815			
		Sulfate	1	20	14.88	6.44		0.252	0.003 *
			2	17	27.31	10			
			3	20	22.6	13.88			
		TDS	1	20	316.4	75.5		0.826	0.055
			2	17	418.4	126.6			
			3	20	406.4	190.9			
		TSS	1	20	12.05	4.05		0.054	0.021 *
			2	17	11.52	12.99			
			3	20	32.45	41.57			
		Turbidity	1	21	18.41	15.31		0.243	0.096
			2	11	24.68	27.62			
			3	22	69.87	123.48			
Flow	1	15	2.243	2.927		0.003 *	0.003 *		
	2	18	5.658	7.143					
	3	20	0.441	1.529					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
Crooked Creek (Beaver)	OK620930-00-0100G	Ammonia	1	20	0.03085	0.04		0.005 *	0.001 *		
			2	20	0.01061	0.00					
			3	6	0.15	0.21					
		Chloride	1	20	1028.5	345.00		0.039 *	0.003 *		
			2	20	1247	333.60					
			3	16	1801	1093.90					
		Conductivity	1	21	4026	1008.00		0.005 *	0.002 *		
			2	21	3778	826.00					
			3	18	5754	2929.00					
		DO	1	21	11.111	1.51		0.001 *	0.000 *		
			2	21	10.071	2.30					
			3	17	6.424	3.71					
		DO % Saturation	1	18	115.88	18.55		0.000 *	0.000 *		
			2	21	107.06	19.19					
			3	17	59.81	30.96					
		Hardness (CaCO3)	1	20	468.3	46.50		0.022 *	0.001 *		
			2	11	480.3	31.70					
			3	17	661.8	244.10					
		pH	1	21	8.3793	0.11		0.000 *	0.000 *		
			2	21	8.2929	0.14					
			3	17	7.8041	0.31					
		TDS	1	20	2238	459.00		0.038 *	0.005 *		
			2	20	2512	141.00					
			3	16	3513	2080.00					
		Flow	1	20	5.968	3.59		0.000 *	0.000 *		
			2	15	6.148	4.92					
			3	14	0.065	0.07					
		Crooked Creek (Grant)	OK621000-06-0010C	Alkalinity (CaCO3)	1	14	286.59	109.55		0.925	0.027 *
					2	16	349.56	46.74			
					3	20	348.05	48.28			
Ammonia	1			13	0.07569	0.08131		0.028 *	0.123		
	2			15	0.03452	0.03932					
	3			6	0.08583	0.05662					
Chloride	1			13	143.8	64.72		0.000 *	0.000 *		
	2			15	291.55	132.34					
	3			20	118.55	27.77					
Conductivity	1			13	1454.7	467.1		0.000 *	0.000 *		
	2			15	1506.3	270.7					
	3			20	969.1	176.3					
Nitrate	1			13	1.941	2.18		0.000 *	0.000 *		
	2			15	1.038	0.207					
	3			20	0.178	0.205					
TKN	1			13	0.7805	0.4153		0.051	0.060		
	2			15	0.784	0.2687					
	3			20	1.1095	0.5762					
Total Nitrogen	1			13	2.772	2.143		0.004 *	0.005 *		
	2			15	1.841	0.268					
	3			20	1.331	0.583					
Available Nitrogen	1			13	2.067	2.148		0.000 *	0.000 *		
	2			15	1.091	0.207					
	3			20	0.247	0.23					
pH	1			14	8.2343	0.2297		0.034 *	0.019 *		
	2			13	8.2638	0.1753					
	3			21	8.4429	0.2552					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
		Sulfate	1	13	192.24	125.99		0.000 *	0.000 *		
			2	15	234.8	100.51					
			3	20	80.88	19.39					
		TDS	1	13	857.2	259.9		0.000 *	0.000 *		
			2	15	957.1	202.1					
			3	20	605	93.9					
		TSS	1	13	48.31	64.39		0.171	0.050		
			2	15	23.69	17.29					
			3	20	17.25	9.78					
		Turbidity	1	14	84.6	122.35		0.119	0.021 *		
			2	10	24.85	19.27					
			3	20	16.56	9.26					
		Flow	1	14	14.34	13.98		0.000 *	0.000 *		
			2	11	16.87	14.45					
			3	18	0.86	1.14					
		Dead Indian Creek	OK620910-05-0080D	Alkalinity (CaCO3)	1	21	254.76	67.81		0.015 *	0.057
					2	16	287.64	72.64			
					3	18	234.78	45.17			
Ammonia	1			20	0.088	0.08019		0.233	0.003 *		
	2			15	0.01818	0.01468					
	3			5	0.0282	0.01894					
Chloride	1			20	157.97	98.76		0.210	0.010 *		
	2			15	239.33	56.41					
	3			17	212.05	63.15					
Conductivity	1			21	1754.3	708.9		0.009 *	0.010 *		
	2			13	2352.6	369.2					
	3			17	1979.9	348.8					
DO % Saturation	1			20	105.97	40.33		0.232	0.004 *		
	2			16	81.85	10.24					
	3			18	72.12	30.41					
Hardness (CaCO3)	1			20	610.6	268.2		0.001 *	0.001 *		
	2			7	1030.2	71.8					
	3			18	648.2	271.3					
Nitrate	1			20	1.4465	0.6986		0.000 *	0.000 *		
	2			15	1.2393	0.3465					
	3			17	0.4059	0.5164					
TKN	1			20	0.6349	0.352		0.012 *	0.042 *		
	2			15	0.4865	0.225					
	3			17	0.7965	0.3965					
Total Nitrogen	1			20	2.1244	0.7563		0.006 *	0.000 *		
	2			15	1.7737	0.388					
	3			17	1.2612	0.565					
Available Nitrogen	1	20	1.5775	0.6947		0.000 *	0.000 *				
	2	15	1.3054	0.3588							
	3	17	0.4735	0.5761							
OrthoP	1	19	0.13068	0.11547		0.037 *	0.026 *				
	2	15	0.0982	0.07362							
	3	17	0.05076	0.04786							
Total P	1	19	0.2151	0.1398		0.318	0.007 *				
	2	15	0.1329	0.0822							
	3	17	0.1071	0.061							
Sulfate	1	20	431.8	266.7		0.032 *	0.001 *				
	2	15	719.4	174							
	3	17	588.7	154.3							

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		TDS	1	20	1203.9	572.7		0.000 *	0.001 *
			2	15	1766.3	284			
			3	17	1315.5	289.6			
		TSS	1	20	24.6	17.79		0.175	0.032 *
			2	15	11.31	7.07			
			3	17	17.18	14.9			
		Flow	1	20	2.045	2.023		0.065	0.018 *
			2	15	9.872	15.077			
			3	15	2.299	2.453			
Deep Creek	OK620910-02-0250C	Alkalinity (CaCO3)	1	20	226.6	38.5		0.723	0.074
			2	18	257.89	37.38			
			3	21	252.43	54.78			
		Ammonia	1	19	0.04468	0.06657		0.001 *	0.001 *
			2	17	0.01061	0			
			3	7	0.14357	0.14662			
		Chloride	1	19	120.7	44.9		0.000 *	0.000 *
			2	17	583.3	310.8			
			3	20	107.2	44.3			
		Conductivity	1	20	1991.1	728.6		0.037 *	0.105
			2	16	2209.2	520.5			
			3	21	1703.9	811.4			
		DO % Saturation	1	19	111.24	37.77		0.099	0.013 *
			2	18	95.89	11.57			
			3	21	84.3	26.99			
		Hardness (CaCO3)	1	19	885.1	404.8		0.001 *	0.004 *
			2	8	1277.9	317.5			
			3	21	755.5	327.9			
		Nitrate	1	19	1.1153	0.7139		0.006 *	0.028 *
			2	17	1.4494	0.5708			
			3	20	0.856	0.6456			
		Nitrite	1	19	0.02789	0.04917		0.015 *	0.027 *
			2	17	0.01414	0			
			3	20	0.062	0.07709			
		TKN	1	19	0.5239	0.2473		0.027 *	0.021 *
			2	17	0.5275	0.2598			
			3	20	0.749	0.3159			
		Total Nitrogen	1	19	1.6671	0.6254		0.091	0.174
			2	17	1.9911	0.5675			
			3	20	1.667	0.5627			
		Available Nitrogen	1	19	1.1878	0.6956		0.018 *	0.068
			2	17	1.4742	0.5708			
			3	20	0.968	0.6555			
		Sulfate	1	19	732.1	435		0.000 *	0.000 *
			2	17	1085.2	246.9			
			3	20	553.5	334			
TDS	1	19	1428.7	719.7		0.000 *	0.000 *		
	2	17	2011.2	352.1					
	3	20	1149.6	483.2					
TSS	1	19	28.05	20.62		0.026 *	0.076		
	2	17	18.96	12.8					
	3	20	34.7	25.17					
Deer Creek	OK621000-04-0010D	Alkalinity (CaCO3)	1	15	196.33	40.78		0.660	0.008 *
			2	13	270.31	56.22			
			3	19	258.42	84.19			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Ammonia	1	14	0.03829	0.04615		0.050	0.175
			2	12	0.01309	0.00599			
			3	5	0.0374	0.04032			
		Chloride	1	14	255.9	93.6		0.194	0.038 *
			2	12	324.7	102.1			
			3	19	436.2	277.4			
		Conductivity	1	15	1507.1	454.4		0.336	0.063
			2	13	1777.3	309.9			
			3	21	2008.1	812.4			
		Hardness (CaCO3)	1	14	429.5	93.2		0.090	0.007 *
			2	7	469.4	113.8			
			3	18	687.4	314.3			
		Nitrate	1	14	0.72	0.7301		0.000 *	0.001 *
			2	12	0.8152	0.7168			
			3	19	0.0679	0.1006			
		TKN	1	14	0.6903	0.3298		0.157	0.079
			2	12	0.7758	0.2786			
			3	19	0.94	0.3222			
		Total Nitrogen	1	14	1.4253	0.7222		0.003 *	0.020 *
			2	12	1.6157	0.6086			
			3	19	1.0342	0.3768			
		Available Nitrogen	1	14	0.7733	0.7263		0.000 *	0.001 *
			2	12	0.8529	0.7149			
			3	19	0.1047	0.1236			
		pH	1	15	8.3327	0.192		0.001 *	0.000 *
			2	13	7.7485	0.5892			
			3	21	8.2314	0.1917			
		OrthoP	1	14	0.05057	0.04327		0.084	0.061
			2	12	0.05175	0.05407			
			3	19	0.09558	0.073			
		Sulfate	1	14	109.34	35.94		0.261	0.066
			2	12	127.57	30			
			3	19	149.91	62.85			
		TDS	1	14	865.3	244.9		0.227	0.081
			2	12	967	190.1			
			3	19	1142.4	466.5			
Flow	1	15	2.259	1.843		0.000 *	0.000 *		
	2	13	10.732	9.265					
	3	16	1.406	1.603					
Doga Creek	OK621200-02-0020C	Alkalinity (CaCO3)	1	19	116.47	39.14		0.165	0.000 *
			2	16	218.81	58.39			
			3	19	192.47	51.45			
		Chloride	1	18	13.71	8.70		0.171	0.009 *
			2	15	26.51	10.81			
			3	18	42.75	43.62			
		Conductivity	1	19	372.8	127.10		0.708	0.004 *
			2	15	544.5	138.80			
			3	19	521.8	196.60			
		DO	1	19	7.151	2.38		0.069	0.089
			2	16	8.933	2.98			
			3	19	7.147	2.63			
		DO % Saturation	1	16	68.43	17.34		0.162	0.086
			2	16	85.95	14.03			
			3	19	74.22	30.11			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Hardness (CaCO3)	1	18	163.98	58.03		0.786	0.007 *
			2	9	229.47	68.25			
			3	19	238.05	81.17			
		Nitrate	1	18	0.2244	0.26		0.988	0.008 *
			2	15	0.0629	0.06			
			3	18	0.0633	0.10			
		TKN	1	18	0.5811	0.33		0.000 *	0.000 *
			2	15	0.2444	0.21			
			3	18	0.7767	0.30			
		Total Nitrogen	1	18	0.8266	0.45		0.000 *	0.000 *
			2	14	0.3343	0.24			
			3	18	0.8683	0.31			
		Available Nitrogen	1	18	0.2973	0.28		0.957	0.003 *
			2	14	0.0991	0.07			
			3	18	0.1011	0.13			
		pH	1	18	8.1672	0.52		0.782	0.002 *
			2	14	7.6864	0.33			
			3	18	7.645	0.47			
		Sulfate	1	18	11.7	6.15		0.910	0.040 *
			2	15	27.21	30.94			
			3	18	26.26	15.75			
		TDS	1	18	236.11	71.50		0.462	0.002 *
			2	15	341.8	71.69			
			3	18	317.89	105.47			
		TSS	1	18	28.56	28.22		0.096	0.043 *
			2	15	10.72	7.34			
			3	18	18.56	16.32			
		Turbidity	1	19	41.87	26.64		0.589	0.001 *
			2	12	20.85	18.28			
			3	20	17.74	13.75			
Driftwood Creek	OK621010-03-0030C	Alkalinity (CaCO3)	1	18	246.8	91.2		0.122	0.005 *
			2	19	314.6	42.7			
			3	20	381.9	180.4			
		Ammonia	1	17	0.08547	0.114		0.303	0.064
			2	18	0.02873	0.02773			
			3	5	0.0154	0.00089			
		Chloride	1	17	89.93	29.02		0.071	0.001 *
			2	18	141.97	119.95			
			3	19	199.89	61.71			
		Hardness (CaCO3)	1	17	992	320.6		0.013 *	0.167
			2	10	1072.4	103.8			
			3	18	895.9	193.5			
		Nitrate	1	17	0.3712	0.3879		0.000 *	0.001 *
			2	18	0.2479	0.2165			
			3	19	0.0405	0.0426			
		TKN	1	17	0.5769	0.2271		0.006 *	0.001 *
			2	18	0.6461	0.2731			
			3	19	0.9958	0.4256			
		Available Nitrogen	1	17	0.5002	0.4987		0.000 *	0.001 *
			2	18	0.3011	0.2184			
			3	19	0.0747	0.052			
		pH	1	18	8.0567	0.3973		0.020 *	0.069
			2	17	8.0671	0.2787			
			3	20	8.2625	0.2074			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Flow	1	18	8.717	8.296		0.000 *	0.000 *
			2	15	6.772	4.327			
			3	19	0.026	0.063			
Duck Pond Creek	OK720500-02-0250F	Ammonia	1	20	0.0266	0.03		0.005 *	0.035 *
			2	20	0.01555	0.02			
			3	6	0.04567	0.03			
		Chloride	1	20	180.52	33.62		0.207	0.000 *
			2	20	211	29.11			
			3	20	220.56	16.20			
		Conductivity	1	21	1109.9	86.50		0.157	0.036 *
			2	21	1192.7	141.30			
			3	22	1145.2	61.60			
		DO % Saturation	1	20	68.81	20.67		0.000 *	0.000 *
			2	21	93.7	21.14			
			3	21	64.41	27.65			
		Nitrate	1	20	0.126	0.19		0.114	0.018 *
			2	20	0.0468	0.04			
			3	20	0.03	0.02			
		TKN	1	20	0.4162	0.22		0.049 *	0.097
			2	20	0.344	0.16			
			3	20	0.5285	0.37			
		Total Nitrogen	1	20	0.5607	0.24		0.064	0.116
			2	20	0.426	0.15			
			3	20	0.595	0.37			
		Available Nitrogen	1	20	0.1711	0.18		0.576	0.069
			2	20	0.0976	0.11			
			3	20	0.0805	0.08			
		Sulfate	1	20	49.85	2.95		0.005 *	0.001 *
			2	20	64.2	23.06			
			3	20	48.14	7.49			
		TDS	1	20	602.75	46.66		0.386	0.002 *
			2	20	641.15	54.10			
			3	20	653.65	33.53			
TSS	1	20	11.05	3.09		0.091	0.119		
	2	20	9.153	3.94					
	3	20	14.55	13.34					
Flow	1	20	0.3125	0.19		0.005 *	0.000 *		
	2	17	0.6665	0.38					
	3	12	0.2932	0.23					
Eagle Chief Creek: Lower	OK620920-04-0010C	Chloride	1	16	73.81	15.32		0.062	0.254
			2	17	78.84	12.83			
			3	19	72.52	5.89			
		Hardness (CaCO3)	1	16	600.6	115.5		0.061	0.075
			2	8	626.7	81.4			
			3	20	525.5	135.9			
		Nitrate	1	16	2.884	1.178		0.213	0.090
			2	17	2.496	1.095			
			3	19	2.027	1.115			
		Nitrite	1	16	0.045	0.04211		0.004 *	0.002 *
			2	17	0.03753	0.0594			
			3	19	0.10263	0.06789			
		OrthoP	1	16	0.03188	0.05435		0.004 *	0.099
			2	17	0.02112	0.01798			
			3	19	0.00821	0.00369			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Total P	1	16	0.08856	0.07209		0.009 *	0.025 *
			2	17	0.08271	0.0617			
			3	19	0.04116	0.02156			
		Sulfate	1	16	365.9	142.3		0.027 *	0.154
			2	17	387.8	108.2			
			3	19	318.2	69.9			
		TDS	1	16	977.4	208.1		0.001 *	0.003 *
			2	17	989	163.7			
			3	19	810.5	116.2			
		TSS	1	16	34.44	38.35		0.010 *	0.043 *
			2	17	34.54	34.99			
			3	19	12.63	4.34			
		Turbidity	1	17	27.44	34.75		0.002 *	0.037 *
			2	10	31.97	29.34			
			3	20	9.69	5.1			
		Flow	1	17	39.22	28.2		0.000 *	0.000 *
			2	17	22.19	13.19			
			3	19	9.8	4.09			
Eagle Chief Creek: Upper	OK620920-04-0010G	Ammonia	1	19	0.03895	0.032		0.005 *	0.010 *
			2	17	0.01418	0.01342			
			3	5	0.0504	0.04272			
		Chloride	1	19	109.22	30.7		0.067	0.061
			2	17	143.03	78			
			3	19	107.55	23.58			
		Conductivity	1	20	2179	571		0.018 *	0.013 *
			2	16	3309	2907			
			3	20	1666	532			
		DO	1	21	11.258	2.712		0.048 *	0.095
			2	17	11.611	2.262			
			3	20	9.786	3.026			
		Hardness (CaCO3)	1	19	1068.8	362		0.011 *	0.037 *
			2	9	1347.9	214.8			
			3	19	970.6	385.3			
		Nitrate	1	19	1.7874	0.73		0.015 *	0.045 *
			2	17	1.3753	0.5688			
			3	19	1.9695	0.7914			
		Nitrite	1	19	0.01842	0.01119		0.007 *	0.000 *
			2	17	0.03106	0.04854			
			3	19	0.10211	0.09047			
		Total Nitrogen	1	19	2.3608	0.7314		0.001 *	0.006 *
			2	17	1.9343	0.5631			
			3	19	2.7253	0.7749			
		Available Nitrogen	1	19	1.8447	0.7221		0.010 *	0.028 *
			2	17	1.4205	0.576			
			3	19	2.0853	0.8347			
Total P	1	17	0.08706	0.05522		0.941	0.079		
	2	17	0.05665	0.02466					
	3	19	0.05758	0.0462					
Sulfate	1	19	950.6	348.4		0.001 *	0.005 *		
	2	17	1063	279.5					
	3	19	712.3	315.9					
TDS	1	19	1917.9	692.8		0.000 *	0.003 *		
	2	17	1920.1	392					
	3	19	1395.1	396.6					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Flow	1	20	6.078	5.56		0.000 *	0.001 *
			2	15	5.948	2.924			
			3	17	1.455	1.297			
Euchee Creek	OK620900-01-0290D	Alkalinity (CaCO3)	1	21	148.28	50.39		0.027 *	0.000 *
			2	16	226.44	62.75			
			3	21	182.05	54.17			
		Chloride	1	20	27.08	13.16		0.231	0.069
			2	15	32.12	17.49			
			3	20	41.07	23.94			
		Conductivity	1	21	451.1	127		0.960	0.061
			2	14	550.8	125.4			
			3	21	553.6	185.2			
		DO % Saturation	1	20	104.29	32.09		0.235	0.014 *
			2	16	80.64	17.59			
			3	21	88.07	19.18			
		Hardness (CaCO3)	1	20	169.14	48.01		0.270	0.031 *
			2	8	236.78	91.32			
			3	21	203.76	61.73			
		Nitrate	1	20	0.931	1.2254		0.584	0.002 *
			2	15	0.1702	0.2705			
			3	20	0.127	0.1922			
		TKN	1	20	1.0705	1.0057		0.000 *	0.004 *
			2	15	0.3147	0.2077			
			3	20	0.871	0.2481			
		Total Nitrogen	1	20	2.039	2.135		0.000 *	0.004 *
			2	15	0.51	0.348			
			3	20	1.026	0.333			
		Available Nitrogen	1	20	1.206	1.73		0.625	0.005 *
			2	15	0.206	0.282			
			3	20	0.166	0.201			
		pH	1	20	8.019	0.6386		0.016 *	0.046 *
			2	15	7.6013	0.2117			
			3	21	7.961	0.5164			
		OrthoP	1	20	0.3337	0.354		0.007 *	0.023 *
			2	15	0.0773	0.0739			
			3	20	0.3558	0.3683			
Total P	1	20	0.4393	0.3447		0.004 *	0.008 *		
	2	15	0.1383	0.0757					
	3	20	0.4229	0.3456					
Sulfate	1	20	35.89	16.36		0.089	0.052		
	2	15	37.98	18.21					
	3	20	49.37	19.63					
TSS	1	20	29.85	26.61		0.418	0.047 *		
	2	15	18.82	12.07					
	3	20	15.95	8.68					
Flow	1	12	3.853	2.502			0.000 *		
	2	16	0	0					
	3	24	0	0					
Griever Creek	OK620920-01-0130G	Ammonia	1	17	0.02553	0.02287		0.028 *	0.053
			2	18	0.01263	0.00858			
			3	4	0.0395	0.049			
		Chloride	1	17	190.94	49.35		0.131	0.001 *
			2	18	236.49	65.27			
			3	17	266	44.88			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
		Conductivity	1	16	3506.9	433.3		0.008 *	0.006 *		
			2	19	2960.2	862.9					
			3	19	3548.6	289.6					
		Hardness (CaCO3)	1	17	1845.6	274		0.367	0.027 *		
			2	10	2026.7	351.7					
			3	19	2155.8	364.8					
		Total P	1	16	0.04856	0.03004		0.815	0.010 *		
			2	18	0.0255	0.01574					
			3	17	0.02706	0.02296					
		TSS	1	17	20.59	17.96		0.771	0.013 *		
			2	18	10.44	5.93					
			3	17	10.88	2.09					
		Flow	1	18	2.313	1.95		0.005 *	0.003 *		
			2	17	1.486	0.964					
			3	17	0.746	0.341					
		Indian Creek	OK620910-02-0310C	Alkalinity (CaCO3)	1	21	233.76	32.02		0.000 *	0.000 *
					2	19	288.21	34.59			
					3	21	219.67	34.7			
Ammonia	1			20	0.0212	0.01142		0.000 *	0.000 *		
	2			18	0.01113	0.00221					
	3			7	0.04971	0.0252					
Chloride	1			20	152.83	22.05		0.399	0.000 *		
	2			18	195.83	27.39					
	3			20	189.92	13.85					
DO % Saturation	1			19	118.22	21.64		0.523	0.000 *		
	2			19	95.04	6.89					
	3			21	98.11	19.67					
Hardness (CaCO3)	1			20	387.55	58.7		0.009 *	0.001 *		
	2			9	494.2	42.67					
	3			21	417.67	76.7					
Nitrite	1			20	0.029	0.0328		0.000 *	0.000 *		
	2			18	0.0184	0.0179					
	3			20	0.214	0.1984					
OrthoP	1			19	0.04611	0.06968		0.003 *	0.031 *		
	2			18	0.07828	0.05164					
	3			20	0.029	0.04508					
Total P	1			19	0.09379	0.07723		0.000 *	0.005 *		
	2			18	0.11678	0.05818					
	3			20	0.04875	0.05008					
Sulfate	1			20	130.5	47.39		0.000 *	0.000 *		
	2			18	264.61	61.45					
	3			20	173.63	22.09					
TDS	1			20	742.3	107.14		0.000 *	0.000 *		
	2			18	904.72	54.35					
	3			20	763.75	69.45					
Flow	1			21	8.59	4.784		0.000 *	0.000 *		
	2			18	14.236	9.859					
	3			20	2.956	1.437					
Kingfisher Creek	OK620910-05-0010J			Alkalinity (CaCO3)	1	20	250.4	34.96		0.076	0.034 *
					2	16	295.56	39.60			
					3	17	255.97	77.19			
		Ammonia	1	19	0.05463	0.06		0.012 *	0.004 *		
			2	15	0.0184	0.01					
			3	4	0.206	0.28					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		DO % Saturation	1	18	99.23	15.93		0.669	0.001 *
			2	16	81.48	12.55			
			3	17	78.85	21.00			
		Hardness (CaCO3)	1	19	734.9	231.90		0.021 *	0.039 *
			2	7	982.7	86.90			
			3	17	737.6	252.00			
		Nitrate	1	19	1.2074	0.70		0.000 *	0.001 *
			2	15	1.42	0.59			
			3	16	0.5631	0.56			
		TKN	1	19	0.5932	0.26		0.019 *	0.017 *
			2	15	0.5273	0.16			
			3	16	0.8563	0.49			
		Total Nitrogen	1	19	1.8353	0.67		0.046 *	0.106
			2	15	1.9936	0.65			
			3	16	1.4813	0.71			
		Available Nitrogen	1	19	1.2967	0.71		0.002 *	0.004 *
			2	15	1.4847	0.61			
			3	16	0.6763	0.69			
		pH	1	20	7.99	0.33		0.128	0.091
			2	15	8.078	0.08			
			3	17	8.1694	0.21			
		Sulfate	1	19	637.7	170.70		0.037 *	0.043 *
			2	15	786.3	176.60			
			3	16	621	238.30			
		TDS	1	19	1668.8	382.70		0.021 *	0.075
			2	15	1766.5	138.00			
			3	16	1479.6	435.20			
		TSS	1	19	42.95	37.87		0.051	0.036 *
			2	15	31.15	23.51			
			3	16	18.31	8.90			
Flow	1	20	13.45	11.48		0.001 *	0.002 *		
	2	15	23.91	18.41					
	3	14	5.76	5.47					
Kiowa Creek: Harper Co.	OK720500-02-0130C	Alkalinity (CaCO3)	1	19	204.89	20.38		0.278	0.082
			2	19	214.95	15.21			
			3	13	226.62	42.45			
		Ammonia	1	18	0.02228	0.02		0.009 *	0.061
			2	18	0.01185	0.01			
			3	4	0.02075	0.01			
		Chloride	1	18	120.29	13.32		0.200	0.087
			2	18	147.54	58.80			
			3	12	124.51	17.75			
		Conductivity	1	19	877.4	190.40		0.003 *	0.032 *
			2	19	962.9	94.00			
			3	14	820.1	158.80			
		DO % Saturation	1	17	110.16	11.61		0.000 *	0.000 *
			2	19	96.22	8.78			
			3	13	78.39	16.64			
		Nitrate	1	18	0.5378	0.35		0.019 *	0.011 *
			2	18	0.4083	0.18			
			3	12	0.2258	0.23			
		Available Nitrogen	1	18	0.5762	0.35		0.023 *	0.014 *
			2	18	0.4578	0.20			
			3	12	0.2642	0.24			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		pH	1	19	8.4053	0.17		0.000 *	0.000 *
			2	19	8.2589	0.17			
			3	13	7.9169	0.19			
		Total P	1	18	0.06539	0.04		0.111	0.027 *
			2	18	0.04728	0.03			
			3	12	0.0295	0.02			
		Flow	1	18	10.788	4.18		0.059	0.030 *
			2	16	9.648	4.30			
			3	11	6.402	4.03			
Lagoon Creek	OK620900-01-0280J	Alkalinity (CaCO3)	1	19	132.68	43.14		0.079	0.006 *
			2	16	190.75	65.14			
			3	21	158.1	44.77			
		Chloride	1	18	80.7	67.20		0.003 *	0.001 *
			2	15	54.1	32.40			
			3	20	186.2	157.80			
		Conductivity	1	19	571.3	308.70		0.018 *	0.011 *
			2	15	493	171.00			
			3	21	932.5	663.50			
		DO	1	19	7.437	2.70		0.352	0.093
			2	16	8.611	2.92			
			3	21	9.667	3.68			
		DO % Saturation	1	18	74.34	16.05		0.263	0.057
			2	16	84.32	19.83			
			3	21	96.74	40.01			
		Hardness (CaCO3)	1	18	197.6	86.10		0.195	0.044 *
			2	8	218.4	79.90			
			3	21	305.1	176.30			
		Nitrate	1	18	0.2156	0.23		0.866	0.001 *
			2	15	0.0413	0.08			
			3	20	0.046	0.08			
		TKN	1	18	0.5589	0.35		0.000 *	0.000 *
			2	15	0.2415	0.21			
			3	20	0.7465	0.37			
		Total Nitrogen	1	18	0.8006	0.49		0.000 *	0.000 *
			2	15	0.3144	0.19			
			3	20	0.829	0.39			
		Available Nitrogen	1	18	0.2891	0.30		0.799	0.003 *
			2	15	0.0835	0.09			
			3	20	0.0925	0.11			
		Total P	1	18	0.0715	0.05		0.576	0.049 *
			2	15	0.04327	0.02			
			3	20	0.04865	0.03			
Sulfate	1	18	23.54	12.38		0.036 *	0.004 *		
	2	15	27.82	9.24					
	3	20	47.71	34.12					
TDS	1	18	344.6	163.00		0.018 *	0.010 *		
	2	15	328.1	87.10					
	3	20	532.9	307.90					
Flow	1	17	2.381	3.64		0.010 *	0.013 *		
	2	15	6.141	10.63					
	3	22	0.018	0.06					
Long Creek	OK620920-02-0080D	Alkalinity (CaCO3)	1	19	168.95	35.79		0.171	0.038 *
			2	19	162.95	25.20			
			3	21	144.81	51.24			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Ammonia	1	18	0.0233	0.02		0.008 *	0.001 *
			2	20	0.0106	0.00			
			3	6	1.0567	1.69			
		Chloride	1	18	195.43	68.74		0.062	0.011 *
			2	20	224.23	48.28			
			3	20	281.62	124.28			
		Conductivity	1	17	3394	1937.00		0.001 *	0.065
			2	20	2645	700.00			
			3	22	3465	733.00			
		Hardness (CaCO3)	1	18	1552.1	569.40		0.071	0.040 *
			2	11	1652.6	331.10			
			3	22	1928.2	427.90			
		Nitrate	1	18	0.5206	0.42		0.012 *	0.000 *
			2	20	0.2499	0.20			
			3	20	0.084	0.20			
		TKN	1	18	0.434	0.16		0.099	0.091
			2	20	0.346	0.12			
			3	20	1.414	2.83			
		pH	1	19	8.0532	0.18		0.026 *	0.024 *
			2	20	7.8885	0.24			
			3	21	8.0481	0.20			
		Sulfate	1	18	1264.2	374.20		0.034 *	0.001 *
			2	20	1478.2	251.60			
			3	20	1698.5	369.10			
		TDS	1	18	2443.3	600.50		0.138	0.048 *
			2	20	2646.2	410.20			
			3	20	2935.3	747.20			
		Flow	1	18	3.251	2.95		0.006 *	0.000 *
			2	17	1.834	2.06			
			3	21	0.442	0.70			
Main Creek	OK620920-01-0180F	Ammonia	1	18	0.01939	0.01		0.001 *	0.000 *
			2	19	0.01061	0.00			
			3	6	0.023	0.01			
		Chloride	1	18	236.25	32.55		0.000 *	0.000 *
			2	19	247.47	56.61			
			3	19	327.39	47.31			
		Conductivity	1	17	3321.1	498.60		0.000 *	0.000 *
			2	20	2784.4	716.30			
			3	21	3548.8	251.70			
		DO % Saturation	1	17	95.15	4.59		0.006 *	0.006 *
			2	20	93.54	6.60			
			3	20	100.52	8.52			
		Hardness (CaCO3)	1	18	1912.1	220.80		0.180	0.017 *
			2	11	2029.9	165.40			
			3	20	2212.5	421.00			
		Nitrate	1	18	0.4728	0.26		0.002 *	0.000 *
			2	19	0.3704	0.20			
			3	19	0.1737	0.16			
		Total Nitrogen	1	18	0.8999	0.28		0.024 *	0.001 *
			2	19	0.7325	0.29			
			3	19	0.5242	0.25			
		Available Nitrogen	1	18	0.5094	0.26		0.003 *	0.000 *
			2	19	0.4197	0.25			
			3	19	0.2021	0.16			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		pH	1	19	8.0574	0.10		0.050	0.006 *
			2	20	7.9985	0.09			
			3	20	7.86	0.29			
		Total P	1	18	0.07428	0.06		0.179	0.002 *
			2	19	0.03753	0.02			
			3	19	0.02768	0.02			
		Sulfate	1	18	1645.8	156.90		0.014 *	0.003 *
			2	19	1694.4	170.00			
			3	19	1828.9	150.60			
		TDS	1	18	3012.4	136.40		0.014 *	0.002 *
			2	19	3055.1	129.10			
			3	19	3189.4	187.40			
		TSS	1	18	61.33	85.70		0.372	0.033 *
			2	19	25.07	20.65			
			3	19	19.42	17.79			
Medicine Lodge River	OK621010-03-0010D	Alkalinity (CaCO3)	1	18	170	40.49		0.324	0.018 *
			2	15	196.67	30.37			
			3	20	212.5	55.21			
		Nitrate	1	17	0.7212	0.43		0.002 *	0.001 *
			2	14	0.85	0.56			
			3	18	0.2478	0.43			
		TKN	1	17	0.3567	0.24		0.012 *	0.020 *
			2	14	0.2924	0.20			
			3	18	0.5428	0.30			
		Available Nitrogen	1	17	0.7751	0.42		0.001 *	0.001 *
			2	14	0.9124	0.54			
			3	18	0.2844	0.43			
		Total P	1	17	0.12065	0.05		0.664	0.002 *
			2	14	0.07071	0.03			
			3	18	0.07689	0.05			
		Sulfate	1	17	299.53	78.90		0.003 *	0.004 *
			2	14	288.01	50.87			
			3	18	232.37	45.26			
		TSS	1	17	45.06	34.47		0.083	0.008 *
			2	14	29.08	23.23			
			3	18	17.22	14.00			
		Turbidity	1	18	52.25	73.19		0.005 *	0.031 *
			2	12	29.22	23.57			
			3	20	11.63	8.90			
Flow	1	18	79.24	80.49		0.002 *	0.018 *		
	2	11	66.97	38.94					
	3	16	22.78	27.54					
Otter Creek	OK620910-03-0040C	Alkalinity (CaCO3)	1	16	231.94	80.91		0.032 *	0.001 *
			2	18	326.39	47.38			
			3	18	279.44	75.35			
		Ammonia	1	15	0.04053	0.05		0.000 *	0.034 *
			2	17	0.0111	0.00			
			3	5	0.0152	0.00			
		Chloride	1	15	73.54	39.97		0.044 *	0.007 *
			2	17	120.4	35.81			
			3	17	91.35	44.63			
		Conductivity	1	16	811.1	325.80		0.007 *	0.011 *
			2	15	1090.2	188.30			
			3	18	858.3	255.20			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		DO	1	16	8.204	3.12		0.030 *	0.012 *
			2	17	11.564	3.74			
			3	18	8.996	2.91			
		DO % Saturation	1	15	87.62	17.37		0.001 *	0.000 *
			2	17	113.35	19.13			
			3	18	87.21	20.90			
		Nitrate	1	15	0.38	0.38		0.000 *	0.002 *
			2	17	0.3902	0.35			
			3	17	0.0418	0.08			
		TKN	1	15	0.6734	0.41		0.005 *	0.025 *
			2	17	0.518	0.25			
			3	17	0.8724	0.42			
		Available Nitrogen	1	15	0.4892	0.43		0.000 *	0.002 *
			2	17	0.4438	0.35			
			3	17	0.0971	0.11			
		OrthoP	1	14	0.09236	0.08		0.005 *	0.044 *
			2	17	0.04947	0.04			
			3	17	0.10041	0.06			
		Total P	1	14	0.17164	0.09		0.008 *	0.018 *
			2	17	0.10418	0.05			
			3	17	0.16318	0.07			
		Sulfate	1	15	53.2	32.22		0.002 *	0.001 *
			2	17	92.62	26.42			
			3	17	60.88	28.99			
		TDS	1	15	474.5	162.60		0.003 *	0.004 *
			2	17	628.9	90.60			
			3	17	489.5	152.40			
TSS	1	15	27.33	21.71		0.384	0.028 *		
	2	17	16.45	13.80					
	3	17	13.24	5.84					
Flow	1	15	4.153	4.23		0.000 *	0.000 *		
	2	14	15.051	14.13					
	3	18	1.533	2.78					
Persimmon Creek	OK720500-01-0150G	Alkalinity (CaCO3)	1	19	261.79	37.21		0.000 *	0.000 *
			2	19	289.79	28.45			
			3	21	224	32.58			
		Ammonia	1	18	0.02583	0.02			0.018 *
			2	18	0.01061	0.00			
			3	6	0.015	0.00			
		Chloride	1	18	48.57	6.59		0.967	0.005 *
			2	18	58.94	13.87			
			3	19	59.11	10.21			
		Conductivity	1	19	910.2	146.40		0.023 *	0.075
			2	19	979	100.70			
			3	21	880.4	153.30			
		DO	1	19	9.504	1.91		0.002 *	0.000 *
			2	19	9.841	2.11			
			3	20	12.539	2.86			
		DO % Saturation	1	16	93.18	6.32		0.000 *	0.000 *
			2	19	90.78	6.06			
			3	20	128.28	27.66			
		Nitrate	1	18	0.8217	0.22		0.000 *	0.000 *
			2	18	0.7128	0.26			
			3	19	0.2411	0.21			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
		Total Nitrogen	1	18	1.2886	0.27		0.001 *	0.000 *		
			2	18	1.1857	0.39					
			3	19	0.7368	0.32					
		Available Nitrogen	1	18	0.8647	0.21		0.000 *	0.000 *		
			2	18	0.7541	0.26					
			3	19	0.2674	0.21					
		pH	1	19	8.2737	0.28		0.104	0.025 *		
			2	19	8.3747	0.08					
			3	20	8.452	0.19					
		OrthoP	1	18	0.04767	0.04		0.003 *	0.005 *		
			2	18	0.07939	0.05					
			3	19	0.03263	0.04					
		Total P	1	18	0.10661	0.05		0.000 *	0.000 *		
			2	18	0.13222	0.06					
			3	19	0.05389	0.04					
		Sulfate	1	18	150.79	20.17		0.120	0.000 *		
			2	18	223.06	57.38					
			3	19	200.22	23.98					
		TSS	1	18	32.11	21.50		0.000 *	0.000 *		
			2	18	40.56	26.27					
			3	19	13.68	5.08					
		Turbidity	1	19	25.39	26.02		0.000 *	0.001 *		
			2	12	30.19	17.98					
			3	21	6.29	4.16					
		Flow	1	18	11.977	8.13		0.000 *	0.000 *		
			2	17	14.381	6.22					
			3	20	5.332	3.88					
		Pond Creek	OK621000-05-0010D	Alkalinity (CaCO3)	1	17	282.94	103.61		0.268	0.002 *
					2	16	363.06	81.80			
					3	18	396.44	89.82			
Ammonia	1			16	0.06213	0.08		0.003 *	0.087		
	2			15	0.02151	0.03					
	3			5	0.0772	0.04					
Chloride	1			16	162.62	69.08		0.000 *	0.000 *		
	2			15	215.29	64.51					
	3			19	118.82	52.99					
Conductivity	1			17	1311.3	433.00		0.001 *	0.016 *		
	2			15	1450.5	290.60					
	3			20	1111	269.20					
Nitrite	1			16	0.03438	0.05		0.000 *	0.000 *		
	2			15	0.01414	0.00					
	3			19	0.12526	0.10					
TKN	1			16	0.9356	0.84		0.002 *	0.069		
	2			15	0.7033	0.34					
	3			19	1.18	0.46					
pH	1			17	8	0.46		0.001 *	0.075		
	2			12	7.9442	0.13					
	3			20	8.183	0.21					
Sulfate	1	16	134.94	52.74		0.001 *	0.001 *				
	2	15	163.93	89.31							
	3	19	80.99	25.72							
TDS	1	16	826.3	235.40		0.000 *	0.002 *				
	2	15	899.9	174.90							
	3	19	664.6	143.80							

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Flow	1	17	14.728	13.04		0.015 *	0.001 *
			2	4	6.118	7.20			
			3	14	0.972	1.36			
Red Rock Creek: Lower	OK621200-05-0010K	Alkalinity (CaCO3)	1	18	209.5	97.80		0.371	0.029 *
			2	14	310.1	98.80			
			3	18	274.6	117.40			
		Ammonia	1	17	0.09235	0.12		0.000 *	0.035 *
			2	13	0.01141	0.00			
			3	5	0.0336	0.02			
		DO % Saturation	1	18	68.92	21.15		0.003 *	0.019 *
			2	14	81.16	11.87			
			3	18	61.74	20.14			
		Hardness (CaCO3)	1	17	245.6	121.20		0.362	0.035 *
			2	6	306.7	135.10			
			3	18	371.9	152.30			
		Nitrate	1	17	0.7847	0.86		0.038 *	0.022 *
			2	13	0.4906	0.45			
			3	16	0.1725	0.33			
		TKN	1	17	0.9671	0.50		0.000 *	0.000 *
			2	13	0.6462	0.29			
			3	16	1.2688	0.32			
		Available Nitrogen	1	17	0.9047	0.96		0.037 *	0.019 *
			2	13	0.544	0.46			
			3	16	0.2181	0.34			
		pH	1	18	7.7917	0.31		0.807	0.065
			2	13	8.0523	0.27			
			3	18	8.0922	0.53			
		Total P	1	17	0.295	0.12		0.059	0.115
			2	13	0.2169	0.09			
			3	16	0.2918	0.11			
TSS	1	17	68.12	49.76		0.370	0.051		
	2	13	44.77	45.32					
	3	16	33.56	17.55					
Turbidity	1	18	183.5	189.20		0.909	0.089		
	2	7	84	60.40					
	3	18	88.2	86.20					
Flow	1	17	13.05	15.13		0.010 *	0.010 *		
	2	10	27.87	40.66					
	3	17	0.77	1.07					
Salt Creek (Kingfisher)	OK620910-02-0100D	Ammonia	1	19	0.02795	0.03		0.069	0.067
			2	16	0.01203	0.00			
			3	6	0.07467	0.14			
		Chloride	1	19	5433	2715.00		0.000 *	0.000 *
			2	16	5613	1934.00			
			3	19	12327	3658.00			
		Conductivity	1	20	14686	6618.00		0.000 *	0.000 *
			2	13	13211	5481.00			
			3	19	32171	11860.00			
		DO	1	21	12.768	3.59		0.355	0.005 *
			2	17	10.284	3.08			
			3	20	9.317	3.17			
		DO % Saturation	1	17	129.22	33.67		0.838	0.000 *
			2	17	92.42	12.71			
			3	20	91.38	17.32			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Hardness (CaCO3)	1	19	1416.8	181.30		0.010 *	0.000 *
			2	8	1442.7	122.90			
			3	20	2150.9	705.20			
		Nitrate	1	19	1.0863	1.03		0.007 *	0.025 *
			2	16	1.4549	0.95			
			3	19	0.5474	0.90			
		TKN	1	19	0.5145	0.26		0.016 *	0.018 *
			2	16	0.2942	0.13			
			3	19	0.4821	0.27			
		Total Nitrogen	1	19	1.6745	1.00		0.017 *	0.043 *
			2	16	1.865	0.93			
			3	19	1.0747	0.93			
		Available Nitrogen	1	19	1.1879	1.11		0.004 *	0.020 *
			2	16	1.5828	0.94			
			3	19	0.6174	0.90			
		pH	1	20	8.0625	0.35		0.001 *	0.000 *
			2	17	7.8729	0.17			
			3	20	7.5885	0.26			
		Sulfate	1	19	1155.8	160.00		0.175	0.037 *
			2	16	1221.1	190.10			
			3	18	1309.9	182.80			
		Water Temp	1	21	20.219	10.73		0.781	0.020 *
			2	17	12.918	9.61			
			3	20	12.06	9.03			
		TDS	1	19	11289	3983.00		0.000 *	0.000 *
			2	16	9844	2368.00			
			3	19	22132	6361.00			
		TSS	1	19	17.5	11.80		0.023 *	0.004 *
			2	16	15.1	5.60			
			3	19	115.9	168.90			
Flow	1	20	13.91	9.55		0.111	0.097		
	2	16	67.44	163.53					
	3	19	6.2	3.71					
Salt Creek (Payne)	OK620900-02-0020D	Alkalinity (CaCO3)	1	21	174.43	63.62		0.241	0.003 *
			2	19	221.05	64.31			
			3	21	245.38	64.58			
		Ammonia	1	20	0.02495	0.02		0.000 *	0.002 *
			2	18	0.01061	0.00			
			3	7	0.03714	0.02			
		Nitrate	1	20	0.3125	0.48		0.517	0.013 *
			2	18	0.0706	0.09			
			3	19	0.0516	0.09			
		TKN	1	20	0.3979	0.22		0.025 *	0.027 *
			2	18	0.3452	0.32			
			3	19	0.6026	0.35			
		Available Nitrogen	1	20	0.354	0.48		0.931	0.016 *
			2	18	0.1071	0.09			
			3	19	0.1042	0.11			
Flow	1	21	3.354	6.75		0.012 *	0.027 *		
	2	17	6.634	11.50					
	3	21	0.005	0.02					
Salt Creek: Lower	OK621200-04-0010F	Alkalinity (CaCO3)	1	19	132.89	37.62		0.198	0.000 *
			2	18	192.89	34.46			
			3	19	210.42	45.73			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Ammonia	1	19	0.04568	0.07		0.000 *	0.066
			2	17	0.01061	0.00			
			3	5	0.0154	0.00			
		Hardness (CaCO3)	1	19	190.82	62.41		0.517	0.003 *
			2	10	263.57	71.64			
			3	19	287.74	103.78			
		Nitrate	1	19	0.2474	0.28		0.156	0.001 *
			2	17	0.0657	0.08			
			3	18	0.035	0.04			
		TKN	1	19	0.4606	0.31		0.000 *	0.000 *
			2	17	0.1606	0.11			
			3	18	0.6622	0.37			
		Total Nitrogen	1	19	0.7353	0.48		0.000 *	0.000 *
			2	17	0.2653	0.13			
			3	18	0.7367	0.37			
		Available Nitrogen	1	19	0.3204	0.31		0.249	0.001 *
			2	17	0.1153	0.11			
			3	18	0.08	0.07			
		pH	1	19	8.1079	0.37		0.501	0.015 *
			2	16	7.8669	0.28			
			3	19	7.7958	0.33			
		Total P	1	19	0.09337	0.07		0.042 *	0.012 *
			2	17	0.04712	0.02			
			3	18	0.06511	0.03			
		Sulfate	1	19	14.175	5.76		0.391	0.048 *
			2	17	21.947	14.49			
			3	18	18.8	4.97			
		Turbidity	1	20	31.19	22.27		0.081	0.104
			2	11	41.44	59.94			
			3	20	16.61	12.44			
		Flow	1	16	8.09	5.60		0.113	0.036 *
			2	15	37.12	51.34			
			3	17	15.05	20.81			
Salt Creek: Middle	OK621200-04-0010P	Alkalinity (CaCO3)	1	18	142.72	38.97		0.131	0.004 *
			2	17	171.35	55.71			
			3	19	197.32	44.74			
		Chloride	1	17	5.21	4.64		0.000 *	0.000 *
			2	16	6.59	8.38			
			3	18	37.78	20.92			
		Conductivity	1	18	404	143.30		0.024 *	0.024 *
			2	17	421.3	146.10			
			3	19	513.8	83.20			
		DO	1	18	6.463	2.10		0.860	0.006 *
			2	17	8.75	2.77			
			3	19	8.904	2.42			
		DO % Saturation	1	16	66.09	14.33		0.496	0.000 *
			2	17	89.12	12.37			
			3	19	85.76	16.36			
		Hardness (CaCO3)	1	17	188.97	27.70		0.083	0.011 *
			2	10	199.46	59.40			
			3	19	275.53	125.61			
		Nitrate	1	17	0.2124	0.29		0.125	0.006 *
			2	16	0.0547	0.07			
			3	18	0.0267	0.03			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
		TKN	1	17	0.3664	0.20		0.000 *	0.001 *		
			2	16	0.2028	0.18					
			3	18	0.4589	0.18					
		Total Nitrogen	1	17	0.6023	0.35		0.000 *	0.001 *		
			2	16	0.2716	0.17					
			3	18	0.5083	0.18					
		Available Nitrogen	1	17	0.27	0.31		0.184	0.002 *		
			2	16	0.0795	0.07					
			3	18	0.055	0.03					
		OrthoP	1	17	0.01429	0.01		0.058	0.086		
			2	16	0.01935	0.02					
			3	18	0.00822	0.00					
		Total P	1	17	0.06541	0.03		0.052	0.034 *		
			2	16	0.06091	0.04					
			3	18	0.03961	0.02					
		Sulfate	1	17	10.603	3.34		0.004 *	0.000 *		
			2	16	12.369	10.04					
			3	18	21.85	7.53					
		TDS	1	17	221.88	37.17		0.011 *	0.001 *		
			2	16	236.75	60.85					
			3	18	292.5	60.14					
		Flow	1	10	0.53	1.09		0.656	0.080		
			2	17	14.02	11.69					
			3	19	11.47	20.48					
		Sandy Creek	OK621010-02-0010D	Alkalinity (CaCO3)	1	19	213.11	52.94		0.046 *	0.094
					2	16	244.25	27.63			
					3	17	215.47	48.33			
Conductivity	1			19	939.3	158.10		0.183	0.020 *		
	2			14	866.7	118.60					
	3			17	811.8	105.50					
Hardness (CaCO3)	1			18	291.67	52.81		0.154	0.092		
	2			9	285.18	20.56					
	3			16	356.06	142.03					
Nitrate	1			18	1.3183	0.62		0.000 *	0.000 *		
	2			15	1.1673	0.58					
	3			16	0.0306	0.03					
TKN	1			18	0.4303	0.31		0.004 *	0.002 *		
	2			15	0.3126	0.26					
	3			16	0.8563	0.62					
Total Nitrogen	1			18	1.7681	0.66		0.013 *	0.001 *		
	2			15	1.5199	0.66					
	3			16	0.9213	0.60					
Available Nitrogen	1			18	1.3823	0.62		0.000 *	0.000 *		
	2			15	1.2247	0.57					
	3			16	0.0731	0.06					
pH	1			19	8.1953	0.26		0.001 *	0.000 *		
	2			15	8.1947	0.17					
	3			17	8.5641	0.34					
Sulfate	1			18	94.22	43.97		0.029 *	0.052		
	2			15	115.8	83.06					
	3			16	67.78	11.07					
TDS	1	18	529.67	88.40		0.076	0.048 *				
	2	15	509.47	62.90							
	3	16	463.25	75.76							

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Flow	1	15	27.63	22.44		0.005 *	0.004 *
			2	14	23.55	24.62			
			3	13	2.34	4.92			
Skeleton Creek: Upper	OK620910-03-0010S	Alkalinity (CaCO3)	1	17	279.94	51.42		0.003 *	0.000 *
			2	17	370.06	58.79			
			3	18	292.33	79.94			
		Ammonia	1	16	0.08413	0.08		0.014 *	0.019 *
			2	16	0.02603	0.06			
			3	5	0.147	0.16			
		Conductivity	1	17	1953.2	348.20		0.010 *	0.034 *
			2	15	1954.8	202.10			
			3	19	1741.3	243.20			
		TKN	1	16	0.993	0.41		0.005 *	0.003 *
			2	16	0.8606	0.37			
			3	17	1.5612	0.85			
		Total Nitrogen	1	16	6.229	3.06		0.009 *	0.078
			2	16	4.82	1.44			
			3	17	6.584	2.10			
		pH	1	17	8.2712	0.23		0.104	0.097
			2	17	8.2806	0.18			
			3	19	8.4821	0.47			
		Flow	1	17	21.61	15.84		0.002 *	0.009 *
			2	14	28.63	17.63			
			3	15	11.81	5.55			
Stillwater Creek: Upper	OK620900-04-0070T	Alkalinity (CaCO3)	1	19	216.63	69.37		0.052	0.039 *
			2	18	218.28	93.48			
			3	18	287.44	112.05			
		Ammonia	1	18	0.1349	0.17		0.000 *	0.004 *
			2	17	0.0161	0.01			
			3	7	0.2076	0.16			
		DO	1	19	5.958	2.14		0.000 *	0.000 *
			2	19	8.002	3.52			
			3	17	3.471	2.22			
		DO % Saturation	1	17	59.95	18.06		0.000 *	0.000 *
			2	19	78.53	23.41			
			3	17	34.24	21.91			
		Hardness (CaCO3)	1	18	230.5	71.30		0.147	0.047 *
			2	7	194.6	44.70			
			3	18	470.7	479.00			
		Nitrate	1	18	0.3544	0.28		0.001 *	0.001 *
			2	17	0.5049	0.51			
			3	17	0.05	0.06			
		TKN	1	18	0.6172	0.42		0.000 *	0.000 *
			2	17	0.285	0.25			
			3	17	1.2788	0.58			
		Total Nitrogen	1	18	1.0038	0.59		0.005 *	0.017 *
			2	17	0.8151	0.55			
			3	17	1.3806	0.55			
		Available Nitrogen	1	18	0.5216	0.44		0.011 *	0.021 *
			2	17	0.5462	0.52			
			3	17	0.1871	0.17			
		pH	1	19	7.5226	0.27		0.192	0.003 *
			2	15	7.9333	0.21			
			3	18	7.7594	0.46			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles		
		OrthoP	1	18	0.1337	0.14		0.001 *	0.006 *		
			2	17	0.0338	0.04					
			3	17	0.1531	0.13					
		Total P	1	18	0.1913	0.09		0.002 *	0.002 *		
			2	17	0.0969	0.07					
			3	17	0.239	0.16					
		Flow	1	17	1.586	4.11		0.000 *	0.000 *		
			2	10	8.364	8.06					
			3	16	0.102	0.18					
Turkey Creek: Lower	OK620910-06-0010B	Alkalinity (CaCO3)	1	19	291.47	64.50		0.000 *	0.000 *		
			2	17	366.65	35.75					
			3	18	268.06	40.64					
		Ammonia	1	18	0.06956	0.09		0.003 *	0.052		
			2	16	0.01809	0.03					
			3	5	0.0874	0.07					
		Chloride	1	18	183.77	51.76		0.034 *	0.000 *		
			2	16	254.46	51.71					
			3	17	219.97	36.76					
		Conductivity	1	18	1370.2	229.90		0.000 *	0.001 *		
			2	14	1597.1	153.50					
			3	17	1325.1	198.90					
		Nitrate	1	18	1.2456	0.71		0.000 *	0.000 *		
			2	16	1.4663	0.55					
			3	17	0.6282	0.49					
		Nitrite	1	18	0.0161	0.01		0.285	0.087		
			2	16	0.048	0.12					
			3	17	0.1	0.15					
		Available Nitrogen	1	18	1.3312	0.70		0.000 *	0.001 *		
			2	16	1.5323	0.57					
			3	17	0.7547	0.51					
		pH	1	20	8.2975	0.20		0.004 *	0.015 *		
			2	16	8.2019	0.19					
			3	18	8.4017	0.19					
		Sulfate	1	18	105.1	18.83		0.001 *	0.000 *		
			2	16	180.73	66.56					
			3	17	115.94	20.76					
		Flow	1	19	28.33	18.49		0.002 *	0.003 *		
			2	16	26.86	18.27					
			3	14	9.2	6.10					
		Turkey Creek: Wheat Capital	OK620910-06-0010R	Ammonia	1	19	0.08263	0.07		0.399	0.010 *
					2	16	0.02228	0.04			
					3	5	0.0398	0.02			
				Chloride	1	19	241.5	130.40		0.272	0.055
					2	16	299	70.50			
					3	18	352.3	178.60			
DO	1			20	10.683	3.48		0.012 *	0.002 *		
	2			16	11.538	4.59					
	3			19	15.001	3.05					
DO % Saturation	1			18	100.78	31.60		0.001 *	0.000 *		
	2			16	111.56	33.01					
	3			19	154	34.99					
TKN	1			19	0.8572	0.40		0.027 *	0.046 *		
	2			16	0.7606	0.30					
	3			18	1.1311	0.57					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		pH	1	19	8.2658	0.25		0.002 *	0.001 *
			2	16	8.2775	0.22			
			3	19	8.5389	0.23			
		Sulfate	1	19	111.36	31.25		0.549	0.033 *
			2	16	155.29	44.04			
			3	18	143.2	68.16			
		TSS	1	19	37.84	38.56		0.906	0.067
			2	16	19.4	15.27			
			3	18	20.06	16.65			
		Flow	1	20	14.722	13.44		0.002 *	0.019 *
			2	16	14.294	5.62			
			3	19	6.425	7.61			
Uncle John's Creek	OK620910-05-0030C	Alkalinity (CaCO3)	1	21	253.24	27.13		0.150	0.002 *
			2	13	310.31	48.98			
			3	14	280.43	55.13			
		Chloride	1	20	84.39	18.77		0.041 *	0.086
			2	12	72.37	17.06			
			3	14	89.56	22.56			
		Conductivity	1	21	1217.6	224.70		0.009 *	0.032 *
			2	9	1049.8	183.60			
			3	14	1298.4	211.40			
		DO % Saturation	1	19	116.45	36.36		0.042 *	0.000 *
			2	13	88.84	6.63			
			3	14	77.91	17.17			
		Hardness (CaCO3)	1	20	407.1	42.70		0.264	0.011 *
			2	4	429.8	42.60			
			3	14	566.1	229.30			
		Nitrate	1	20	0.9775	0.70		0.007 *	0.003 *
			2	12	1.8808	0.48			
			3	14	0.9893	0.94			
		Total Nitrogen	1	20	1.4665	0.64		0.022 *	0.008 *
			2	12	2.2827	0.41			
			3	14	1.5486	0.97			
		Available Nitrogen	1	20	1.0387	0.70		0.009 *	0.004 *
			2	12	1.9274	0.49			
			3	14	1.0507	0.96			
		pH	1	22	8.24	0.30		0.006 *	0.000 *
			2	13	8.0877	0.09			
			3	14	7.8436	0.28			
		Sulfate	1	20	259.92	79.03		0.001 *	0.001 *
			2	12	210.99	42.23			
			3	14	336.55	103.74			
		Water Temp	1	22	20.08	10.54		0.887	0.012 *
			2	13	11.37	10.03			
			3	14	10.84	9.26			
		TDS	1	20	799.2	129.50		0.017 *	0.047 *
			2	12	735.3	107.00			
			3	14	865.2	144.40			
Turbidity	1	21	10.368	10.67		0.001 *	0.026 *		
	2	7	18.656	10.08					
	3	14	7.008	4.06					
Flow	1	21	6.821	6.56		0.003 *	0.003 *		
	2	11	14.502	8.96					
	3	12	4.954	4.21					

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
West Clay Creek	OK621010-01-0090R	Alkalinity (CaCO3)	1	18	286.1	91.50		0.080	0.009 *
			2	21	340	92.40			
			3	21	424.2	194.10			
		Chloride	1	17	2901	2773.00		0.000 *	0.000 *
			2	20	3689	3408.00			
			3	20	8287	1995.00			
		Conductivity	1	18	8552	7541.00		0.000 *	0.000 *
			2	19	4913	3788.00			
			3	21	23305	4259.00			
		DO % Saturation	1	13	118.03	26.97		0.036 *	0.074
			2	20	102.07	36.53			
			3	20	129.63	43.22			
		Hardness (CaCO3)	1	17	1244.8	280.20		0.002 *	0.000 *
			2	11	1432.6	238.10			
			3	20	1825.5	342.80			
		Nitrate	1	17	0.9224	0.86		0.003 *	0.005 *
			2	20	0.7675	0.62			
			3	20	0.243	0.42			
		Total Nitrogen	1	17	1.7976	0.83		0.040 *	0.025 *
			2	20	1.6149	0.75			
			3	20	1.1405	0.66			
		Available Nitrogen	1	17	1.0105	0.91		0.008 *	0.011 *
			2	20	0.8258	0.63			
			3	20	0.337	0.47			
		pH	1	19	8.2021	0.42		0.075	0.017 *
			2	17	7.8765	0.32			
			3	20	8.0425	0.23			
		OrthoP	1	16	0.03338	0.04		0.713	0.076
			2	20	0.08735	0.08			
			3	20	0.0777	0.08			
		Sulfate	1	17	1092.8	314.60		0.191	0.008 *
			2	20	1310.8	384.20			
			3	20	1459.3	317.70			
		TDS	1	17	6496	4372.00		0.000 *	0.000 *
			2	20	7313	4308.00			
			3	20	14610	4455.00			
		TSS	1	17	22.47	17.17		0.027 *	0.023 *
			2	20	17.38	12.05			
			3	20	49.45	60.99			
		Turbidity	1	18	14.77	19.45		0.005 *	0.083
			2	12	17.17	14.71			
			3	21	6.95	3.88			
Flow	1	17	2.874	4.11		0.025 *	0.034 *		
	2	17	2.09	3.54					
	3	18	0.137	0.13					
Yellowstone Creek	OK621010-01-0270C	Alkalinity (CaCO3)	1	19	138	36.24		0.175	0.045 *
			2	19	157.11	23.10			
			3	13	188.92	96.61			
		Chloride	1	18	47.723	5.11		0.015 *	0.000 *
			2	17	67.482	13.44			
			3	12	56.942	4.83			
		Hardness (CaCO3)	1	18	1925.9	139.60		0.054	0.002 *
			2	10	2003	270.50			
			3	12	2240.8	272.00			

Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 2 v. 3	P Value All Cycles
		Total P	1	18	0.037	0.03		0.051	0.002 *
			2	17	0.0205	0.01			
			3	12	0.01208	0.01			
		Sulfate	1	18	1713.9	182.00		0.003 *	0.001 *
			2	17	1714.2	264.00			
			3	12	2001.3	182.30			
		TDS	1	18	2720.9	172.20		0.000 *	0.000 *
			2	17	2664	150.10			
			3	12	2922.3	127.30			
		TSS	1	18	16	10.08		0.420	0.046 *
			2	17	9.756	5.43			
			3	12	11.333	4.62			
		Flow	1	19	1.779	1.70		0.036 *	0.027 *
			2	16	3.589	4.47			
			3	10	0.392	0.80			
Site Name	WBID	Parameter	Cycle	N	Mean	Standard Deviation	Relative Change	P Value 1 v.3	
Wildhorse Creek	OK621000-02-0040F	Ammonia	1	18	0.069	0.06		0.029 *	
			3	6	0.2325	0.29			
		Conductivity	1	18	2001.1	378.20		0.028 *	
			3	20	1720	379.30			
		DO	1	19	8.818	3.34		0.035 *	
			3	19	6.431	3.37			
		Nitrate	1	18	2.054	2.52		0.034 *	
			3	20	0.643	1.28			
		Available Nitrogen	1	18	2.144	2.52		0.044 *	
			3	20	0.794	1.36			
		TDS	1	18	1201.8	258.10		0.057	
			3	20	1057.9	190.20			
		Flow	1	19	4.071	4.33		0.000 *	
			3	19	0.17	0.33			

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Fixed Sites															
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	119	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	108	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	103	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	54	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	46	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	31	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	29	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	20	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	18	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	15	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	11	Percidae	Percina caprodes	Logperch	interm	1						
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	10	Centrarchidae	Pomoxis annularis	White crappie	tol			1				
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	6	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	3	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	3	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	2	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	2	Percichthyidae	Morone chrysops	White bass	tol				1			
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Beaver Creek	OK620900-03-0230C	50732	8/7/2012	1	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	146	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	31	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	29	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	23	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	17	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	16	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	16	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	13	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	13	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	13	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	10	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	10	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	10	Cyprinidae	Lythrurus umbratilis	Redfin shiner	interm	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	9	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	7	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	6	Percidae	Unidentified Etheostoma spp.	Unidentified darter spp.								
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	5	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	5	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	5	Percidae	Etheostoma spectabile	Orangethroat darter	interm	1						1
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	4	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	4	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	2	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	2	Fundulidae	Fundulus notatus	Blackstripe topminnow	interm	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	1	Catostomidae	Ictiobus cyprinellus	Largemouth buffalo	tol	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	1	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Beaver Creek	OK621210-00-0050L	50719	7/12/2012	1	Ictaluridae	Ictalurus punctatus	Channel catfish	tol			1			1	
Bent Creek	OK720500-01-0070D	50326	6/20/2012	334	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Bent Creek	OK720500-01-0070D	50326	6/20/2012	260	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Bent Creek	OK720500-01-0070D	50326	6/20/2012	130	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Bent Creek	OK720500-01-0070D	50326	6/20/2012	105	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Bent Creek	OK720500-01-0070D	50326	6/20/2012	23	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Bent Creek	OK720500-01-0070D	50326	6/20/2012	7	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Bent Creek	OK720500-01-0070D	50326	6/20/2012	2	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Bent Creek	OK720500-01-0070D	50326	6/20/2012	2	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Bent Creek	OK720500-01-0070D	50326	6/20/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Bent Creek	OK720500-01-0070D	50326	6/20/2012	1	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	466	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	86	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	41	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	26	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	16	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	16	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	12	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	6	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	5	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol			1				
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	4	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	3	Ictaluridae	Noturus nocturnus	Freckled madtom	intol	1						
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	2	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	2	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	2	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol			1				
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	1	Centrarchidae	Pomoxis annularis	White crappie	tol			1				
Bitter Creek	OK621100-00-0100G	50338	6/28/2012	1	Centrarchidae	Unidentified Lepomis spp.	Unidentified sunfish spp.	interm	1						
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	92	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	56	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	45	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	37	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	36	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	17	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	16	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	11	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	11	Ictaluridae	Ictalurus punctatus	Channel catfish	tol			1			1	
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	4	Centrarchidae	Pomoxis annularis	White crappie	tol			1				
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	3	Catostomidae	Carpionodes carpio	River carpsucker	tol			1				
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	3	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	2	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	2	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	2	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	1	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	1	Cyprinidae	Notropis buchanani	Ghost shiner	interm	1						
Black Bear Creek: Upper	OK621200-03-0260B	50734	8/9/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	512	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	128	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	64	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	45	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	23	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	15	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	14	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	5	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	4	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	3	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	3	Percidae	Percina caprodes	Logperch	interm	1						
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	1	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Bois d'Arc Creek	OK621000-03-0010C	50336	6/27/2012	1	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	196	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	42	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	31	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	26	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	23	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	4	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	2	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	2	Ictaluridae	Ameiurus melas	Black bullhead	tol	1					1	
Buffalo Creek: Lower	OK620920-05-0010G	50295	5/31/2012	1	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Clear Creek	OK720500-02-0070G	50304	6/6/2012	208	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Clear Creek	OK720500-02-0070G	50304	6/6/2012	81	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Clear Creek	OK720500-02-0070G	50304	6/6/2012	36	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Clear Creek	OK720500-02-0070G	50304	6/6/2012	15	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Clear Creek	OK720500-02-0070G	50304	6/6/2012	9	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Clear Creek	OK720500-02-0070G	50304	6/6/2012	8	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Clear Creek	OK720500-02-0070G	50304	6/6/2012	6	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Clear Creek	OK720500-02-0070G	50304	6/6/2012	3	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Clear Creek	OK720500-02-0070G	50304	6/6/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Clear Creek	OK720500-02-0070G	50304	6/6/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Clear Creek	OK720500-02-0300F	50313	6/7/2012	353	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Clear Creek	OK720500-02-0300F	50313	6/7/2012	179	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Clear Creek	OK720500-02-0300F	50313	6/7/2012	92	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Clear Creek	OK720500-02-0300F	50313	6/7/2012	60	Centrarchidae	Unidentified Micropterus spp.	Unidentified bass spp.	interm				1			
Clear Creek	OK720500-02-0300F	50313	6/7/2012	33	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Clear Creek	OK720500-02-0300F	50313	6/7/2012	24	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Clear Creek	OK720500-02-0300F	50313	6/7/2012	17	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Clear Creek	OK720500-02-0300F	50313	6/7/2012	6	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
Clear Creek	OK720500-02-0300F	50313	6/7/2012	5	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1			1
Clear Creek	OK720500-02-0300F	50313	6/7/2012	5	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Clear Creek	OK720500-02-0300F	50313	6/7/2012	1	Lepisosteidae	Lepisosteus platostomus	Shortnose gar	tol				1			
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	219	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	174	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	166	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	40	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	32	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	26	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	22	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	7	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	4	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	4	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	4	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	2	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Cooper Creek	OK620910-02-0040C	50711	7/12/2012	1	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	351	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	78	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	47	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	40	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	9	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	6	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	5	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	5	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	5	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	4	Cyprinidae	Notropis bairdi	Red River shiner	tol	1						
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	4	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	1	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Cottonwood Creek	OK620910-04-0010E	50733	8/8/2012	1	Ictaluridae	Ictalurus furcatus	Blue catfish	tol	1			1			
Council Creek	OK620900-02-0050H	50280	5/16/2012	153	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Council Creek	OK620900-02-0050H	50280	5/16/2012	99	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Council Creek	OK620900-02-0050H	50280	5/16/2012	79	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Council Creek	OK620900-02-0050H	50280	5/16/2012	26	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Council Creek	OK620900-02-0050H	50280	5/16/2012	16	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Council Creek	OK620900-02-0050H	50280	5/16/2012	12	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Council Creek	OK620900-02-0050H	50280	5/16/2012	9	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Council Creek	OK620900-02-0050H	50280	5/16/2012	9	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Council Creek	OK620900-02-0050H	50280	5/16/2012	6	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Council Creek	OK620900-02-0050H	50280	5/16/2012	5	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Council Creek	OK620900-02-0050H	50280	5/16/2012	5	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Council Creek	OK620900-02-0050H	50280	5/16/2012	5	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Council Creek	OK620900-02-0050H	50280	5/16/2012	4	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Council Creek	OK620900-02-0050H	50280	5/16/2012	3	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Council Creek	OK620900-02-0050H	50280	5/16/2012	3	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Council Creek	OK620900-02-0050H	50280	5/16/2012	2	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Council Creek	OK620900-02-0050H	50280	5/16/2012	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Council Creek	OK620900-02-0050H	50280	5/16/2012	1	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Council Creek	OK620900-02-0050H	50280	5/16/2012	1	Cyprinidae	Camptostoma anomalum	Central stoneroller	interm						1	1
Council Creek	OK620900-02-0050H	50280	5/16/2012	1	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	56	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	40	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	4	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	4	Cyprinidae	Camptostoma anomalum	Central stoneroller	interm					1		1
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	3	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	2	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	2	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	2	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	interm	1						
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	1	Centrarchidae	Unidentified Lepomis hybrid	Hybrid, longear x bluegill sunfish	tol							
Crooked Creek	OK620930-00-0100G	50307	6/6/2012	1	Percidae	Etheostoma cragini	Arkansas darter	intol	1						1
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	298	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	174	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	151	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	112	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	80	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	36	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	34	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	25	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	21	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	18	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	10	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	9	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	3	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	2	Lepisosteidae	Lepisosteus platostomus	Shortnose gar	tol				1			
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	1	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Crooked Creek	OK621000-06-0010C	50386	7/11/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	234	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	159	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	76	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	71	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	48	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	47	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	36	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	36	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	34	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	29	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	13	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	12	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	12	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	10	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	9	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	9	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	6	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	6	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	3	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	2	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Dead Indian Creek	OK620910-05-0080A	50713	7/17/2012	1	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Deep Creek	OK620910-02-0250C	50333	6/27/2012	117	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Deep Creek	OK620910-02-0250C	50333	6/27/2012	117	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Deep Creek	OK620910-02-0250C	50333	6/27/2012	62	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Deep Creek	OK620910-02-0250C	50333	6/27/2012	55	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Deep Creek	OK620910-02-0250C	50333	6/27/2012	31	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Deep Creek	OK620910-02-0250C	50333	6/27/2012	12	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Deep Creek	OK620910-02-0250C	50333	6/27/2012	12	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Deep Creek	OK620910-02-0250C	50333	6/27/2012	10	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Deep Creek	OK620910-02-0250C	50333	6/27/2012	9	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Deep Creek	OK620910-02-0250C	50333	6/27/2012	8	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Deep Creek	OK620910-02-0250C	50333	6/27/2012	5	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Deep Creek	OK620910-02-0250C	50333	6/27/2012	3	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Deep Creek	OK620910-02-0250C	50333	6/27/2012	3	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Deep Creek	OK620910-02-0250C	50333	6/27/2012	3	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Deep Creek	OK620910-02-0250C	50333	6/27/2012	3	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1					1	
Deep Creek	OK620910-02-0250C	50333	6/27/2012	2	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
Deep Creek	OK620910-02-0250C	50333	6/27/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Deep Creek	OK620910-02-0250C	50333	6/27/2012	1	Centrarchidae	Pomoxis nigromaculatus	Black crappie	tol				1			
Deep Creek	OK620910-02-0250C	50333	6/27/2012	1	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Deer Creek	OK621000-04-0010D	50293	5/30/2012	2237	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Deer Creek	OK621000-04-0010D	50293	5/30/2012	334	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	205	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	165	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	92	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	87	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Deer Creek	OK621000-04-0010D	50293	5/30/2012	77	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Deer Creek	OK621000-04-0010D	50293	5/30/2012	36	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Deer Creek	OK621000-04-0010D	50293	5/30/2012	31	Catostomidae	Moxostoma	Redhorse sucker	intol	1						1
Deer Creek	OK621000-04-0010D	50293	5/30/2012	14	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Deer Creek	OK621000-04-0010D	50293	5/30/2012	13	Centrarchidae	Unidentified Lepomis spp.	Unidentified sunfish spp.	interm	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	10	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Deer Creek	OK621000-04-0010D	50293	5/30/2012	10	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Deer Creek	OK621000-04-0010D	50293	5/30/2012	8	Centrarchidae	Micropterus dolomieu	Smallmouth bass	intol				1			1
Deer Creek	OK621000-04-0010D	50293	5/30/2012	8	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	8	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Deer Creek	OK621000-04-0010D	50293	5/30/2012	7	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	6	Cyprinidae	Unidentified Pimephales spp.	Unidentified minnow spp.	unk							
Deer Creek	OK621000-04-0010D	50293	5/30/2012	5	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Deer Creek	OK621000-04-0010D	50293	5/30/2012	4	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Deer Creek	OK621000-04-0010D	50293	5/30/2012	4	Percidae	Percina caprodes	Logperch	interm	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	3	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Deer Creek	OK621000-04-0010D	50293	5/30/2012	2	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Deer Creek	OK621000-04-0010D	50293	5/30/2012	2	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Deer Creek	OK621000-04-0010D	50293	5/30/2012	1	Catostomidae	Carpiodes cyprinus	Quillback	interm			1				
Deer Creek	OK621000-04-0010D	50293	5/30/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Deer Creek	OK621000-04-0010D	50293	5/30/2012	1	Lepisosteidae	Unidentified Lepisosteus spp.	Unidentified gar spp.	tol				1			
Doga Creek	OK621200-02-0020C	50319	6/19/2012	280	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Doga Creek	OK621200-02-0020C	50319	6/19/2012	47	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Doga Creek	OK621200-02-0020C	50319	6/19/2012	41	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Doga Creek	OK621200-02-0020C	50319	6/19/2012	31	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Doga Creek	OK621200-02-0020C	50319	6/19/2012	26	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Doga Creek	OK621200-02-0020C	50319	6/19/2012	25	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Doga Creek	OK621200-02-0020C	50319	6/19/2012	18	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Doga Creek	OK621200-02-0020C	50319	6/19/2012	5	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Doga Creek	OK621200-02-0020C	50319	6/19/2012	4	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Doga Creek	OK621200-02-0020C	50319	6/19/2012	4	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Doga Creek	OK621200-02-0020C	50319	6/19/2012	3	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Doga Creek	OK621200-02-0020C	50319	6/19/2012	3	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Doga Creek	OK621200-02-0020C	50319	6/19/2012	2	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Doga Creek	OK621200-02-0020C	50319	6/19/2012	1	Catostomidae	Unidentified Catostomidae spp.	Unidentified sucker spp.	interm	1						1
Doga Creek	OK621200-02-0020C	50319	6/19/2012	1	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Doga Creek	OK621200-02-0020C	50319	6/19/2012	1	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Doga Creek	OK621200-02-0020C	50319	6/19/2012	1	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
Doga Creek	OK621200-02-0020C	50319	6/19/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Doga Creek	OK621200-02-0020C	50319	6/19/2012	1	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	386	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	188	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	173	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	161	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	115	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	108	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	100	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	52	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	38	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	15	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	15	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	10	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	9	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	1	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	1	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Driftwood Creek	OK621010-03-0030C	50383	7/10/2012	1	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1					1	
Duck Pond Creek	OK720500-02-0250F	50303	6/5/2012	110	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Duck Pond Creek	OK720500-02-0250F	50303	6/5/2012	31	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Duck Pond Creek	OK720500-02-0250F	50303	6/5/2012	23	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Duck Pond Creek	OK720500-02-0250F	50303	6/5/2012	19	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Duck Pond Creek	OK720500-02-0250F	50303	6/5/2012	12	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Duck Pond Creek	OK720500-02-0250F	50303	6/5/2012	4	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Duck Pond Creek	OK720500-02-0250F	50303	6/5/2012	2	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	270	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	100	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	38	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	26	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	22	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	22	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	18	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	18	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	17	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	9	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	7	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	7	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	4	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	3	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	3	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	2	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	2	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Eagle Chief Creek: Lower	OK620920-04-0010C	50328	6/21/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	1162	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	945	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	117	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	49	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	43	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	21	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	21	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	14	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	9	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	8	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	2	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	2	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	2	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
Eagle Chief Creek: Upper	OK620920-04-0010G	50309	6/6/2012	1	Catostomidae	Moxostoma	Redhorse sucker	intol	1						1
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	160	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	154	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	11	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	10	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	8	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	6	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	5	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	5	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	4	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	4	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	2	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	2	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Euchee Creek	OK620900-01-0290D	50300	6/5/2012	1	Percichthyidae	Morone chrysops	White bass	tol				1			
Griever Creek	OK620920-01-0130G	50155	5/29/2012	571	Cyprinidae	Hybognathus placitus	Plains minnow	tol	1						
Griever Creek	OK620920-01-0130G	50155	5/29/2012	301	Cyprinidae	Cyprinella lutrensis	Red shiner	tol	1						
Griever Creek	OK620920-01-0130G	50155	5/29/2012	78	Cyprinidae	Notropis stramineus	Sand shiner	tol	1						
Griever Creek	OK620920-01-0130G	50155	5/29/2012	64	Fundulidae	Fundulus zebrinus	Plains killifish	tol				1			
Griever Creek	OK620920-01-0130G	50155	5/29/2012	29	Cyprinidae	Notropis bairdi	Red River shiner	tol				1			
Griever Creek	OK620920-01-0130G	50155	5/29/2012	8	Poeciliidae	Gambusia affinis	Mosquitofish	tol			1				
Griever Creek	OK620920-01-0130G	50155	5/29/2012	4	Cyprinidae	Campostoma anomalum	Central stoneroller	tol			1				
Griever Creek	OK620920-01-0130G	50155	5/29/2012	1	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	interm	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	375	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	306	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Indian Creek	OK620910-02-0310C	50710	7/11/2012	163	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	125	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Indian Creek	OK620910-02-0310C	50710	7/11/2012	105	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	104	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Indian Creek	OK620910-02-0310C	50710	7/11/2012	84	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Indian Creek	OK620910-02-0310C	50710	7/11/2012	68	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	64	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Indian Creek	OK620910-02-0310C	50710	7/11/2012	53	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	35	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	24	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	20	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Indian Creek	OK620910-02-0310C	50710	7/11/2012	14	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Indian Creek	OK620910-02-0310C	50710	7/11/2012	13	Cyprinidae	Notropis bairdi	Red River shiner	tol	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	8	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Indian Creek	OK620910-02-0310C	50710	7/11/2012	5	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Indian Creek	OK620910-02-0310C	50710	7/11/2012	3	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1			1
Indian Creek	OK620910-02-0310C	50710	7/11/2012	1	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Indian Creek	OK620910-02-0310C	50710	7/11/2012	1	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Indian Creek	OK620910-02-0310C	50710	7/11/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	560	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	337	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	272	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	267	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	114	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	24	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	18	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	16	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	16	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	10	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	7	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	5	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	5	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	4	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	2	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	2	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	2	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Kingfisher Creek	OK620910-05-0010J	50715	7/19/2012	1	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Kiowa Creek: Harper Co.	OK720500-02-0130C	50306	6/6/2012	302	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Kiowa Creek: Harper Co.	OK720500-02-0130C	50306	6/6/2012	40	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Kiowa Creek: Harper Co.	OK720500-02-0130C	50306	6/6/2012	38	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Kiowa Creek: Harper Co.	OK720500-02-0130C	50306	6/6/2012	12	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Kiowa Creek: Harper Co.	OK720500-02-0130C	50306	6/6/2012	10	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	116	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	65	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	51	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	44	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	30	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	22	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	10	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	5	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	5	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	4	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	2	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	2	Centrarchidae	Lepomis microlophus	Redear sunfish	interm	1						
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	1	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1			1
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	1	Centrarchidae	Unidentified Lepomis hybrid	Hybrid, green x bluegill sunfish	tol							
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	1	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	1	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Lagoon Creek	OK620900-01-0180J	50323	5/14/2012	1	Percidae	Percina caprodes	Logperch	interm	1						
Long Creek	OK620920-02-0080D	50159	5/30/2012	110	Cyprinidae	Cyprinella lutrensis	Red shiner	intol	1						
Long Creek	OK620920-02-0080D	50159	5/30/2012	71	Fundulidae	Fundulus zebrinus	Plains killifish	tol			1				
Long Creek	OK620920-02-0080D	50159	5/30/2012	39	Cyprinidae	Notropis stramineus	Sand shiner	tol			1				
Long Creek	OK620920-02-0080D	50159	5/30/2012	30	Cyprinidae	Notropis bairdi	Red River shiner	tol				1			1
Long Creek	OK620920-02-0080D	50159	5/30/2012	12	Cyprinidae	Campostoma anomalum	Central stoneroller	tol	1						
Long Creek	OK620920-02-0080D	50159	5/30/2012	2	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Long Creek	OK620920-02-0080D	50159	5/30/2012	2	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	tol	1						
Long Creek	OK620920-02-0080D	50159	5/30/2012	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol	1						
Long Creek	OK620920-02-0080D	50159	5/30/2012	1	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	tol				1			
Long Creek	OK620920-02-0080D	50159	5/30/2012	1	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						1
Main Creek	OK620920-01-0180F	50316	6/14/2012	303	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Main Creek	OK620920-01-0180F	50316	6/14/2012	84	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Main Creek	OK620920-01-0180F	50316	6/14/2012	47	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Main Creek	OK620920-01-0180F	50316	6/14/2012	23	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Main Creek	OK620920-01-0180F	50316	6/14/2012	1	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	interm	1						
Main Creek	OK620920-01-0180F	50316	6/14/2012	1	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	1150	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	489	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	75	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	57	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	36	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	33	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	27	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	15	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	10	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	6	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	5	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	4	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	4	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	1	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	1	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Medicine Lodge River	OK621010-03-0010D	50382	7/10/2012	1	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Otter Creek	OK620910-03-0040C	50731	8/6/2012	133	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Otter Creek	OK620910-03-0040C	50731	8/6/2012	95	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Otter Creek	OK620910-03-0040C	50731	8/6/2012	90	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Otter Creek	OK620910-03-0040C	50731	8/6/2012	85	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Otter Creek	OK620910-03-0040C	50731	8/6/2012	59	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Otter Creek	OK620910-03-0040C	50731	8/6/2012	49	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Otter Creek	OK620910-03-0040C	50731	8/6/2012	40	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Otter Creek	OK620910-03-0040C	50731	8/6/2012	30	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Otter Creek	OK620910-03-0040C	50731	8/6/2012	20	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Otter Creek	OK620910-03-0040C	50731	8/6/2012	14	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Otter Creek	OK620910-03-0040C	50731	8/6/2012	10	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Otter Creek	OK620910-03-0040C	50731	8/6/2012	10	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Otter Creek	OK620910-03-0040C	50731	8/6/2012	6	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Otter Creek	OK620910-03-0040C	50731	8/6/2012	5	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Otter Creek	OK620910-03-0040C	50731	8/6/2012	3	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Otter Creek	OK620910-03-0040C	50731	8/6/2012	3	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Otter Creek	OK620910-03-0040C	50731	8/6/2012	3	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1					1	
Otter Creek	OK620910-03-0040C	50731	8/6/2012	2	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Otter Creek	OK620910-03-0040C	50731	8/6/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Otter Creek	OK620910-03-0040C	50731	8/6/2012	1	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Otter Creek	OK620910-03-0040C	50731	8/6/2012	1	Percidae	Percina caprodes	Logperch	interm	1						
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	217	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	129	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	114	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	106	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	33	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	23	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	10	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	6	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	2	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	2	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Persimmon Creek	OK720500-01-0150G	50327	6/20/2012	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Pond Creek	OK621000-05-0010D	50335	6/27/2012	980	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Pond Creek	OK621000-05-0010D	50335	6/27/2012	147	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Pond Creek	OK621000-05-0010D	50335	6/27/2012	67	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Pond Creek	OK621000-05-0010D	50335	6/27/2012	53	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Pond Creek	OK621000-05-0010D	50335	6/27/2012	48	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Pond Creek	OK621000-05-0010D	50335	6/27/2012	39	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Pond Creek	OK621000-05-0010D	50335	6/27/2012	27	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Pond Creek	OK621000-05-0010D	50335	6/27/2012	16	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Pond Creek	OK621000-05-0010D	50335	6/27/2012	13	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Pond Creek	OK621000-05-0010D	50335	6/27/2012	10	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Pond Creek	OK621000-05-0010D	50335	6/27/2012	4	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Pond Creek	OK621000-05-0010D	50335	6/27/2012	3	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Pond Creek	OK621000-05-0010D	50335	6/27/2012	2	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Pond Creek	OK621000-05-0010D	50335	6/27/2012	1	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Pond Creek	OK621000-05-0010D	50335	6/27/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Pond Creek	OK621000-05-0010D	50335	6/27/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Pond Creek	OK621000-05-0010D	50335	6/27/2012	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Pond Creek	OK621000-05-0010D	50335	6/27/2012	1	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Pond Creek	OK621000-05-0010D	50335	6/27/2012	1	Lepisosteidae	Unidentified Lepisosteus spp.	Unidentified gar spp.	tol				1			
Pond Creek	OK621000-05-0010D	50335	6/27/2012	1	Percichthyidae	Morone chrysops	White bass	tol				1			
Pond Creek	OK621000-05-0010D	50335	6/27/2012	1	Percidae	Percina caprodes	Logperch	interm	1						
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	178	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	102	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	81	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	53	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	18	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	12	Cyprinidae	Notropis buchanani	Ghost shiner	interm	1						
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	7	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	5	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	5	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	4	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	4	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	2	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	2	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	1	Ictaluridae	Noturus nocturnus	Freckled madtom	intol	1						
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	1	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Red Rock Creek: Lower	OK621200-05-0010K	52289	5/16/2013	1	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	247	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	99	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	87	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	85	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	79	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	45	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	35	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	22	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	18	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	12	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	7	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	6	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	5	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	3	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Red Rock Creek: Upper	OK621200-05-0160G	50735	8/13/2012	2	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Salt Creek	OK620900-02-0020D	50281	5/17/2012	199	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Salt Creek	OK620900-02-0020D	50281	5/17/2012	78	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Salt Creek	OK620900-02-0020D	50281	5/17/2012	50	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Salt Creek	OK620900-02-0020D	50281	5/17/2012	32	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Salt Creek	OK620900-02-0020D	50281	5/17/2012	21	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Salt Creek	OK620900-02-0020D	50281	5/17/2012	19	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Salt Creek	OK620900-02-0020D	50281	5/17/2012	12	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Salt Creek	OK620900-02-0020D	50281	5/17/2012	11	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Salt Creek	OK620900-02-0020D	50281	5/17/2012	11	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Salt Creek	OK620900-02-0020D	50281	5/17/2012	7	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Salt Creek	OK620900-02-0020D	50281	5/17/2012	5	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Salt Creek	OK620900-02-0020D	50281	5/17/2012	4	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Salt Creek	OK620900-02-0020D	50281	5/17/2012	2	Centrarchidae	Lepomis microlophus	Redear sunfish	interm	1						
Salt Creek	OK620900-02-0020D	50281	5/17/2012	2	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Salt Creek	OK620900-02-0020D	50281	5/17/2012	2	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Salt Creek	OK620900-02-0020D	50281	5/17/2012	2	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
Salt Creek	OK620900-02-0020D	50281	5/17/2012	2	Percidae	Percina caprodes	Logperch	interm	1						
Salt Creek	OK620900-02-0020D	50281	5/17/2012	2	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Salt Creek	OK620900-02-0020D	50281	5/17/2012	1	Centrarchidae	Pomoxis nigromaculatus	Black crappie	tol				1			
Salt Creek	OK620900-02-0020D	50281	5/17/2012	1	Centrarchidae	Unidentified Lepomis hybrid	Hybrid, green x bluegill sunfish	tol							
Salt Creek	OK620900-02-0020D	50281	5/17/2012	1	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Salt Creek	OK620900-02-0020D	50281	5/17/2012	1	Lepisosteidae	Unidentified Lepisosteus spp.	Unidentified gar spp.	tol				1			
Salt Creek	OK620910-02-0100D	50324	5/17/2012	248	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	interm	1						
Salt Creek	OK620910-02-0100D	50324	5/17/2012	186	Cyprinidae	Notropis bairdi	Red River shiner	tol	1						
Salt Creek	OK620910-02-0100D	50324	5/17/2012	111	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Salt Creek	OK620910-02-0100D	50324	5/17/2012	108	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Salt Creek	OK620910-02-0100D	50324	5/17/2012	1	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	843	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	47	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	44	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	21	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	20	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	19	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	13	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	7	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	7	Percidae	Percina copelandi	Channel darter	intol	1						1
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	6	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1			1
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	5	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	5	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	4	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	3	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	3	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	2	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	2	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	2	Percidae	Percina caprodes	Logperch	interm	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	1	Percidae	Etheostoma spectabile	Orangethroat darter	interm	1						1
Salt Creek: Lower	OK621200-04-0010F	50320	6/20/2012	1	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	125	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	107	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	28	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	22	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	22	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	17	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	14	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	7	Cyprinidae	Pimephales tenellus	Slim minnow	intol	1						1
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	6	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	3	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1			1
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	3	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	3	Cyprinidae	Lythrurus umbratilis	Redfin shiner	interm	1						
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	2	Catostomidae	Moxostoma erythrurum	Golden redhorse	interm	1						1
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	2	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	1	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	1	Percidae	Etheostoma spectabile	Orangethroat darter	interm	1						1
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	1	Percidae	Percina caprodes	Logperch	interm	1						
Salt Creek: Middle	OK621200-04-0010K	50718	7/18/2012	1	Percidae	Percina copelandi	Channel darter	intol	1						1
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	428	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	330	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	132	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	54	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	45	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	31	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	28	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	21	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	15	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	14	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	9	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	4	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	4	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	2	Abundant hybrids	Stizostedion canadense x Stizostedion	Saugeye hybrid	interm				1			
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	2	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	2	Ictaluridae	Noturus nocturnus	Freckled madtom	intol	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Sandy Creek	OK621010-02-0010D	50717	7/12/2012	1	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	124	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	67	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	32	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	27	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	5	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	2	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	2	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	2	Ictaluridae	Pyloodictis olivaris	Flathead catfish	tol				1			
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	2	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	1	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	1	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Skeleton Creek: Upper	OK620910-03-0010S	50729	8/23/2012	1	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1					1	
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	159	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	33	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	19	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	13	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	11	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	5	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	4	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	2	Ictaluridae	Ameiurus melas	Black bullhead	tol	1					1	
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	1	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1		1	
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Stillwater Creek: Upper	OK620900-04-0070T	50728	8/16/2012	1	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	2493	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	1496	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	548	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	324	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	240	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	136	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	128	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	89	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	73	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	62	Catostomidae	Carpodes carpio	River carpsucker	tol			1				
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	59	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	46	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	41	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	39	Cyprinidae	Unidentified Pimephales spp.	Unidentified minnow spp.	unk							
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	31	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	21	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	20	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	20	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	18	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	8	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1					1	
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	6	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	6	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	4	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	3	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50321	6/20/2012	1	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	130	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	57	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	42	Catostomidae	Carpodes carpio	River carpsucker	tol			1				
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	42	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	33	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	32	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	28	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	27	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	26	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	20	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	16	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	8	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	6	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	4	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	4	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	2	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	1	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Turkey Creek: Lower	OK620910-06-0010B	50730	8/2/2012	1	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	231	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	162	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	135	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	97	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	96	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	72	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	70	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	41	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	38	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	6	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	2	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	1	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Uncle John's Creek	OK620910-05-0030C	50716	7/25/2012	1	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
West Clay Creek	OK621010-01-0130R	50297	5/31/2012	724	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
West Clay Creek	OK621010-01-0130R	50297	5/31/2012	550	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
West Clay Creek	OK621010-01-0130R	50297	5/31/2012	14	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
West Clay Creek	OK621010-01-0130R	50297	5/31/2012	5	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
West Clay Creek	OK621010-01-0130R	50297	5/31/2012	3	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
West Clay Creek	OK621010-01-0130R	50297	5/31/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
West Clay Creek	OK621010-01-0130R	50297	5/31/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
West Clay Creek	OK621010-01-0130R	50297	5/31/2012	1	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	627	Cyprinidae	Cyprinella lutrensis	Red shiner	tol				1			
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	385	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	tol			1				
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	315	Cyprinidae	Notropis stramineus	Sand shiner	tol	1						
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	210	Poeciliidae	Gambusia affinis	Mosquitofish	interm	1						
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	175	Ictaluridae	Ictalurus punctatus	Channel catfish	intol	1						
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	62	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	61	Cyprinidae	Notropis atherinoides	Emerald shiner	tol			1				
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	22	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	17	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1		1	
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	16	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	13	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	4	Catostomidae	Carpiodes carpio	River carpsucker	tol	1						1
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	4	Cyprinidae	Unidentified Pimephales spp.	Unidentified minnow spp.	tol	1						
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	3	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	unk							
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	417	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	411	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	337	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	44	Cyprinidae	Camptostoma anomalum	Central stoneroller	interm					1		1
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	36	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	17	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	15	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Yellowstone Creek	OK621010-01-0270C	50312	6/7/2012	3	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1

Probabilistic Sites															
Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Black Bear Creek	CCA12-015	50726	8/2/2012	163	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Black Bear Creek	CCA12-015	50726	8/2/2012	143	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Black Bear Creek	CCA12-015	50726	8/2/2012	139	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Black Bear Creek	CCA12-015	50726	8/2/2012	39	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Black Bear Creek	CCA12-015	50726	8/2/2012	24	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Black Bear Creek	CCA12-015	50726	8/2/2012	19	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Black Bear Creek	CCA12-015	50726	8/2/2012	8	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Black Bear Creek	CCA12-015	50726	8/2/2012	5	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Black Bear Creek	CCA12-015	50726	8/2/2012	5	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Black Bear Creek	CCA12-015	50726	8/2/2012	3	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Black Bear Creek	CCA12-015	50726	8/2/2012	2	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Black Bear Creek	CCA12-015	50726	8/2/2012	2	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Black Bear Creek	CCA12-015	50726	8/2/2012	1	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Black Bear Creek	CCA12-015	50726	8/2/2012	1	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Black Bear Creek	CCA12-015	50726	8/2/2012	1	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Black Bear Creek	CCA12-074	50315	6/14/2012	378	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Black Bear Creek	CCA12-074	50315	6/14/2012	59	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Black Bear Creek	CCA12-074	50315	6/14/2012	36	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Black Bear Creek	CCA12-074	50315	6/14/2012	23	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Black Bear Creek	CCA12-074	50315	6/14/2012	16	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Black Bear Creek	CCA12-074	50315	6/14/2012	12	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Black Bear Creek	CCA12-074	50315	6/14/2012	9	Ictaluridae	Noturus nocturnus	Freckled madtom	intol	1						
Black Bear Creek	CCA12-074	50315	6/14/2012	8	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Black Bear Creek	CCA12-074	50315	6/14/2012	6	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Black Bear Creek	CCA12-074	50315	6/14/2012	2	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Black Bear Creek	CCA12-074	50315	6/14/2012	2	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1					1	
Black Bear Creek	CCA12-074	50315	6/14/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Black Bear Creek	CCA12-074	50315	6/14/2012	1	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Black Bear Creek	CCA12-074	50315	6/14/2012	1	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Black Bear Creek	CCA12-074	50315	6/14/2012	1	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	154	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	105	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	91	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	81	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	46	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	33	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	31	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	16	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	12	Catostomidae	Moxostoma	Redhorse sucker	intol	1						1
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	12	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	3	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	2	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	2	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	2	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	2	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	2	Percidae	Percina caprodes	Logperch	interm	1						
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	1	Catostomidae	Moxostoma erythrurum	Golden redhorse	interm	1						1
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	1	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Bois d'Arc Creek	CCA12-031	50720	7/16/2012	1	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Bug Creek	CCA12-052	50330	6/22/2012	142	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Bug Creek	CCA12-052	50330	6/22/2012	65	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Bug Creek	CCA12-052	50330	6/22/2012	62	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Bug Creek	CCA12-052	50330	6/22/2012	58	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Bug Creek	CCA12-052	50330	6/22/2012	52	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Bug Creek	CCA12-052	50330	6/22/2012	38	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Bug Creek	CCA12-052	50330	6/22/2012	22	Centrarchidae	Unidentified Lepomis hybrid	Hybrid, green x bluegill sunfish	tol							
Bug Creek	CCA12-052	50330	6/22/2012	22	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Bug Creek	CCA12-052	50330	6/22/2012	17	Cyprinidae	Camptostoma anomalum	Central stoneroller	interm					1		1
Bug Creek	CCA12-052	50330	6/22/2012	14	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Bug Creek	CCA12-052	50330	6/22/2012	13	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Bug Creek	CCA12-052	50330	6/22/2012	11	Cyprinidae	Lythrurus umbratilis	Redfin shiner	interm	1						
Bug Creek	CCA12-052	50330	6/22/2012	5	Centrarchidae	Lepomis gulosus	Warmouth sunfish	tol				1			
Bug Creek	CCA12-052	50330	6/22/2012	5	Centrarchidae	Lepomis microlophus	Redear sunfish	interm	1						
Bug Creek	CCA12-052	50330	6/22/2012	4	Cyprinidae	Pimephales tenellus	Slim minnow	intol	1						1
Bug Creek	CCA12-052	50330	6/22/2012	3	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Bug Creek	CCA12-052	50330	6/22/2012	3	Fundulidae	Fundulus notatus	Blackstripe topminnow	interm	1						
Bug Creek	CCA12-052	50330	6/22/2012	3	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Bug Creek	CCA12-052	50330	6/22/2012	1	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1			1
Bug Creek	CCA12-052	50330	6/22/2012	1	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Bug Creek	CCA12-052	50330	6/22/2012	1	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Camp Creek	CCA12-058	50283	5/22/2012	63	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Camp Creek	CCA12-058	50283	5/22/2012	11	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Camp Creek	CCA12-058	50283	5/22/2012	8	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Camp Creek	CCA12-058	50283	5/22/2012	5	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Camp Creek	CCA12-058	50283	5/22/2012	4	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Camp Creek	CCA12-058	50283	5/22/2012	4	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Camp Creek	CCA12-058	50283	5/22/2012	3	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Camp Creek	CCA12-058	50283	5/22/2012	2	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Camp Creek	CCA12-068	50291	5/23/2012	125	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Camp Creek	CCA12-068	50291	5/23/2012	45	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Camp Creek	CCA12-068	50291	5/23/2012	17	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Camp Creek	CCA12-068	50291	5/23/2012	12	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Camp Creek	CCA12-068	50291	5/23/2012	12	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Camp Creek	CCA12-068	50291	5/23/2012	11	Centrarchidae	Unidentified Lepomis hybrid	Hybrid, green x bluegill sunfish	tol							
Camp Creek	CCA12-068	50291	5/23/2012	6	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Camp Creek	CCA12-068	50291	5/23/2012	4	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Camp Creek	CCA12-068	50291	5/23/2012	4	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Camp Creek	CCA12-068	50291	5/23/2012	2	Centrarchidae	Lepomis microlophus	Redear sunfish	interm	1						
Camp Creek	CCA12-068	50291	5/23/2012	2	Centrarchidae	Pomoxis nigromaculatus	Black crappie	tol				1			
Camp Creek	CCA12-068	50291	5/23/2012	2	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Camp Creek	CCA12-068	50291	5/23/2012	2	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Camp Creek	CCA12-068	50291	5/23/2012	1	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Chilocco Creek	CCA12-011	50331	6/25/2012	91	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Chilocco Creek	CCA12-011	50331	6/25/2012	54	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Chilocco Creek	CCA12-011	50331	6/25/2012	10	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Chilocco Creek	CCA12-011	50331	6/25/2012	10	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Chilocco Creek	CCA12-011	50331	6/25/2012	9	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Chilocco Creek	CCA12-011	50331	6/25/2012	8	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Chilocco Creek	CCA12-011	50331	6/25/2012	7	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Chilocco Creek	CCA12-011	50331	6/25/2012	5	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Chilocco Creek	CCA12-011	50331	6/25/2012	5	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Chilocco Creek	CCA12-011	50331	6/25/2012	3	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			

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Chilocco Creek	CCA12-011	50331	6/25/2012	3	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Chilocco Creek	CCA12-011	50331	6/25/2012	2	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Chilocco Creek	CCA12-011	50331	6/25/2012	1	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Chilocco Creek	CCA12-011	50331	6/25/2012	1	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Chilocco Creek	CCA12-039	50332	6/26/2012	146	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Chilocco Creek	CCA12-039	50332	6/26/2012	75	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	34	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	24	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Chilocco Creek	CCA12-039	50332	6/26/2012	18	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	12	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	10	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Chilocco Creek	CCA12-039	50332	6/26/2012	9	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	9	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Chilocco Creek	CCA12-039	50332	6/26/2012	8	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Chilocco Creek	CCA12-039	50332	6/26/2012	8	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	7	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Chilocco Creek	CCA12-039	50332	6/26/2012	7	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Chilocco Creek	CCA12-039	50332	6/26/2012	5	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Chilocco Creek	CCA12-039	50332	6/26/2012	4	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	4	Percidae	Etheostoma spectabile	Orangethroat darter	interm	1						1
Chilocco Creek	CCA12-039	50332	6/26/2012	3	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	3	Catostomidae	Moxostoma	Redhorse sucker	intol	1						1
Chilocco Creek	CCA12-039	50332	6/26/2012	3	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Chilocco Creek	CCA12-039	50332	6/26/2012	2	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Chilocco Creek	CCA12-039	50332	6/26/2012	2	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Chilocco Creek	CCA12-039	50332	6/26/2012	2	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Chilocco Creek	CCA12-039	50332	6/26/2012	2	Percichthyidae	Morone chrysops	White bass	tol				1			
Chilocco Creek	CCA12-039	50332	6/26/2012	1	Percidae	Percina caprodes	Logperch	interm	1						
Chilocco Creek	CCA12-039	50332	6/26/2012	1	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Cimarron River	CCA12-013	50721	7/19/2012	592	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Cimarron River	CCA12-013	50721	7/19/2012	191	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Cimarron River	CCA12-013	50721	7/19/2012	54	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Cimarron River	CCA12-013	50721	7/19/2012	35	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Cimarron River	CCA12-013	50721	7/19/2012	27	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Cimarron River	CCA12-013	50721	7/19/2012	24	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Cimarron River	CCA12-013	50721	7/19/2012	17	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cimarron River	CCA12-013	50721	7/19/2012	11	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Cimarron River	CCA12-013	50721	7/19/2012	7	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Cimarron River	CCA12-013	50721	7/19/2012	6	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Cimarron River	CCA12-013	50721	7/19/2012	4	Cyprinidae	Macrhybopsis storeriana	Silver chub	tol	1						
Cimarron River	CCA12-013	50721	7/19/2012	4	Percichthyidae	Morone chrysops	White bass	tol				1			
Cimarron River	CCA12-013	50721	7/19/2012	1	Lepisosteidae	Lepisosteus platostomus	Shortnose gar	tol				1			
Cimarron River	CCA12-016	50379	7/5/2012	495	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						

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Cimarron River	CCA12-016	50379	7/5/2012	170	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	interm	1						
Cimarron River	CCA12-016	50379	7/5/2012	45	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Cimarron River	CCA12-016	50379	7/5/2012	40	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Cimarron River	CCA12-016	50379	7/5/2012	35	Clupeidae	Dorosoma petenense	Threadfin shad	interm			1				
Cimarron River	CCA12-016	50379	7/5/2012	27	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cimarron River	CCA12-016	50379	7/5/2012	8	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Cimarron River	CCA12-016	50379	7/5/2012	8	Cyprinidae	Notropis bairdi	Red River shiner	tol	1						
Cimarron River	CCA12-016	50379	7/5/2012	6	Cyprinidae	Macrhybopsis hyostoma	Shoal chub								
Cimarron River	CCA12-016	50379	7/5/2012	6	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Cimarron River	CCA12-016	50379	7/5/2012	6	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Cimarron River	CCA12-016	50379	7/5/2012	3	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Cimarron River	CCA12-016	50379	7/5/2012	2	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Cimarron River	CCA12-018	50724	7/31/2012	535	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Cimarron River	CCA12-018	50724	7/31/2012	154	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Cimarron River	CCA12-018	50724	7/31/2012	105	Cyprinidae	Notropis bairdi	Red River shiner	tol	1						
Cimarron River	CCA12-018	50724	7/31/2012	75	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Cimarron River	CCA12-018	50724	7/31/2012	41	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Cimarron River	CCA12-018	50724	7/31/2012	22	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	interm	1						
Cimarron River	CCA12-018	50724	7/31/2012	15	Catostomidae	Unidentified Catostomidae spp.	Unidentified sucker spp.	interm	1						1
Cimarron River	CCA12-018	50724	7/31/2012	9	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Cimarron River	CCA12-018	50724	7/31/2012	9	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Cimarron River	CCA12-018	50724	7/31/2012	7	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Cimarron River	CCA12-018	50724	7/31/2012	6	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Cimarron River	CCA12-018	50724	7/31/2012	6	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cimarron River	CCA12-018	50724	7/31/2012	2	Percichthyidae	Morone chrysops	White bass	tol				1			
Cimarron River	CCA12-046	50156	5/29/2012	454	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	tol							
Cimarron River	CCA12-046	50156	5/29/2012	210	Cyprinidae	Notropis bairdi	Red River shiner	tol	1						
Cimarron River	CCA12-046	50156	5/29/2012	91	Fundulidae	Fundulus zebrinus	Plains killifish	interm	1						
Cimarron River	CCA12-046	50156	5/29/2012	6	Cyprinidae	Hybognathus placitus	Plains minnow	tol	1						
Cimarron River	CCA12-046	50156	5/29/2012	2	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cimarron River	CCA12-050	50727	8/9/2012	837	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	interm	1						
Cimarron River	CCA12-050	50727	8/9/2012	216	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Cimarron River	CCA12-050	50727	8/9/2012	201	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Cimarron River	CCA12-050	50727	8/9/2012	136	Cyprinidae	Notropis bairdi	Red River shiner	tol	1						
Cimarron River	CCA12-050	50727	8/9/2012	126	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Cimarron River	CCA12-050	50727	8/9/2012	45	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cimarron River	CCA12-050	50727	8/9/2012	17	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Cimarron River	CCA12-050	50727	8/9/2012	12	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Cimarron River	CCA12-050	50727	8/9/2012	5	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Cimarron River	CCA12-050	50727	8/9/2012	4	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Cimarron River	CCA12-050	50727	8/9/2012	3	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Cimarron River	CCA12-050	50727	8/9/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Cimarron River	CCA12-050	50727	8/9/2012	1	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						

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Cimarron River	CCA12-050	50727	8/9/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Cimarron River	CCA12-050	50727	8/9/2012	1	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Cimarron River	CCA12-050	50727	8/9/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Cimarron River	CCA12-056	50292	5/24/2012	97	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Cimarron River	CCA12-056	50292	5/24/2012	56	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Cimarron River	CCA12-056	50292	5/24/2012	41	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Cimarron River	CCA12-056	50292	5/24/2012	40	Percichthyidae	Morone chrysops	White bass	tol				1			
Cimarron River	CCA12-056	50292	5/24/2012	29	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Cimarron River	CCA12-056	50292	5/24/2012	16	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cimarron River	CCA12-056	50292	5/24/2012	5	Ictaluridae	Ictalurus furcatus	Blue catfish	tol	1			1			
Cimarron River	CCA12-056	50292	5/24/2012	3	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Cimarron River	CCA12-056	50292	5/24/2012	1	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Cimarron River	CCA12-056	50292	5/24/2012	1	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Cimarron River	CCA12-056	50292	5/24/2012	1	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Cimarron River	CCA12-065	50723	7/31/2012	372	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Cimarron River	CCA12-065	50723	7/31/2012	67	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Cimarron River	CCA12-065	50723	7/31/2012	57	Cyprinidae	Notropis bairdi	Red River shiner	tol	1						
Cimarron River	CCA12-065	50723	7/31/2012	38	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Cimarron River	CCA12-065	50723	7/31/2012	36	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	interm	1						
Cimarron River	CCA12-065	50723	7/31/2012	10	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Cimarron River	CCA12-065	50723	7/31/2012	9	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Cimarron River	CCA12-065	50723	7/31/2012	9	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Cimarron River	CCA12-065	50723	7/31/2012	7	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Cimarron River	CCA12-065	50723	7/31/2012	5	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Cimarron River	CCA12-065	50723	7/31/2012	2	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Cimarron River	CCA12-065	50723	7/31/2012	1	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Cimarron River	CCA12-065	50723	7/31/2012	1	Cyprinidae	Macrhybopsis hyostoma	Shoal chub								
Cimarron River	CCA12-065	50723	7/31/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Clear Creek	CCA12-009	50305	6/6/2012	208	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Clear Creek	CCA12-009	50305	6/6/2012	81	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Clear Creek	CCA12-009	50305	6/6/2012	36	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Clear Creek	CCA12-009	50305	6/6/2012	15	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Clear Creek	CCA12-009	50305	6/6/2012	9	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Clear Creek	CCA12-009	50305	6/6/2012	8	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Clear Creek	CCA12-009	50305	6/6/2012	6	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Clear Creek	CCA12-009	50305	6/6/2012	3	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Clear Creek	CCA12-009	50305	6/6/2012	1	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Clear Creek	CCA12-009	50305	6/6/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Council Creek	CCA12-079	50299	6/4/2012	280	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Council Creek	CCA12-079	50299	6/4/2012	268	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Council Creek	CCA12-079	50299	6/4/2012	168	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Council Creek	CCA12-079	50299	6/4/2012	148	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Council Creek	CCA12-079	50299	6/4/2012	80	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Council Creek	CCA12-079	50299	6/4/2012	20	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Council Creek	CCA12-079	50299	6/4/2012	14	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Council Creek	CCA12-079	50299	6/4/2012	14	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Council Creek	CCA12-079	50299	6/4/2012	12	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Council Creek	CCA12-079	50299	6/4/2012	11	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Council Creek	CCA12-079	50299	6/4/2012	10	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1					1	
Council Creek	CCA12-079	50299	6/4/2012	7	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Council Creek	CCA12-079	50299	6/4/2012	7	Cyprinidae	Hybognathus placitus	Plains minnow	tol					1		
Council Creek	CCA12-079	50299	6/4/2012	5	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Council Creek	CCA12-079	50299	6/4/2012	4	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Council Creek	CCA12-079	50299	6/4/2012	4	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Council Creek	CCA12-079	50299	6/4/2012	4	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Council Creek	CCA12-079	50299	6/4/2012	4	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Council Creek	CCA12-079	50299	6/4/2012	3	Catostomidae	Unidentified Catostomidae spp.	Unidentified sucker spp.	interm	1						1
Council Creek	CCA12-079	50299	6/4/2012	2	Percidae	Percina caprodes	Logperch	interm	1						
Council Creek	CCA12-079	50299	6/4/2012	1	Centrarchidae	Lepomis gulosus	Warmouth sunfish	tol				1			
Council Creek	CCA12-079	50299	6/4/2012	1	Centrarchidae	Lepomis microlophus	Redear sunfish	interm	1						
Council Creek	CCA12-079	50299	6/4/2012	1	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Council Creek	CCA12-079	50299	6/4/2012	1	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1					1	
Deer Creek	CCA12-063	50385	7/11/2012	463	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Deer Creek	CCA12-063	50385	7/11/2012	61	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Deer Creek	CCA12-063	50385	7/11/2012	37	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Deer Creek	CCA12-063	50385	7/11/2012	30	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Deer Creek	CCA12-063	50385	7/11/2012	29	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Deer Creek	CCA12-063	50385	7/11/2012	16	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Deer Creek	CCA12-063	50385	7/11/2012	14	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Deer Creek	CCA12-063	50385	7/11/2012	8	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Deer Creek	CCA12-063	50385	7/11/2012	7	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Deer Creek	CCA12-063	50385	7/11/2012	6	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Deer Creek	CCA12-063	50385	7/11/2012	5	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Deer Creek	CCA12-063	50385	7/11/2012	4	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Deer Creek	CCA12-063	50385	7/11/2012	2	Catostomidae	Moxostoma	Redhorse sucker	intol	1						1
Deer Creek	CCA12-063	50385	7/11/2012	2	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Deer Creek	CCA12-063	50385	7/11/2012	2	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Deer Creek	CCA12-063	50385	7/11/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Deer Creek	CCA12-063	50385	7/11/2012	1	Percidae	Percina caprodes	Logperch	interm	1						
Deer Creek	CCA12-070	50339	6/28/2012	385	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Deer Creek	CCA12-070	50339	6/28/2012	206	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Deer Creek	CCA12-070	50339	6/28/2012	172	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Deer Creek	CCA12-070	50339	6/28/2012	84	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Deer Creek	CCA12-070	50339	6/28/2012	80	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Deer Creek	CCA12-070	50339	6/28/2012	68	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Deer Creek	CCA12-070	50339	6/28/2012	36	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Deer Creek	CCA12-070	50339	6/28/2012	33	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Deer Creek	CCA12-070	50339	6/28/2012	29	Catostomidae	Moxostoma	Redhorse sucker	intol	1						1
Deer Creek	CCA12-070	50339	6/28/2012	19	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Deer Creek	CCA12-070	50339	6/28/2012	13	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Deer Creek	CCA12-070	50339	6/28/2012	9	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Deer Creek	CCA12-070	50339	6/28/2012	7	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Deer Creek	CCA12-070	50339	6/28/2012	5	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Deer Creek	CCA12-070	50339	6/28/2012	3	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Deer Creek	CCA12-070	50339	6/28/2012	3	Percidae	Percina caprodes	Logperch	interm	1						
Deer Creek	CCA12-070	50339	6/28/2012	2	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Deer Creek	CCA12-070	50339	6/28/2012	1	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Deer Creek	CCA12-070	50339	6/28/2012	1	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
Deer Creek	CCA12-070	50339	6/28/2012	1	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Doe Creek	CCA12-026	50288	5/24/2012	12	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Doe Creek	CCA12-026	50288	5/24/2012	8	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Doe Creek	CCA12-026	50288	5/24/2012	3	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Doe Creek	CCA12-026	50288	5/24/2012	2	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Dry Creek	CCA12-022	50736	9/20/2012	443	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Dry Creek	CCA12-022	50736	9/20/2012	137	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Dry Creek	CCA12-022	50736	9/20/2012	103	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Dry Creek	CCA12-022	50736	9/20/2012	74	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Dry Creek	CCA12-022	50736	9/20/2012	58	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Dry Creek	CCA12-022	50736	9/20/2012	45	Cyprinidae	Camptostoma anomalum	Central stoneroller	interm					1		1
Dry Creek	CCA12-022	50736	9/20/2012	23	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Dry Creek	CCA12-022	50736	9/20/2012	22	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Dry Creek	CCA12-022	50736	9/20/2012	21	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Dry Creek	CCA12-022	50736	9/20/2012	15	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Dry Creek	CCA12-022	50736	9/20/2012	2	Centrarchidae	Unidentified Lepomis hybrid	Hybrid, longear x green sunfish	tol							
Dry Creek	CCA12-022	50736	9/20/2012	1	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Kingfisher Creek	CCA12-060	50378	7/5/2012	234	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Kingfisher Creek	CCA12-060	50378	7/5/2012	109	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Kingfisher Creek	CCA12-060	50378	7/5/2012	74	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Kingfisher Creek	CCA12-060	50378	7/5/2012	59	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Kingfisher Creek	CCA12-060	50378	7/5/2012	25	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Kingfisher Creek	CCA12-060	50378	7/5/2012	20	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Kingfisher Creek	CCA12-060	50378	7/5/2012	14	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Kingfisher Creek	CCA12-060	50378	7/5/2012	6	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Kingfisher Creek	CCA12-060	50378	7/5/2012	5	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Kingfisher Creek	CCA12-060	50378	7/5/2012	2	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Lariat Creek	CCA12-078	50308	6/6/2012	354	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Lariat Creek	CCA12-078	50308	6/6/2012	181	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Lariat Creek	CCA12-078	50308	6/6/2012	109	Cyprinidae	Unidentified Pimephales spp.	Unidentified minnow spp.	unk							
Lariat Creek	CCA12-078	50308	6/6/2012	69	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Lariat Creek	CCA12-078	50308	6/6/2012	44	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Lariat Creek	CCA12-078	50308	6/6/2012	22	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
Lariat Creek	CCA12-078	50308	6/6/2012	18	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Lariat Creek	CCA12-078	50308	6/6/2012	13	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Lariat Creek	CCA12-078	50308	6/6/2012	12	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Lariat Creek	CCA12-078	50308	6/6/2012	7	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Lariat Creek	CCA12-078	50308	6/6/2012	3	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Little Turkey Creek	CCA12-072	50712	7/16/2012	352	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Little Turkey Creek	CCA12-072	50712	7/16/2012	124	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Little Turkey Creek	CCA12-072	50712	7/16/2012	96	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Little Turkey Creek	CCA12-072	50712	7/16/2012	86	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Little Turkey Creek	CCA12-072	50712	7/16/2012	72	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Little Turkey Creek	CCA12-072	50712	7/16/2012	65	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Little Turkey Creek	CCA12-072	50712	7/16/2012	43	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Little Turkey Creek	CCA12-072	50712	7/16/2012	33	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Little Turkey Creek	CCA12-072	50712	7/16/2012	4	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Little Turkey Creek	CCA12-072	50712	7/16/2012	2	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Little Turkey Creek	CCA12-072	50712	7/16/2012	1	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Little Turkey Creek	CCA12-072	50712	7/16/2012	1	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
North Canadian River	CCA12-042	50298	6/4/2012	426	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
North Canadian River	CCA12-042	50298	6/4/2012	336	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
North Canadian River	CCA12-042	50298	6/4/2012	85	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
North Canadian River	CCA12-042	50298	6/4/2012	20	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
North Canadian River	CCA12-042	50298	6/4/2012	10	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
North Canadian River	CCA12-042	50298	6/4/2012	7	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
North Canadian River	CCA12-042	50298	6/4/2012	3	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
North Canadian River	CCA12-042	50298	6/4/2012	3	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
North Canadian River	CCA12-042	50298	6/4/2012	3	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
North Canadian River	CCA12-042	50298	6/4/2012	2	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
North Canadian River	CCA12-042	50298	6/4/2012	2	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
North Canadian River	CCA12-042	50298	6/4/2012	2	Percichthyidae	Morone chrysops	White bass	tol				1			
North Canadian River	CCA12-042	50298	6/4/2012	1	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
North Canadian River	CCA12-042	50298	6/4/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
North Canadian River	CCA12-042	50298	6/4/2012	1	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
North Canadian River	CCA12-062	50286	5/24/2012	156	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
North Canadian River	CCA12-062	50286	5/24/2012	108	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
North Canadian River	CCA12-062	50286	5/24/2012	58	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
North Canadian River	CCA12-062	50286	5/24/2012	17	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
North Canadian River	CCA12-062	50286	5/24/2012	15	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
North Canadian River	CCA12-062	50286	5/24/2012	13	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
North Canadian River	CCA12-062	50286	5/24/2012	11	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
North Canadian River	CCA12-062	50286	5/24/2012	8	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
North Canadian River	CCA12-062	50286	5/24/2012	5	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						

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North Canadian River	CCA12-062	50286	5/24/2012	2	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
North Canadian River	CCA12-080	50275	6/25/2012	307	Cyprinidae	Notropis stramineus	Sand shiner	tol	1						
North Canadian River	CCA12-080	50275	6/25/2012	87	Fundulidae	Fundulus zebrinus	Plains killifish	tol				1			
North Canadian River	CCA12-080	50275	6/25/2012	54	Poeciliidae	Gambusia affinis	Mosquitofish	interm							1
North Canadian River	CCA12-080	50275	6/25/2012	36	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	tol			1				
North Canadian River	CCA12-080	50275	6/25/2012	24	Centrarchidae	Lepomis megalotis	Longear sunfish	interm	1						
North Canadian River	CCA12-080	50275	6/25/2012	10	Cyprinidae	Pimephales promelas	Fathead minnow	tol	1						
North Canadian River	CCA12-080	50275	6/25/2012	9	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
North Canadian River	CCA12-080	50275	6/25/2012	8	Cyprinidae	Cyprinus carpio	Common carp	tol	1						1
North Canadian River	CCA12-080	50275	6/25/2012	6	Lepisosteidae	Lepisosteus oculatus	Spotted gar	interm							1
North Canadian River	CCA12-080	50275	6/25/2012	4	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
North Canadian River	CCA12-080	50275	6/25/2012	4	Ictaluridae	Ictalurus punctatus	Channel catfish	tol	1						
North Canadian River	CCA12-080	50275	6/25/2012	3	Centrarchidae	Micropterus salmoides	Largemouth bass	interm	1						
North Canadian River	CCA12-080	50275	6/25/2012	1	Cyprinidae	Pimephales vigilax	Bullhead minnow	intol	1						
North Canadian River	CCA12-080	50275	6/25/2012	1	Sciaenidae	Aplodinotus grunniens	Freshwater drum	interm	1						
Palo Duro Creek	CCA12-057	50302	6/5/2012	64	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Palo Duro Creek	CCA12-057	50302	6/5/2012	27	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Palo Duro Creek	CCA12-057	50302	6/5/2012	16	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Palo Duro Creek	CCA12-057	50302	6/5/2012	9	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
Palo Duro Creek	CCA12-057	50302	6/5/2012	6	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Palo Duro Creek	CCA12-057	50302	6/5/2012	5	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Palo Duro Creek	CCA12-057	50302	6/5/2012	1	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Palo Duro Creek	CCA12-057	50302	6/5/2012	1	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
Palo Duro Creek	CCA12-057	50302	6/5/2012	1	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Pond Creek	CCA12-059	50334	6/27/2012	605	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Pond Creek	CCA12-059	50334	6/27/2012	203	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Pond Creek	CCA12-059	50334	6/27/2012	174	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Pond Creek	CCA12-059	50334	6/27/2012	136	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Pond Creek	CCA12-059	50334	6/27/2012	55	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Pond Creek	CCA12-059	50334	6/27/2012	35	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Pond Creek	CCA12-059	50334	6/27/2012	31	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Pond Creek	CCA12-059	50334	6/27/2012	25	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Pond Creek	CCA12-059	50334	6/27/2012	24	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Pond Creek	CCA12-059	50334	6/27/2012	22	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Pond Creek	CCA12-059	50334	6/27/2012	11	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Pond Creek	CCA12-059	50334	6/27/2012	5	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Pond Creek	CCA12-059	50334	6/27/2012	5	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Pond Creek	CCA12-059	50334	6/27/2012	4	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Pond Creek	CCA12-059	50334	6/27/2012	4	Cyprinidae	Unidentified Pimephales spp.	Unidentified minnow spp.	unk							
Pond Creek	CCA12-059	50334	6/27/2012	4	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Pond Creek	CCA12-059	50334	6/27/2012	2	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Pond Creek	CCA12-059	50334	6/27/2012	2	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Pond Creek	CCA12-059	50334	6/27/2012	1	Catostomidae	Ictiobus cyprinellus	Largemouth buffalo	tol	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Red Rock Creek	CCA12-047	50725	8/1/2012	55	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Red Rock Creek	CCA12-047	50725	8/1/2012	46	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Red Rock Creek	CCA12-047	50725	8/1/2012	27	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Red Rock Creek	CCA12-047	50725	8/1/2012	23	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Red Rock Creek	CCA12-047	50725	8/1/2012	18	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Red Rock Creek	CCA12-047	50725	8/1/2012	17	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Red Rock Creek	CCA12-047	50725	8/1/2012	9	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Red Rock Creek	CCA12-047	50725	8/1/2012	8	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Red Rock Creek	CCA12-047	50725	8/1/2012	6	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Red Rock Creek	CCA12-047	50725	8/1/2012	6	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Red Rock Creek	CCA12-047	50725	8/1/2012	3	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Red Rock Creek	CCA12-047	50725	8/1/2012	1	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Red Rock Creek	CCA12-047	50725	8/1/2012	1	Centrarchidae	Micropterus dolomieu	Smallmouth bass	intol				1			1
Red Rock Creek	CCA12-047	50725	8/1/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Red Rock Creek	CCA12-047	50725	8/1/2012	1	Ictaluridae	Ictalurus furcatus	Blue catfish	tol	1			1			
Red Rock Creek	CCA12-047	50725	8/1/2012	1	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Salt Creek	CCA12-024	50318	6/18/2012	146	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Salt Creek	CCA12-024	50318	6/18/2012	46	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Salt Creek	CCA12-024	50318	6/18/2012	39	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Salt Creek	CCA12-024	50318	6/18/2012	26	Cyprinidae	Pimephales tenellus	Slim minnow	intol	1						1
Salt Creek	CCA12-024	50318	6/18/2012	25	Percidae	Percina phoxocephala	Slenderhead darter	intol	1						1
Salt Creek	CCA12-024	50318	6/18/2012	19	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Salt Creek	CCA12-024	50318	6/18/2012	17	Percidae	Etheostoma spectabile	Orangethroat darter	interm	1						1
Salt Creek	CCA12-024	50318	6/18/2012	15	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Salt Creek	CCA12-024	50318	6/18/2012	13	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Salt Creek	CCA12-024	50318	6/18/2012	11	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Salt Creek	CCA12-024	50318	6/18/2012	11	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Salt Creek	CCA12-024	50318	6/18/2012	11	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Salt Creek	CCA12-024	50318	6/18/2012	8	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Salt Creek	CCA12-024	50318	6/18/2012	7	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Salt Creek	CCA12-024	50318	6/18/2012	7	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Salt Creek	CCA12-024	50318	6/18/2012	6	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Salt Creek	CCA12-024	50318	6/18/2012	6	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Salt Creek	CCA12-024	50318	6/18/2012	5	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1			1
Salt Creek	CCA12-024	50318	6/18/2012	5	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Salt Creek	CCA12-024	50318	6/18/2012	3	Cyprinidae	Lythrurus umbratilis	Redfin shiner	interm	1						
Salt Creek	CCA12-024	50318	6/18/2012	2	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Salt Creek	CCA12-024	50318	6/18/2012	2	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Salt Creek	CCA12-024	50318	6/18/2012	2	Catostomidae	Moxostoma erythrum	Golden redhorse	interm	1						1
Salt Creek	CCA12-024	50318	6/18/2012	2	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Salt Creek	CCA12-024	50318	6/18/2012	2	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Salt Creek	CCA12-024	50318	6/18/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Salt Creek	CCA12-024	50318	6/18/2012	1	Percidae	Percina caprodes	Logperch	interm	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Salt Creek	CCA12-040	50722	7/30/2012	131	Atherinidae	Labidesthes sicculus	Brook silverside	interm	1						
Salt Creek	CCA12-040	50722	7/30/2012	125	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Salt Creek	CCA12-040	50722	7/30/2012	91	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Salt Creek	CCA12-040	50722	7/30/2012	75	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Salt Creek	CCA12-040	50722	7/30/2012	39	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Salt Creek	CCA12-040	50722	7/30/2012	31	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Salt Creek	CCA12-040	50722	7/30/2012	22	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Salt Creek	CCA12-040	50722	7/30/2012	18	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Salt Creek	CCA12-040	50722	7/30/2012	16	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Salt Creek	CCA12-040	50722	7/30/2012	14	Catostomidae	Moxostoma erythrurum	Golden redhorse	interm	1						1
Salt Creek	CCA12-040	50722	7/30/2012	11	Cyprinidae	Lythrurus umbratilis	Redfin shiner	interm	1						
Salt Creek	CCA12-040	50722	7/30/2012	9	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Salt Creek	CCA12-040	50722	7/30/2012	9	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Salt Creek	CCA12-040	50722	7/30/2012	5	Fundulidae	Fundulus notatus	Blackstripe topminnow	interm	1						
Salt Creek	CCA12-040	50722	7/30/2012	4	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Salt Creek	CCA12-040	50722	7/30/2012	3	Centrarchidae	Micropterus punctulatus	Spotted bass	interm				1			1
Salt Creek	CCA12-040	50722	7/30/2012	3	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Salt Creek	CCA12-040	50722	7/30/2012	2	Catostomidae	Moxostoma	Redhorse sucker	intol	1						1
Salt Creek	CCA12-040	50722	7/30/2012	2	Percidae	Etheostoma spectabile	Orangethroat darter	interm	1						1
Salt Creek	CCA12-040	50722	7/30/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Salt Creek	CCA12-040	50722	7/30/2012	1	Centrarchidae	Unidentified Lepomis hybrid	Hybrid, sunfish								
Salt Creek	CCA12-040	50722	7/30/2012	1	Cyprinidae	Pimephales tenellus	Slim minnow	intol	1						1
Salt Creek	CCA12-040	50722	7/30/2012	1	Lepisosteidae	Lepisosteus oculatus	Spotted gar	tol				1			
Salt Creek	CCA12-040	50722	7/30/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Salt Fork Arkansas River	CCA12-076	50381	7/10/2012	132	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Salt Fork Arkansas River	CCA12-076	50381	7/10/2012	117	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Salt Fork Arkansas River	CCA12-076	50381	7/10/2012	76	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Salt Fork Arkansas River	CCA12-076	50381	7/10/2012	18	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Salt Fork Arkansas River	CCA12-076	50381	7/10/2012	16	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Salt Fork Arkansas River	CCA12-076	50381	7/10/2012	16	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Salt Fork Arkansas River	CCA12-076	50381	7/10/2012	4	Cyprinidae	Campostoma anomalum	Central stoneroller	interm					1		1
Sand Creek	CCA12-035	50296	5/31/2012	424	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Sand Creek	CCA12-035	50296	5/31/2012	261	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Sand Creek	CCA12-035	50296	5/31/2012	63	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Sand Creek	CCA12-035	50296	5/31/2012	49	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Sand Creek	CCA12-035	50296	5/31/2012	48	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Sand Creek	CCA12-035	50296	5/31/2012	16	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Sand Creek	CCA12-035	50296	5/31/2012	12	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Sand Creek	CCA12-035	50296	5/31/2012	3	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Sand Creek	CCA12-035	50296	5/31/2012	3	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Sand Creek	CCA12-035	50296	5/31/2012	1	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Sand Creek	CCA12-035	50296	5/31/2012	1	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Sand Creek	CCA12-035	50296	5/31/2012	1	Lepisosteidae	Unidentified Lepisosteus spp.	Unidentified gar spp.	tol				1			

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Skeleton Creek	CCA12-004	50329	6/21/2012	1719	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Skeleton Creek	CCA12-004	50329	6/21/2012	519	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Skeleton Creek	CCA12-004	50329	6/21/2012	100	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Skeleton Creek	CCA12-004	50329	6/21/2012	95	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Skeleton Creek	CCA12-004	50329	6/21/2012	87	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Skeleton Creek	CCA12-004	50329	6/21/2012	43	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Skeleton Creek	CCA12-004	50329	6/21/2012	36	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Skeleton Creek	CCA12-004	50329	6/21/2012	33	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Skeleton Creek	CCA12-004	50329	6/21/2012	18	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Skeleton Creek	CCA12-004	50329	6/21/2012	15	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Skeleton Creek	CCA12-004	50329	6/21/2012	9	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Skeleton Creek	CCA12-004	50329	6/21/2012	7	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Skeleton Creek	CCA12-004	50329	6/21/2012	6	Centrarchidae	Lepomis punctatus	Spotted sunfish	intol	1						
Skeleton Creek	CCA12-004	50329	6/21/2012	4	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Skeleton Creek	CCA12-004	50329	6/21/2012	3	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Skeleton Creek	CCA12-004	50329	6/21/2012	3	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Skeleton Creek	CCA12-004	50329	6/21/2012	2	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Skeleton Creek	CCA12-004	50329	6/21/2012	1	Centrarchidae	Unidentified Lepomis hybrid	Hybrid, longear x green sunfish	tol							
Skeleton Creek	CCA12-020	50714	7/18/2012	336	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Skeleton Creek	CCA12-020	50714	7/18/2012	113	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Skeleton Creek	CCA12-020	50714	7/18/2012	31	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Skeleton Creek	CCA12-020	50714	7/18/2012	25	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Skeleton Creek	CCA12-020	50714	7/18/2012	21	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Skeleton Creek	CCA12-020	50714	7/18/2012	16	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Skeleton Creek	CCA12-020	50714	7/18/2012	15	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Skeleton Creek	CCA12-020	50714	7/18/2012	15	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Skeleton Creek	CCA12-020	50714	7/18/2012	8	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Skeleton Creek	CCA12-020	50714	7/18/2012	7	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Skeleton Creek	CCA12-020	50714	7/18/2012	5	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Skeleton Creek	CCA12-020	50714	7/18/2012	2	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Skeleton Creek	CCA12-034	50380	7/6/2012	647	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Skeleton Creek	CCA12-034	50380	7/6/2012	174	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Skeleton Creek	CCA12-034	50380	7/6/2012	77	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1		1	
Skeleton Creek	CCA12-034	50380	7/6/2012	8	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Skeleton Creek	CCA12-034	50380	7/6/2012	3	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Skeleton Creek	CCA12-034	50380	7/6/2012	3	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Skeleton Creek	CCA12-034	50380	7/6/2012	2	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Skeleton Creek	CCA12-034	50380	7/6/2012	1	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Skeleton Creek	CCA12-034	50380	7/6/2012	1	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Skeleton Creek	CCA12-034	50380	7/6/2012	1	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Skeleton Creek	CCA12-034	50380	7/6/2012	1	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Skeleton Creek	CCA12-034	50380	7/6/2012	1	Lepisosteidae	Unidentified Lepisosteus spp.	Unidentified gar spp.	tol				1			
Sleeping Bear Creek	CCA12-030	50157	5/30/2012	83	Centrarchidae	Lepomis megalotis	Longear sunfish	interm							1

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Sleeping Bear Creek	CCA12-030	50157	5/30/2012	47	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Sleeping Bear Creek	CCA12-030	50157	5/30/2012	46	Poeciliidae	Gambusia affinis	Mosquitofish	tol							
Sleeping Bear Creek	CCA12-030	50157	5/30/2012	28	Centrarchidae	Micropterus salmoides	Largemouth bass	tol	1						
Sleeping Bear Creek	CCA12-030	50157	5/30/2012	13	Centrarchidae	Lepomis cyanellus	Green sunfish	interm	1						
Sleeping Bear Creek	CCA12-030	50157	5/30/2012	8	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	interm	1						
Sleeping Bear Creek	CCA12-030	50157	5/30/2012	6	Cyprinidae	Camptostoma anomalum	Central stoneroller	tol	1						
Sleeping Bear Creek	CCA12-030	50157	5/30/2012	4	Cyprinidae	Pimephales promelas	Fathead minnow	tol	1						
Spring Creek	CCA12-023	50311	6/7/2012	33	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Spring Creek	CCA12-023	50311	6/7/2012	28	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Spring Creek	CCA12-023	50311	6/7/2012	21	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Spring Creek	CCA12-023	50311	6/7/2012	15	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Spring Creek	CCA12-023	50311	6/7/2012	3	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Spring Creek	CCA12-023	50311	6/7/2012	1	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Spring Creek	CCA12-081	50337	6/28/2012	83	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Spring Creek	CCA12-081	50337	6/28/2012	78	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Spring Creek	CCA12-081	50337	6/28/2012	46	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Spring Creek	CCA12-081	50337	6/28/2012	12	Percichthyidae	Unidentified Morone spp.	Unidentified bass spp.								
Spring Creek	CCA12-081	50337	6/28/2012	8	Cyprinidae	Pimephales notatus	Bluntnose minnow	interm			1				1
Spring Creek	CCA12-081	50337	6/28/2012	7	Cyprinidae	Camptostoma anomalum	Central stoneroller	interm					1		1
Spring Creek	CCA12-081	50337	6/28/2012	7	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Spring Creek	CCA12-081	50337	6/28/2012	5	Catostomidae	Moxostoma	Redhorse sucker	intol	1						1
Spring Creek	CCA12-081	50337	6/28/2012	5	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Spring Creek	CCA12-081	50337	6/28/2012	4	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Spring Creek	CCA12-081	50337	6/28/2012	4	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Spring Creek	CCA12-081	50337	6/28/2012	2	Percidae	Percina caprodes	Logperch	interm	1						
Spring Creek	CCA12-081	50337	6/28/2012	1	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Spring Creek	CCA12-081	50337	6/28/2012	1	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Stillwater Creek	CCA12-073	50314	6/11/2012	354	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Stillwater Creek	CCA12-073	50314	6/11/2012	321	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Stillwater Creek	CCA12-073	50314	6/11/2012	40	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Stillwater Creek	CCA12-073	50314	6/11/2012	34	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Stillwater Creek	CCA12-073	50314	6/11/2012	24	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Stillwater Creek	CCA12-073	50314	6/11/2012	6	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Stillwater Creek	CCA12-073	50314	6/11/2012	4	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Stillwater Creek	CCA12-073	50314	6/11/2012	4	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Stillwater Creek	CCA12-073	50314	6/11/2012	3	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Stillwater Creek	CCA12-073	50314	6/11/2012	3	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Stillwater Creek	CCA12-073	50314	6/11/2012	2	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Stillwater Creek	CCA12-073	50314	6/11/2012	2	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Stillwater Creek	CCA12-073	50314	6/11/2012	2	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Stillwater Creek	CCA12-073	50314	6/11/2012	2	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Stillwater Creek	CCA12-073	50314	6/11/2012	2	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Stillwater Creek	CCA12-073	50314	6/11/2012	1	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Stillwater Creek	CCA12-073	50314	6/11/2012	1	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Traders Creek	CCA12-077	50158	5/30/2012	46	Fundulidae	Fundulus zebrinus	Plains killifish	interm							1
Traders Creek	CCA12-077	50158	5/30/2012	34	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Traders Creek	CCA12-077	50158	5/30/2012	6	Cyprinidae	Campostoma anomalum	Central stoneroller	tol			1				
Traders Creek	CCA12-077	50158	5/30/2012	3	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						
Traders Creek	CCA12-077	50158	5/30/2012	2	Cyprinodontidae	Cyprinodon rubrofluviatilis	Red River pupfish	tol	1						1
Traders Creek	CCA12-077	50158	5/30/2012	2	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Turkey Creek	CCA12-003	50322	6/20/2012	201	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Turkey Creek	CCA12-003	50322	6/20/2012	70	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Turkey Creek	CCA12-003	50322	6/20/2012	50	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Turkey Creek	CCA12-003	50322	6/20/2012	45	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Turkey Creek	CCA12-003	50322	6/20/2012	38	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Turkey Creek	CCA12-003	50322	6/20/2012	31	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Turkey Creek	CCA12-003	50322	6/20/2012	31	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Turkey Creek	CCA12-003	50322	6/20/2012	23	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Turkey Creek	CCA12-003	50322	6/20/2012	8	Cyprinidae	Notropis atherinoides	Emerald shiner	tol	1						
Turkey Creek	CCA12-003	50322	6/20/2012	6	Catostomidae	Ictiobus bubalus	Smallmouth buffalo	tol	1						
Turkey Creek	CCA12-003	50322	6/20/2012	3	Centrarchidae	Lepomis microlophus	Redear sunfish	interm	1						
Turkey Creek	CCA12-003	50322	6/20/2012	3	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Turkey Creek	CCA12-003	50322	6/20/2012	3	Ictaluridae	Pylodictis olivaris	Flathead catfish	tol				1			
Turkey Creek	CCA12-003	50322	6/20/2012	3	Lepisosteidae	Lepisosteus osseus	Longnose gar	tol				1			
Turkey Creek	CCA12-003	50322	6/20/2012	2	Catostomidae	Carpodes carpio	River carpsucker	tol			1				
Turkey Creek	CCA12-003	50322	6/20/2012	2	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Turkey Creek	CCA12-003	50322	6/20/2012	2	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Turkey Creek	CCA12-003	50322	6/20/2012	1	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Turkey Creek	CCA12-003	50322	6/20/2012	1	Centrarchidae	Pomoxis nigromaculatus	Black crappie	tol				1			
Turkey Creek	CCA12-003	50322	6/20/2012	1	Sciaenidae	Aplodinotus grunniens	Freshwater drum	tol	1						1
Turkey Creek	CCA12-014	50287	5/23/2012	47	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Turkey Creek	CCA12-014	50287	5/23/2012	18	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Turkey Creek	CCA12-014	50287	5/23/2012	8	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Turkey Creek	CCA12-014	50287	5/23/2012	8	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Turkey Creek	CCA12-014	50287	5/23/2012	6	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Turkey Creek	CCA12-014	50287	5/23/2012	6	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
Turkey Creek	CCA12-014	50287	5/23/2012	2	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Turkey Creek	CCA12-014	50287	5/23/2012	2	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Turkey Creek	CCA12-036	50289	5/21/2012	100	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Turkey Creek	CCA12-036	50289	5/21/2012	40	Cyprinidae	Notemigonus crysoleucas	Golden shiner	tol			1				
Turkey Creek	CCA12-036	50289	5/21/2012	32	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Turkey Creek	CCA12-036	50289	5/21/2012	21	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Turkey Creek	CCA12-036	50289	5/21/2012	12	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Turkey Creek	CCA12-036	50289	5/21/2012	7	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Turkey Creek	CCA12-036	50289	5/21/2012	4	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Turkey Creek	CCA12-036	50289	5/21/2012	2	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Turkey Creek	CCA12-036	50289	5/21/2012	2	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Turkey Creek	CCA12-082	50317	6/14/2012	106	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Turkey Creek	CCA12-082	50317	6/14/2012	79	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Turkey Creek	CCA12-082	50317	6/14/2012	76	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Turkey Creek	CCA12-082	50317	6/14/2012	30	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Turkey Creek	CCA12-082	50317	6/14/2012	10	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Turkey Creek	CCA12-082	50317	6/14/2012	3	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Turkey Creek	CCA12-082	50317	6/14/2012	2	Centrarchidae	Lepomis microlophus	Redear sunfish	interm	1						
Turkey Creek	CCA12-082	50317	6/14/2012	1	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Turkey Creek	CCA12-082	50317	6/14/2012	1	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
Unnamed Creek	CCA12-006	50290	5/22/2012	33	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Unnamed Creek	CCA12-006	50290	5/22/2012	21	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Unnamed Creek	CCA12-006	50290	5/22/2012	3	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Unnamed Creek	CCA12-006	50290	5/22/2012	3	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Unnamed Creek	CCA12-006	50290	5/22/2012	1	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Unnamed Creek	CCA12-006	50290	5/22/2012	1	Ictaluridae	Ameiurus melas	Black bullhead	tol	1						1
Unnamed Creek	CCA12-006	50290	5/22/2012	1	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Unnamed Creek	CCA12-043	50294	5/30/2012	232	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Unnamed Creek	CCA12-043	50294	5/30/2012	78	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Unnamed Creek	CCA12-043	50294	5/30/2012	42	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Unnamed Creek	CCA12-043	50294	5/30/2012	41	Centrarchidae	Lepomis humilis	Orangespotted sunfish	tol	1						
Unnamed Creek	CCA12-043	50294	5/30/2012	23	Clupeidae	Dorosoma cepedianum	Gizzard shad	tol			1				
Unnamed Creek	CCA12-043	50294	5/30/2012	13	Centrarchidae	Pomoxis annularis	White crappie	tol				1			
Unnamed Creek	CCA12-043	50294	5/30/2012	13	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Unnamed Creek	CCA12-043	50294	5/30/2012	6	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Unnamed Creek	CCA12-043	50294	5/30/2012	5	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Unnamed Creek	CCA12-043	50294	5/30/2012	4	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Unnamed Creek	CCA12-043	50294	5/30/2012	4	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Unnamed Creek	CCA12-043	50294	5/30/2012	4	Ictaluridae	Ictalurus punctatus	Channel catfish	tol				1			1
Unnamed Creek	CCA12-043	50294	5/30/2012	2	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Unnamed Creek	CCA12-043	50294	5/30/2012	1	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				
Unnamed Creek	CCA12-043	50294	5/30/2012	1	Catostomidae	Ictiobus cyprinellus	Largemouth buffalo	tol	1						
Unnamed Creek	CCA12-043	50294	5/30/2012	1	Lepisosteidae	Unidentified Lepisosteus spp.	Unidentified gar spp.	tol				1			
Unnamed Creek	CCA12-044	50285	5/23/2012	276	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Unnamed Creek	CCA12-044	50285	5/23/2012	35	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1
Unnamed Creek	CCA12-044	50285	5/23/2012	7	Centrarchidae	Lepomis macrochirus	Bluegill sunfish	tol	1						
Unnamed Creek	CCA12-044	50285	5/23/2012	1	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Unnamed Creek	CCA12-064	50284	5/23/2012	143	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Unnamed Creek	CCA12-064	50284	5/23/2012	55	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Unnamed Creek	CCA12-064	50284	5/23/2012	25	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Unnamed Creek	CCA12-064	50284	5/23/2012	17	Ictaluridae	Ameiurus natalis	Yellow bullhead	tol	1						1
Unnamed Creek	CCA12-064	50284	5/23/2012	13	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Unnamed Creek	CCA12-064	50284	5/23/2012	4	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1						1

Site Name	WBID	Sample ID	Date	Total Specimen Count	Family	Species	Vernacular Name	Combined tolerance	Insectivor	Planktivor	Omnivore	Piscivore	Herbivore	Generalist	Lithophilic spawners
Unnamed Creek	CCA12-064	50284	5/23/2012	2	Centrarchidae	Micropterus salmoides	Largemouth bass	tol				1			
Unnamed Creek	CCA12-064	50284	5/23/2012	2	Cyprinidae	Pimephales vigilax	Bullhead minnow	tol			1				
Unnamed Creek	CCA12-084	50384	7/11/2012	454	Cyprinidae	Pimephales promelas	Fathead minnow	tol			1				
Unnamed Creek	CCA12-084	50384	7/11/2012	315	Poeciliidae	Gambusia affinis	Mosquitofish	tol	1						
Unnamed Creek	CCA12-084	50384	7/11/2012	178	Cyprinidae	Notropis stramineus	Sand shiner	interm	1						
Unnamed Creek	CCA12-084	50384	7/11/2012	110	Cyprinidae	Cyprinella lutrensis	Red shiner	tol			1				
Unnamed Creek	CCA12-084	50384	7/11/2012	54	Fundulidae	Fundulus zebrinus	Plains killifish	tol	1						
Unnamed Creek	CCA12-084	50384	7/11/2012	15	Cyprinidae	Phenacobius mirabilis	Suckermouth minnow	intol	1						
Unnamed Creek	CCA12-084	50384	7/11/2012	11	Centrarchidae	Lepomis cyanellus	Green sunfish	tol	1					1	
Unnamed Creek	CCA12-084	50384	7/11/2012	6	Cyprinidae	Cyprinus carpio	Common carp	tol			1				
Unnamed Creek	CCA12-084	50384	7/11/2012	4	Centrarchidae	Lepomis megalotis	Longear sunfish	tol	1						
Unnamed Creek	CCA12-084	50384	7/11/2012	2	Catostomidae	Carpiodes carpio	River carpsucker	tol			1				

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
Fixed Sites																					
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	15	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	14	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	10	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	8	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	7	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4		X						
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	6	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	4	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	4	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	3	Insecta	Diptera	Stratiomyidae	Stratiomys		8	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	3	Insecta	Odonata	Gomphidae	Erpetogomphus		1				X				
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	3	Insecta	Odonata	Gomphidae	Gomphus		1				X				
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	2	Insecta	Coleoptera	Dytiscidae	Hydroporus		7				X				
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X						X	
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Coleoptera	Elmidae	Heterelmis		4	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Megaloptera	Corydalidae	Corydalus		4				X				
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Odonata	Calopterygidae	Hetaerina		5				X				
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Riffle	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Odonata	Gomphidae	Progomphus		1				X				
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	48	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	46	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	9	Insecta	Diptera	Tipulidae	Limnophila		3				X				
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	4	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	1	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	51343	1/22/2013	W	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	59	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	17	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	12	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	11	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	4	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	4	Insecta	Ephemeroptera	Heptageniidae	Leucrocota		4	X						X	
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	3	Oligochaeta	Haplotaxida	Tubificidae	Branchiura		1	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	2	Insecta	Ephemeroptera	Baetidae	Baetis		4	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	2	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	1	Hirudinea	Pharyngobdellida	Erpobdellidae	Mooreobdella		8				X				
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	1	Insecta	Coleoptera	Gyrinidae	Dineutus						X				
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	1	Insecta	Coleoptera	Scirtidae	Scirtes		8								X
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	1	Insecta	Collembola	Isotomidae	Isotomurus			X							
CGP	Riffle	Bois d'Arc Creek	OK621000-03-0010C	52211	7/8/2013	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Riffle	Dead Indian Creek	OK620910-05-0080A	53365	1/16/2014	W	7	Oligochaeta	Haplotaxida	Naididae	Nais		8	X							
CGP	Riffle	Dead Indian Creek	OK620910-05-0080A	53365	1/16/2014	W	6	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Dead Indian Creek	OK620910-05-0080A	53365	1/16/2014	W	4	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Dead Indian Creek	OK620910-05-0080A	53365	1/16/2014	W	4	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Riffle	Dead Indian Creek	OK620910-05-0080A	53365	1/16/2014	W	2	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Riffle	Dead Indian Creek	OK620910-05-0080A	53365	1/16/2014	W	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Riffle	Dead Indian Creek	OK620910-05-0080A	53365	1/16/2014	W	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Riffle	Dead Indian Creek	OK620910-05-0080A	53365	1/16/2014	W	1	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	26	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	22	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	17	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	13	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	10	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	9	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	8	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	4	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	3	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	2	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Potamyia		4	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	50350	7/3/2012	S	1	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X			X	
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	26	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	22	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	16	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	12	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	10	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	5	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	2	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	2	Oligochaeta	Haplotaxida	Naididae	Nais		8	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	1	Insecta	Coleoptera	Elmidae	Microcyloepus		4	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	1	Insecta	Diptera	Dolichopodidae	Hydrophorus		4				X				
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	1	Insecta	Diptera	Tipulidae	Limnophila		3				X				
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	1	Insecta	Ephemeroptera	Baetidae			4	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	1	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4		X						
CGP	Riffle	Deep Creek	OK620910-02-0250C	53360	1/15/2014	W	29	Oligochaeta	Haplotaxida	Naididae	Nais		8	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	53360	1/15/2014	W	15	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	53360	1/15/2014	W	12	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	53360	1/15/2014	W	10	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Deep Creek	OK620910-02-0250C	53360	1/15/2014	W	10	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Riffle	Griever Creek	OK620920-01-0130G	53394	1/31/2014	W	3	Insecta	Diptera	Tabanidae	Chrysops		6		X			X			
CGP	Riffle	Griever Creek	OK620920-01-0130G	53394	1/31/2014	W	2	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
CGP	Riffle	Griever Creek	OK620920-01-0130G	53394	1/31/2014	W	1	Insecta	Coleoptera	Dytiscidae	Agabus		7					X			
CGP	Riffle	Griever Creek	OK620920-01-0130G	53394	1/31/2014	W	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	Riffle	Griever Creek	OK620920-01-0130G	53394	1/31/2014	W	1	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Riffle	Griever Creek	OK620920-01-0130G	53394	1/31/2014	W	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Riffle	Griever Creek	OK620920-01-0130G	53394	1/31/2014	W	1	Insecta	Odonata	Gomphidae	Erpetogomphus		1					X			
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	38	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	32	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	23	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	13	Insecta	Diptera	Chironomidae	Tanypodinae		6		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	10	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	3	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	2	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Gastropoda	Basommatophora	Physella			8								X
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Insecta	Odonata	Coenagrionidae	Enallagma		9					X			
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	74	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	18	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	6	Insecta	Diptera	Chironomidae	Tanypodinae		6		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	4	Insecta	Odonata	Gomphidae	Progomphus		1					X			
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	3	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	2	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	1	Insecta	Diptera	Ceratopogonidae	Stilobezzia		6					X			
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	1	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Riffle	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	1	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	29	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	29	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	15	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	15	Insecta	Diptera	Chironomidae	Tanypodinae		6		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	9	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	7	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	2	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	2	Insecta	Odonata	Coenagrionidae	Argia		9					X			
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Insecta	Coleoptera	Elmidae	Dubiraphia		4		X						X
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	53366	1/16/2014	W	71	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	53366	1/16/2014	W	18	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	53366	1/16/2014	W	14	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	53366	1/16/2014	W	4	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	53366	1/16/2014	W	3	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1		X						
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	53366	1/16/2014	W	2	Insecta	Diptera	Chironomidae	Orthocladinae		6	X							
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	53366	1/16/2014	W	2	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
CGP	Riffle	Kingfisher Creek	OK620910-05-0010J	53366	1/16/2014	W	1	Turbellaria	Tricladida	Planariidae	Dugesia		4		X						
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	37	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	18	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	16	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	6	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	6	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	4	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	4	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	3	Gastropoda	Basommatophora	Physidae	Physella		8						X		
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	3	Insecta	Diptera	Chironomidae	Tanytarsini		6	X						X	
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	2	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	2	Insecta	Diptera	Ceratopogonidae	Stilobezzia		6				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	2	Insecta	Diptera	Tipulidae	Limnophila		3				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	2	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	2	Insecta	Odonata	Libellulidae	Brechmorhoga		9				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	1	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	1	Insecta	Ephemeroptera	Leptophlebiidae	Neochoroterpes		2	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	1	Insecta	Odonata	Calopterygidae	Hetaerina		5				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	1	Insecta	Odonata	Gomphidae	Erpetogomphus		1				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	50344	7/2/2012	S	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	25	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	24	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	19	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	18	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	7	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	5	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	5	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	2	Insecta	Coleoptera	Haliplidae	Peltodytes		2								X
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	2	Insecta	Plecoptera	Perlidae	Perlesta		1			X					
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Crustacea	Decapoda	Cambaridae	Cambarus		6	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Hemiptera	Belostomatidae	Lethocerus		5				X				
CGP	Riffle	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	15	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	12	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	12	Insecta	Odonata	Gomphidae	Progomphus		1				X				
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	11	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	11	Insecta	Odonata	Gomphidae	Erpetogomphus		1				X				
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	8	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	7	Insecta	Coleoptera	Elmidae	Microcylloepus		4		X						
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	4	Insecta	Diptera	Tipulidae	Limnophila		3					X			
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	3	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	3	Insecta	Odonata	Calopterygidae	Hetaerina		5					X			
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	2	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X		X		
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Riffle	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	71	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	15	Insecta	Diptera	Chironomidae	Chironomini		8	X	X						
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	14	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	4	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	3	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	1	Insecta	Ephemeroptera	Baetidae	Baetis		4	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	1	Insecta	Ephemeroptera	Heptageniidae	Leucrocuta		4	X						X	
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	1	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	1	Insecta	Megaloptera	Corydalidae	Corydalus		4					X			
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	1	Insecta	Trichoptera	Leptoceridae	Ceraclea		4	X							
CGP	Riffle	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	1	Oligochaeta	Haplotaxida	Tubificidae	Branchiura		1	X							
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	56	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	30	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	18	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	18	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	5	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	1	Insecta	Diptera	Tipulidae	Limnophila		3					X			
CGP	Riffle	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	1	Insecta	Trichoptera	Hydroptilidae	Ochrotrichia		4	X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	72	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	40	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	11	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X				X			
CGP	Riffle	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	2	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Riffle	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	67	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	9	Insecta	Diptera	Ceratopogonidae	Palpomyia		6	X				X			
CGP	Riffle	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	7	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	5	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	3	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X				X			

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder	
CGP	Riffle	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	2	Insecta	Diptera	Tipulidae	Limnophila		3					X				
CGP	Riffle	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	1	Insecta	Collembola	Isotomidae	Isotomurus				X							
CGP	Riffle	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	1	Insecta	Diptera	Ephydriidae	Ephydra		6	X								
CGP	Riffle	Salt Creek	OK620910-02-0100D	53359	1/15/2014	W	65	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X								
CGP	Riffle	Salt Creek	OK620910-02-0100D	53359	1/15/2014	W	36	Insecta	Diptera	Chironomidae	Chironomini		8	X								
CGP	Riffle	Salt Creek	OK620910-02-0100D	53359	1/15/2014	W	4	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X								
CGP	Riffle	Salt Creek	OK620910-02-0100D	53359	1/15/2014	W	2	Insecta	Diptera	Chironomidae	Tanypodinae		6	X								
CGP	Riffle	Salt Creek	OK620910-02-0100D	53359	1/15/2014	W	1	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X					
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	56	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	32	Insecta	Diptera	Chironomidae	Chironomini		8	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	17	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	6	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	5	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	3	Insecta	Ephemeroptera	Baetidae	Baetis		4	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	3	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X			X		
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	2	Insecta	Diptera	Tipulidae	Geranomyia		3									X
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	2	Insecta	Ephemeroptera	Caenidae	Caenis		7	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8									X
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X					
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	1	Oligochaeta	Haplotaxida	Naididae	Nais		8	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	1	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X								
CGP	Riffle	Sandy Creek	OK621010-02-0010D	50473	7/18/2012	S	1	Turbellaria	Tricladida	Planariidae	Dugesia		4			X						
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	71	Insecta	Diptera	Chironomidae	Chironomini		8	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	12	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	11	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	7	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	6	Insecta	Diptera	Chironomidae	Tanytarsini		6	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	5	Insecta	Diptera	Chironomidae	Tanypodinae		6	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	4	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X	
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	4	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X		X			
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X					
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X					
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Ephemeroptera	Caenidae	Cercobrachys											
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8					X				
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9					X				
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X			X	
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	77	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	10	Insecta	Diptera	Chironomidae	Chironomini		8	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	6	Oligochaeta	Haplotaxida	Naididae	Nais		8	X								
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	5	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	4	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	2	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	2	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	2	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	2	Turbellaria	Tricladida	Planariidae	Dugesia		4		X						
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	1	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	52132	6/24/2013	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	49	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	17	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	7	Oligochaeta	Haplotaxida	Naididae	Nais		8	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	3	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	3	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	3	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	2	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	2	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	2	Insecta	Diptera	Tipulidae	Limnophila		3				X				
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	2	Oligochaeta	Haplotaxida	Naididae	Slavina		8	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	2	Oligochaeta	Haplotaxida	Tubificidae	Aulodrilus		8	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	1	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Riffle	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	53363	1/15/2014	W	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	59	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	21	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	11	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	8	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	8	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	6	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	6	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	4	Insecta	Ephemeroptera	Heptageniidae	Leucrocota		4	X							X
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	3	Insecta	Odonata	Gomphidae	Progomphus		1				X				
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	1	Insecta	Odonata	Gomphidae	Erpetogomphus		1				X				
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	1	Insecta	Odonata	Gomphidae	Gomphus		1				X				
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	50357	7/3/2012	S	1	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	35	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	16	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	15	Oligochaeta	Haplotaxida	Naididae	Nais		8	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	6	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	4	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	3	Insecta	Ephemeroptera	Heptageniidae	Leucrocota		4	X							X

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder	
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Crustacea	Amphipoda	Talitridae	Hyalella		8		X							
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Insecta	Diptera	Chaoboridae	Chaoborus		8					X				
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Insecta	Ephemeroptera	Caenidae	Caenis		7	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Insecta	Hemiptera	Cicadellidae												
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6					X				
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Diptera	Simuliidae	Simulium		6	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Ephemeroptera	Baetidae	Baetis		4	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Odonata	Gomphidae	Erpetogomphus		1					X				
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Odonata	Gomphidae	Progomphus		1					X				
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Oligochaeta	Haplotaxida	Naididae	Slavina		8	X								
CGP	Riffle	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X								
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	70	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X								
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	37	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X								
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	23	Insecta	Diptera	Chironomidae	Chironomini		8	X								
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	11	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X				
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	3	Insecta	Diptera	Ceratopogonidae	Stilobezzia		6					X				
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	2	Insecta	Diptera	Chironomidae	Tanytarsini		6	X								
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	1	Crustacea	Ostracoda						X							
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X								
CGP	Riffle	West Clay Creek	OK621010-01-0130R	50246	6/18/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X								
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	58	Insecta	Diptera	Chironomidae	Chironomini		8	X								
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	25	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	6	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X								
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	4	Gastropoda	Basommatophora	Physidae	Physella		8							X		
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X								
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	2	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X								
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	2	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X								
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	2	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X			X	
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	1	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X				X				
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X								
CGP	Riffle	Wildhorse Creek	OK621000-02-0040F	50387	6/26/2012	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8					X				
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	77	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	15	Insecta	Diptera	Chironomidae	Chironomini		8	X								
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	14	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X								
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	10	Insecta	Ephemeroptera	Heptageniidae	Leucrocuta		4	X							X	
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	6	Insecta	Ephemeroptera	Baetidae	Baetis		4	X								
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	5	Insecta	Trichoptera	Philopotamidae	Chimarra		3	X								
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	2	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	2	Insecta	Megaloptera	Corydalidae	Corydalis		4					X				

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	1	Insecta	Ephemeroptera	Baetidae	Acerpenna		4		X						
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	50377	7/5/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	S	64	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	S	48	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	S	8	Insecta	Ephemeroptera	Baetidae	Baetis		4	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	S	4	Insecta	Diptera	Chironomidae	Chironomini		8	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	S	2	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	S	2	Insecta	Ephemeroptera	Heptageniidae	Leucrocuta		4	X					X		
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
FH	Riffle	Salt Creek: Lower	OK621200-04-0010F	52216	7/8/2013	S	1	Insecta	Trichoptera	Philopotamidae	Chimarra		3	X							
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	79	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	13	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	10	Insecta	Diptera	Chironomidae	Chironomini		8	X							
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	7	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	4	Insecta	Ephemeroptera	Heptageniidae	Leucrocuta		4	X						X	
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	3	Insecta	Ephemeroptera	Baetidae	Acerpenna		4		X						
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	3	Insecta	Ephemeroptera	Baetidae	Baetis		4	X							
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	2	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	1	Insecta	Ephemeroptera	Baetidae	Procloeon		4	X	X						
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
FH	Riffle	Salt Creek: Middle	OK621200-04-0010K	52214	7/8/2013	S	1	Insecta	Ephemeroptera	Heptageniidae	Stenacron		4		X						
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	19	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	14	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	12	Turbellaria	Tricladida	Planariidae	Dugesia		4		X						
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	11	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	8	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4		X						
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	5	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X						X	
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	5	Insecta	Odonata	Gomphidae	Gomphus		1				X				
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	4	Insecta	Coleoptera	Dytiscidae	Hydroporus		7				X				
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	4	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	4	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	3	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	3	Insecta	Odonata	Gomphidae	Erpetogomphus		1				X				
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	2	Crustacea	Amphipoda	Talitridae	Hyaella		8	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Enopla	Hoplonemertea	Tetrastemmatidae	Prostoma		8				X				
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Gastropoda	Stylommatophora	Succineidae	Succinea										
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Hirudinea	Rhynchobdellida	Glossiphoniidae	Helobdella		1				X	X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Diptera	Stratiomyidae	Stratiomys		8	X							

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Hemiptera	Veliidae	Rhagovelia		8					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X		X	
CGP	SVeg	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Oligochaeta	Haplotaxida	Tubificidae	Ilyodrilus		8	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	30	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	19	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	15	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	8	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	7	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	6	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	5	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	4	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	4	Turbellaria	Tricladida	Planariidae	Dugesia		4		X						
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	3	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	3	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	2	Crustacea	Cladocera					X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	2	Insecta	Coleoptera	Halplidae	Peltodytes		2								X
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	2	Insecta	Diptera	Ceratopogonidae			6					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	2	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Coleoptera	Dytiscidae	Oreodytes		7					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Coleoptera	Scirtidae	Scirtes		8								X
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Diptera	Dolichopodidae	Hydrophorus		4					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Diptera	Stratiomyidae	Nemotelus		8	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Diptera	Stratiomyidae	Stratiomys		8	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	106	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	8	Insecta	Trichoptera	Limnephilidae	Limnephilus		4								X
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	3	Insecta	Coleoptera	Dytiscidae	Agabus		7					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	3	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	2	Insecta	Coleoptera	Halplidae	Peltodytes		2								X
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	2	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X				X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	2	Insecta	Diptera	Ceratopogonidae	Stilobezzia		6					X			
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	2	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	1	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	1	Oligochaeta	Haplotaxida	Lumbricidae			5	X							
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	45	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	24	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	17	Insecta	Diptera	Chironomidae	Tanytopodinae		6	X							
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	11	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	7	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	7	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	4	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X		X	
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	3	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Cooper Creek	OK620910-02-0040C	53367	1/16/2014	W	3	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X				X			

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	9	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	8	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	7	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	6	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	5	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	3	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X						X	
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	3	Insecta	Ephemeroptera	Baetidae	Falliceon		4	X							
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	3	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	3	Insecta	Odonata	Calopterygidae	Hetaerina		5				X				
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	1	Insecta	Odonata	Coenagrionidae	Enallagma		9				X				
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	1	Insecta	Odonata	Gomphidae	Gomphus		1				X				
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	SVeg	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	1	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	36	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	11	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	10	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	7	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	6	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	5	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	5	Insecta	Ephemeroptera	Baetidae	Falliceon		4	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	5	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	3	Insecta	Odonata	Calopterygidae	Hetaerina		5				X				
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	2	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	2	Insecta	Coleoptera	Dytiscidae	Hydroporus		7				X				
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	2	Insecta	Hemiptera	Belostomatidae	Lethocerus		5				X				
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Hirudinea	Rhynchobdellida	Glossiphoniidae	Placobdella		1			X					
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Hemiptera	Cicadellidae											
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	33	Insecta	Ephemeroptera	Baetidae	Falliceon		4	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	19	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	15	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	7	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	6	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	5	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	5	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	5	Insecta	Odonata	Coenagrionidae	Enallagma		9					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	4	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	3	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	2	Crustacea	Amphipoda	Talitridae	Hyaella		8		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	2	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	2	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	2	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	2	Insecta	Odonata	Calopterygidae	Hetaerina		5					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Acari	Arcarina	Eremaeidae	Hydrozetes		4					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Gastropoda	Basommatophora	Lymnaeidae	Lymnaea		6								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Insecta	Coleoptera	Haliplidae	Peltodytes		2								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Insecta	Hemiptera	Belostomatidae	Lethocerus		5					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X			X
CGP	SVeg	Indian Creek	OK620910-02-0310C	52130	6/24/2013	S	1	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	47	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	16	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	9	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	8	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	7	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	6	Crustacea	Amphipoda	Talitridae	Hyaella		8		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	6	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	3	Insecta	Coleoptera	Dytiscidae	Agabus		7					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	3	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	3	Insecta	Odonata	Calopterygidae	Hetaerina		5					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	2	Gastropoda	Basommatophora	Lymnaeidae	Fossaria		6								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	2	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	2	Insecta	Diptera	Simuliidae	Simulium		6		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	1	Insecta	Coleoptera	Dytiscidae	Neobidessus		7					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	1	Insecta	Coleoptera	Scirtidae	Scirtes		8								X
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	1	Insecta	Diptera	Ceratopogonidae	Stilobezzia		6					X			
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4		X						
CGP	SVeg	Indian Creek	OK620910-02-0310C	53361	1/15/2014	W	1	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8		X						
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	37	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	16	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	12	Crustacea	Amphipoda	Talitridae	Hyaella		8		X						
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	6	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	4	Insecta	Ephemeroptera	Baetidae	Callibaetis		4		X						
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	4	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4		X						
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	3	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	3	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	3	Insecta	Odonata	Coenagrionidae	Enallagma		9					X			
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	2	Insecta	Hemiptera	Corixidae	Trichocorixa		8					X			

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X							X
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
CGP	SVeg	Kingfisher Creek	OK620910-05-0010J	52135	6/25/2013	S	1	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	41	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	22	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	13	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	7	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	4	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	3	Insecta	Diptera	Ceratopogonidae	Probezzia		6					X			
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	2	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	2	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Gastropoda	Basommatophora	Lymnaeidae	Fossaria		6							X	
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Coleoptera	Haliplidae	Peltodytes		2								X
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8					X			
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Odonata	Coenagrionidae	Argia		9					X			
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	SVeg	Long Creek	OK620920-02-0080D	52024	6/17/2013	S	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	25	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	14	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	14	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	9	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	6	Insecta	Odonata	Gomphidae	Progomphus		1					X			
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	4	Insecta	Odonata	Calopterygidae	Hetaerina		5					X			
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	3	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	3	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X							X
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	3	Insecta	Coleoptera	Elmidae	Microcyloepus		4	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	3	Insecta	Odonata	Gomphidae	Gomphus		1					X			
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	2	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	2	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	2	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	2	Insecta	Odonata	Coenagrionidae	Argia		9					X			
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	2	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X		X	
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6					X			
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Diptera	Stratiomyidae	Nemotelus		8	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Diptera	Tabanidae	Chrysops		6	X				X			
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Odonata	Gomphidae	Erpetogomphus		1					X			

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Main Creek	OK620920-01-0180F	50341	7/2/2012	S	1	Insecta	Trichoptera	Hydroptilidae	Ithytrichia		4							X	
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	44	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	35	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	21	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	18	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	11	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	1	Insecta	Coleoptera	Dytiscidae	Hydroporus		7				X				
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	1	Insecta	Diptera	Ceratopogonidae			6				X				
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	1	Insecta	Diptera	Tipulidae	Limnophila		3				X				
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	52020	6/17/2013	S	1	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	66	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	16	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	5	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X						X	
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	3	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	3	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	3	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	3	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	3	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	1	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	1	Insecta	Coleoptera	Dytiscidae	Oreodytes		7				X				
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	1	Insecta	Coleoptera	Elmidae	Heterelmis		4	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	1	Insecta	Diptera	Ceratopogonidae	Stilobezzia		6				X				
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	1	Insecta	Trichoptera	Limnephilidae	Limnephilus		4								X
CGP	SVeg	Main Creek	OK620920-01-0180F	53393	1/31/2014	W	1	Oligochaeta	Haplotaxida	Lumbricidae			5	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	46	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	42	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	8	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	8	Insecta	Hemiptera	Corixidae	Trichocorixa		8				X				
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	7	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	5	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	4	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	4	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	3	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	3	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	2	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Coleoptera	Halipidae	Peltodytes		2								X
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Diptera	Tabanidae	Chrysops		6	X			X				

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Persimmon Creek	OK720500-01-0150G	53396	1/31/2014	W	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	61	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	13	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	10	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	2	Insecta	Diptera	Stratiomyidae	Stratiomys		8	X							
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	2	Insecta	Odonata	Coenagrionidae	Enallagma		9				X				
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Diptera	Tabanidae	Tabanus		6				X				
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Hemiptera	Belostomatidae	Lethocerus		5				X				
CGP	SVeg	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Hemiptera	Cicadellidae											
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	28	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	21	Insecta	Hemiptera	Corixidae	Trichocorixa		8				X				
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	13	Insecta	Coleoptera	Hydrophilidae	Berosus		7	X			X	X			
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	9	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	7	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	5	Insecta	Diptera	Chironomidae	Tanytopodinae		6	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	4	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	3	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Hirudinea	Rhynchobdellida	Glossiphoniidae	Helobdella		1				X	X			
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Coleoptera	Dytiscidae	Hydroporus		7				X				
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X						X	
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Coleoptera	Haliplidae	Peltodytes		2								X
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Coleoptera	Helophoridae	Helophorus		7								X
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Hemiptera	Cicadellidae											
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Odonata	Calopterygidae	Hetaerina		5				X				
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
CGP	SVeg	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	11	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X							X
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	10	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	8	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	7	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	7	Insecta	Coleoptera	Elmidae	Microcyloepus		4	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	6	Insecta	Diptera	Chironomidae	Tanytopodinae		6	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	5	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	5	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	4	Insecta	Odonata	Calopterygidae	Hetaerina		5					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	4	Insecta	Odonata	Coenagrionidae	Argia		9					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	2	Gastropoda	Basommatophora	Physidae	Physella		8							X	
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	2	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	2	Insecta	Diptera	Chironomidae	Chironomini		8		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	2	Insecta	Diptera	Stratiomyidae	Odontomyia		8		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	2	Pelecypoda	Veneroida	Sphaeriidae	Pisidium		6	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Enopla	Hoplonemertea	Tetrastemmatidae	Prostoma		8					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5								X
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Paracymus		7			X		X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Insecta	Diptera	Chironomidae	Orthocladiinae		6		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Insecta	Megaloptera	Sialidae	Sialis		4					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Insecta	Odonata	Coenagrionidae	Enallagma		9					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Insecta	Odonata	Gomphidae	Erpetogomphus		1					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Smicridea		4	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	50347	7/2/2012	S	1	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	21	Crustacea	Amphipoda	Talitridae	Hyaella		8		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	21	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	20	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	12	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	5	Insecta	Ephemeroptera	Heptageniidae	Heptagenia		4			X					
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	4	Insecta	Coleoptera	Elmidae	Microcylloepus		4		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	4	Insecta	Odonata	Calopterygidae	Hetaerina		5					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	3	Insecta	Diptera	Chironomidae	Orthocladiinae		6		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	3	Insecta	Diptera	Chironomidae	Tanypodinae		6		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	3	Insecta	Odonata	Gomphidae	Erpetogomphus		1					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	2	Insecta	Plecoptera	Perlidae	Perlesta		1			X					
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Gastropoda	Basommatophora	Planorbidae	Helisoma		6							X	
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Coleoptera	Curculionidae											X
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Diptera	Chironomidae	Chironomini		8		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Ephemeroptera	Baetidae	Labiobaetis		4		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Odonata	Coenagrionidae	Argia		9					X			
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Smicridea		4	X							
SWT	SVeg	Clear Creek	OK720500-02-0070G	52026	6/18/2013	S	1	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
SWT	SVeg	Clear Creek	OK720500-02-0070G	53399	1/31/2014	W	71	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	53399	1/31/2014	W	35	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	53399	1/31/2014	W	10	Insecta	Diptera	Chironomidae	Tanypodinae		6		X						
SWT	SVeg	Clear Creek	OK720500-02-0070G	53399	1/31/2014	W	4	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
SWT	SVeg	Clear Creek	OK720500-02-0070G	53399	1/31/2014	W	2	Insecta	Diptera	Chironomidae	Orthocladiinae		6		X						

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Woody	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6		X						
CGP	Woody	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Ephemeroptera	Heptageniidae	Stenonema		4			X					
CGP	Woody	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Woody	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Insecta	Odonata	Gomphidae	Erpetogomphus		1				X				
CGP	Woody	Bent Creek	OK720500-01-0070D	50342	7/2/2012	S	1	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	23	Crustacea	Amphipoda	Talitridae	Hyaella		8		X						
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	17	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	11	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	10	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	5	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	5	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	4	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	4	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	2	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	2	Insecta	Diptera	Chironomidae	Tanypodinae		6		X						
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	2	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Crustacea	Cladocera					X							
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Gastropoda	Stylommatophora	Succineidae	Succinea										
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7		X						
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Insecta	Diptera	Tipulidae	Geranomyia		3								X
CGP	Woody	Bent Creek	OK720500-01-0070D	52022	6/17/2013	S	1	Oligochaeta	Haplotaxida	Naididae	Slavina		8	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	93	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	3	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	3	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	2	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	1	Insecta	Odonata	Gomphidae	Progomphus		1				X				
CGP	Woody	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Bent Creek	OK720500-01-0070D	53395	1/31/2014	W	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1		X						
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	76	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	19	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	7	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	6	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	5	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	3	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	2	Insecta	Coleoptera	Gyrinidae	Dineutus						X				
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	2	Insecta	Trichoptera	Hydroptiliidae	Hydroptila		4				X			X	
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	1	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X						X	
CGP	Woody	Bitter Creek	OK621100-00-0100G	52212	7/8/2013	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	40	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	18	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	17	Insecta	Diptera	Ceratopogonidae	Dasyhelea		6	X							
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	10	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	9	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	6	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder	
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	3	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X	
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	3	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	2	Insecta	Diptera	Ceratopogonidae	Atrichopogon		6		X			X				
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	2	Insecta	Ephemeroptera	Caenidae	Caenis		7		X							
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8		X							
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5									X
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7					X				
CGP	Woody	Black Bear Creek: Upper	OK621200-03-0260B	50486	7/24/2012	S	1	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	62	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	26	Insecta	Trichoptera	Hydropsychidae	Potamyia		4	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	13	Insecta	Ephemeroptera	Baetidae	Baetis		4		X							
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	7	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	7	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X							
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	3	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	3	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	3	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	50487	7/24/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	77	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	13	Insecta	Trichoptera	Hydropsychidae	Potamyia		4	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	11	Insecta	Ephemeroptera	Baetidae	Baetis		4		X							
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	11	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	10	Oligochaeta	Haplotaenidae	Naididae	Nais		8		X							
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	9	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	2	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X			X	
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	1	Insecta	Diptera	Tipulidae	Geranomyia		3									X
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X								
CGP	Woody	Cottonwood Creek	OK620910-04-0010E	51320	1/23/2013	W	1	Insecta	Odonata	Coenagrionidae	Argia		9					X				
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	40	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	23	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	10	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	6	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	4	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X							
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	2	Insecta	Diptera	Simuliidae	Simulium		6	X								
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	2	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X			X	
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8		X							
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	1	Insecta	Coleoptera	Elmidae	Dubiraphia		4		X						X	
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6					X				
CGP	Woody	Dead Indian Creek	OK620910-05-0080A	52134	6/25/2013	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7		X							
CGP	Woody	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	24	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	23	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	22	Insecta	Ephemeroptera	Caenidae	Caenis		7		X							
CGP	Woody	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	5	Insecta	Diptera	Chironomidae	Tanytarsini		6		X							
CGP	Woody	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	4	Crustacea	Amphipoda	Talitridae	Hyalella		8		X							
CGP	Woody	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	2	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X			
CGP	Woody	Deep Creek	OK620910-02-0250C	52129	6/24/2013	S	2	Insecta	Diptera	Ceratopogonidae	Probezzia		6					X				

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	2	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	2	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	2	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	2	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Insecta	Diptera	Tipulidae	Geranomyia		3								X
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	50348	7/3/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	25	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	21	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	17	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	9	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	6	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	5	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X			X	
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	4	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	4	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	4	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	3	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4		X						
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	2	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	2	Insecta	Ephemeroptera	Baetidae	Proclaeon		4	X	X						
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	2	Insecta	Ephemeroptera	Heptageniidae	Stenonema		4			X					
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	1	Insecta	Diptera	Ceratopogonidae	Atrichopogon		6	X			X				
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	1	Insecta	Diptera	Ceratopogonidae	Dasyhelea		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	1	Insecta	Odonata	Calopterygidae	Hetaerina		5				X				
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	52131	6/24/2013	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	53362	1/15/2014	W	94	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	53362	1/15/2014	W	7	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	53362	1/15/2014	W	4	Oligochaeta	Haplotaxida	Naididae	Nais		8	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	53362	1/15/2014	W	3	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	53362	1/15/2014	W	2	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	53362	1/15/2014	W	1										X				
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	53362	1/15/2014	W	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Woody	Eagle Chief Creek: Lower	OK620920-04-0010C	53362	1/15/2014	W	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	36	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	19	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	14	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	12	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	7	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	5	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4		X						
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	4	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	4	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	4	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	3	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	3	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	3	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	3	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X		X		
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Insecta	Diptera	Tabanidae	Tabanus		6				X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	2	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	50247	6/18/2012	S	1	Insecta	Ephemeroptera	Heptageniidae	Stenonema		4			X					
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	42	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	36	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	15	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	6	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	4	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	3	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	3	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	2	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	2	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	2	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	2	Insecta	Collembola	Isotomidae	Isotomurus				X						
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	2	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	2	Insecta	Diptera	Chironomidae	Tanytopodinae		6	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	2	Oligochaeta	Haplotaxida	Naididae	Pristina		8	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Crustacea	Decapoda	Cambaridae	Cambarus		6	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Enopla	Hoplonemertea	Tetrastemmatidae	Prostoma		8				X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Insecta	Diptera	Empididae	Clinocera		6				X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Insecta	Diptera	Psychodidae	Psychoda		1	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Insecta	Diptera	Tipulidae	Limnophila		3				X				
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Eagle Chief Creek: Upper	OK620920-04-0010G	52118	6/17/2013	S	1	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	53	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	16	Insecta	Diptera	Chironomidae	Tanytopodinae		6	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	9	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	8	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	7	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	5	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	5	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X		X		
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	4	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	3	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	2	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	2	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Coleoptera	Elmidae	Microcylloepus		4	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Megaloptera	Corydalidae	Corydalis		4				X				
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Odonata	Calopterygidae	Hetaerina		5				X				
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Woody	Indian Creek	OK620910-02-0310C	50349	7/3/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	68	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	15	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	9	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	7	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	5	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	4	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	4	Insecta	Coleoptera	Dytiscidae	Hydroporus		7				X				
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	3	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	3	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X		X		
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	2	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	2	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	50251	6/19/2012	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8				X				
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	W	110	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	W	4	Insecta	Diptera	Tipulidae	Limnophila		3				X				
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	W	2	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	W	1	Gastropoda	Stylommatophora	Succineidae	Succinea										
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	W	1	Insecta	Diptera	Ephydriidae	Hydrellia		6	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	W	1	Insecta	Diptera	Tipulidae	Geranomyia		3								X
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	W	1	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	51335	1/28/2013	W	1	Insecta	Plecoptera	Taeniopterygidae	Taeniopteryx		2	X							X
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	52119	6/17/2013	S	64	Insecta	Ephemeroptera	Caenidae	Amercaenis										
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	52119	6/17/2013	S	13	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	52119	6/17/2013	S	9	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	52119	6/17/2013	S	5	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	Woody	Medicine Lodge River	OK621010-03-0010D	52119	6/17/2013	S	5	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder	
CGP	Woody	Pond Creek	OK621000-05-0010D	51582	3/12/2013	S	7	Oligochaeta	Haplotaxida	Naididae	Nais		8									
CGP	Woody	Pond Creek	OK621000-05-0010D	51582	3/12/2013	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X								
CGP	Woody	Pond Creek	OK621000-05-0010D	51582	3/12/2013	S	1	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X								
CGP	Woody	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	65	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	54	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	7	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						
CGP	Woody	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	7	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							
CGP	Woody	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	4	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X							
CGP	Woody	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	2	Insecta	Ephemeroptera	Caenidae	Caenis		7		X							
CGP	Woody	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X								
CGP	Woody	Red Rock Creek: Lower	OK621200-05-0010K	50484	7/24/2012	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	58	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	22	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	21	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	5	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	4	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X							
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	4	Insecta	Odonata	Coenagrionidae	Argia		9				X					
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	2	Gastropoda	Basommatophora	Physidae	Physella		8								X	
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	2	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X				X	
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	1	Insecta	Diptera	Tipulidae	Limnophila		3				X					
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8				X					
CGP	Woody	Red Rock Creek: Upper	OK621200-05-0160G	50485	7/24/2012	S	1	Insecta	Hemiptera	Veliidae	Microvelia		8				X					
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	90	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	6	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	4	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X				
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	2	Insecta	Diptera	Ceratopogonidae	Bezzia		6		X			X				
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5									X
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6		X							
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X					
CGP	Woody	Salt Creek	OK620910-02-0100D	50351	7/3/2012	S	1	Insecta	Odonata	Coenagrionidae	Enallagma		9				X					
CGP	Woody	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	106	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	3	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							
CGP	Woody	Salt Creek	OK620910-02-0100D	52128	6/24/2013	S	2	Insecta	Diptera	Ceratopogonidae	Palpomyia		6		X			X				
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	108	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	17	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X								
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	4	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	2	Insecta	Diptera	Ceratopogonidae	Forcipomyia		6				X				X	
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Potamyia		4	X								
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	1	Acari	Arcarina	Eremaeidae	Hydrozetes		4				X					
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8								X	
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	50480	7/23/2012	S	1	Insecta	Ephemeroptera	Baetidae	Baetis		4		X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	50	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	20	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	19	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	10	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	4	Oligochaeta	Haplotaxida	Naididae	Nais		8		X						
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	1	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	1	Insecta	Trichoptera	Hydropsychidae	Potamyia		4	X							
CGP	Woody	Skeleton Creek: Upper	OK620910-03-0010S	51581	3/12/2013	W	1	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		1		X						
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	62	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	22	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	8	Insecta	Coleoptera	Elmidae	Dubiraphia		4		X					X	
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	8	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	6	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	6	Insecta	Ephemeroptera	Heptageniidae	Stenacron		4			X					
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	4	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	4	Insecta	Ephemeroptera	Baetidae	Baetis		4		X						
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	1	Insecta	Diptera	Ceratopogonidae	Dasyhelea		6		X						
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	1	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X						
CGP	Woody	Stillwater Creek: Upper	OK620900-04-0070T	50483	7/23/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	93	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	13	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	8	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	4	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	3	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	3	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	2	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Ephemeroptera	Baetidae	Callibaetis		4		X						
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X						
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Oligochaeta	Haplotaxida	Naididae	Nais		8		X						
CGP	Woody	Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	50352	7/3/2012	S	1	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X							
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	75	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	14	Insecta	Hemiptera	Corixidae	Trichocorixa		8				X				
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	3	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	2	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	2	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X						
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7		X						
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Insecta	Diptera	Ceratopogonidae	Atrichopogon		6		X			X			
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6		X						
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	52137	6/25/2013	S	1	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4								
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	53368	1/16/2014	W	55	Insecta	Diptera	Chironomidae	Tanytarsini		6	X				X		X	
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	53368	1/16/2014	W	53	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	53368	1/16/2014	W	3	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	53368	1/16/2014	W	2	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	53368	1/16/2014	W	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	53368	1/16/2014	W	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Woody	Turkey Creek: Lower	OK620910-06-0010B	53368	1/16/2014	W	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	45	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	7	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4		X						
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	6	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	5	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	5	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	3	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	2	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Hemiptera	Cicadellidae	Cicadellidae										
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8					X			
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	52133	6/25/2013	S	1	Oligochaeta	Haplotaxida	Naididae	Nais		8	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	63	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	27	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	13	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	7	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	4	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	3	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	2	Insecta	Odonata	Gomphidae	Erpetogomphus		1					X			
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	2	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7		X						
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	1	Insecta	Collembola	Isotomidae	Isotomurus			X							
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	1	Insecta	Diptera	Tipulidae	Limnophila		3				X				
CGP	Woody	Uncle John's Creek	OK620910-05-0030C	53364	1/16/2014	W	1	Insecta	Ephemeroptera	Heptageniidae	Stenonema		4			X					

Probabilistic Sites																					
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	68	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	26	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	12	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	7	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	5	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	5	Insecta	Diptera	Tipulidae	Limnophila		3				X				

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	4	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	3	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	3	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	3	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X		X		
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	2	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	2	Insecta	Megaloptera	Corydalidae	Corydalis		4				X				
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Diptera	Stratiomyidae	Stratiomys		8	X							
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8				X				
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Riffle	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Trichoptera	Philopotamidae	Chimarra		3	X							
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	43	Insecta	Diptera	Chironomidae	Chironomini		8	X	X						
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	29	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	10	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	10	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	7	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	6	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	3	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	2	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	1	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	1	Insecta	Ephemeroptera	Heptageniidae	Leucrocota		4	X						X	
CGP	Riffle	Skeleton Creek - 020	CCA12-020	50279	6/26/2012	S	1	Insecta	Odonata	Gomphidae	Gomphus		1				X				
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	61	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	8	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	6	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	4	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	4	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	3	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	1	Insecta	Coleoptera	Haliplidae	Peltodytes		2								X
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	1	Insecta	Diptera	Stratiomyidae	Stratiomys		8	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	1	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Riffle	Traders Creek - 077	CCA12-077	50158	5/30/2012	S	1	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	60	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	12	Insecta	Diptera	Chironomidae	Chironomini		8	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	12	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	8	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	7	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	5	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	5	Insecta	Ephemeroptera	Baetidae	Baetis		4	X							

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	5	Insecta	Ephemeroptera	Heptageniidae	Stenonema		4			X					
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	2	Insecta	Ephemeroptera	Baetidae	Procloeon		4		X	X					
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	2	Insecta	Megaloptera	Corydalidae	Corydalus		4				X				
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	1	Insecta	Coleoptera	Psephenidae	Psephenus		4							X	
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	1	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	1	Insecta	Ephemeroptera	Heptageniidae	Leucrocuta		4	X						X	
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	1	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	1	Insecta	Odonata	Coenagrionidae	Enallagma		9				X				
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	1	Pelecypoda	Veneroida	Corbiculidae	Corbicula		5	X							
FH	Riffle	Salt Creek - 024	CCA12-024	50375	7/5/2012	S	1	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	66	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	17	Insecta	Hemiptera	Corixidae	Trichocorixa		8				X				
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	10	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	5	Oligochaeta	Haplotaxida	Naididae	Dero		10	X							
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	4	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	1	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	1	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	SVeg	Camp Creek - 058	CCA12-058	50283	5/22/2012	S	1	Insecta	Odonata	Coenagrionidae	Enallagma		9				X				
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	75	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	12	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	4	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	3	Insecta	Odonata	Coenagrionidae	Enallagma		9				X				
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	2	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	2	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Gastropoda	Basommatophora	Lymnaeidae	Fossaria		6							X	
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Gastropoda	Basommatophora	Planorbidae	Helisoma		6							X	
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Gastropoda	Stylommatophora	Succineidae	Succinea										
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Hirudinea	Pharyngobdellida	Erpobdellidae	Dina		8				X				
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Insecta	Coleoptera	Haliplidae	Peltodytes		2								X
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Insecta	Diptera	Ceratopogonidae	Probezzia		6				X				
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Lariat Creek - 078	CCA12-078	50166	6/5/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	56	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	21	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	8	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	8	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	5	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	SVeg	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	4	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	3	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	3	Insecta	Ephemeroptera	Heptageniidae	Heptagenia		4			X					

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	2	Insecta	Ephemeroptera	Baetidae	Baetis		4		X						
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	2	Insecta	Odonata	Coenagrionidae	Argia		9					X			
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8		X						
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Enopla	Hoplonemertea	Tetrastemmatidae	Prostoma		8					X			
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Insecta	Hemiptera	Corixidae			8					X			
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Insecta	Odonata	Gomphidae	Erpetogomphus		1					X			
CGP	SVeg	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Insecta	Odonata	Gomphidae	Gomphus		1					X			
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	55	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	26	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	19	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X						
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	12	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	4	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4		X						
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	2	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	2	Turbellaria	Tricladida	Planariidae	Dugesia		4			X					
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8		X						
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	SVeg	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X						
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	19	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	17	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X						
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	17	Insecta	Plecoptera	Perlidae	Perlesta		1			X					
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	15	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	14	Gastropoda	Basommatophora	Planorbidae	Helisoma		6								X
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	4	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	3	Insecta	Coleoptera	Dytiscidae	Agabus		7					X			
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	2	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4		X						
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8		X						
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	1	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7					X			
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
CGP	SVeg	Sleeping Bear Creek - 030	CCA12-030	50116	5/21/2012	S	1	Insecta	Ephemeroptera	Heptageniidae	Heptagenia		4			X					
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	21	Insecta	Diptera	Chironomidae	Chironomini		8		X						
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	16	Gastropoda	Basommatophora	Physidae	Physella		8								X
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	13	Crustacea	Amphipoda	Talitridae	Hyalella		8		X						
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	9	Insecta	Ephemeroptera	Caenidae	Caenis		7		X						
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	7	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	5	Insecta	Coleoptera	Elmidae	Dubiraphia		4		X						X
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	5	Insecta	Diptera	Chironomidae	Tanytopodinae		6		X						
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	5	Insecta	Diptera	Chironomidae	Tanytarsini		6		X						
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	4	Insecta	Coleoptera	Dytiscidae	Oreodytes		7					X			

Appendix C

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	4	Insecta	Odonata	Coenagrionidae	Enallagma		9					X			
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	3	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7					X			
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	2	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	2	Insecta	Odonata	Libellulidae			9					X			
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	1	Hirudinea	Pharyngobdellida	Erpobdellidae	Erpobdella		8					X			
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	1	Insecta	Diptera	Chironomidae	Orthocladiinae		6	X							
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	1	Insecta	Diptera	Dixidae	Dixella			X							
CGP	SVeg	Spring Creek - 023	CCA12-023	50164	6/4/2012	S	1	Insecta	Megaloptera	Sialidae	Sialis		4					X			
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	45	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	15	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	9	Crustacea	Amphipoda	Hyalellidae	Hyalella		8	X							
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	8	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	7	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	7	Insecta	Odonata	Coenagrionidae	Enallagma		9					X			
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	3	Gastropoda	Basommatophora	Planorbidae	Helisoma		6							X	
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	3	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	2	Insecta	Coleoptera	Elmidae	Stenelmis		4		X						
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	2	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	2	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	2	Insecta	Odonata	Calopterygidae	Hetaerina		5					X			
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	1	Crustacea	Ostracoda					X							
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Paracymus		7			X		X			
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7					X			
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	1	Insecta	Diptera	Tabanidae	Tabanus		6					X			
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	1	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9					X			
CGP	SVeg	Turkey Creek - 082	CCA12-082	50317	6/14/2012	S	1	Oligochaeta	Haplotaxida	Tubificidae	Ilyodrilus		8		X						
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1										X				
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Odonata	Aeshnidae	Boyeria		3					X			
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	24	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	4	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Hemiptera	Corixidae	Trichocorixa		8					X			
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Hemiptera	Gerridae	Rheumatobates							X			
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9					X			
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	2	Insecta	Odonata	Gomphidae	Erpetogomphus		1					X			
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	18	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche		4	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	2	Insecta	Coleoptera	Elmidae	Dubiraphia		4	X						X	
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	2	Insecta	Coleoptera	Elmidae	Microcylloepus		4	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	7	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Crustacea	Decapoda	Cambaridae	Cambarus		6	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	5	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	3	Oligochaeta	Haplotaxida	Tubificidae	Limnodrilus		10		X						

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	3	Insecta	Coleoptera	Haliplidae	Peltodytes		2								X
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	12	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	4	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	11	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	SVeg	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	69	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	14	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	8	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	5	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	4	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	3	Insecta	Coleoptera	Hydrophilidae	Berosus		7				X	X			
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	3	Pelecypoda	Veneroida	Sphaeriidae	Sphaerium		8	X							
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	2	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	2	Insecta	Diptera	Ceratopogonidae	Atrichopogon		6	X			X				
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	2	Insecta	Diptera	Ceratopogonidae	Bezzia		6	X			X				
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	2	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Crustacea	Ostracoda					X							
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Deer Creek - 063	CCA12-063	50472	7/18/2012	S	1	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	53	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	20	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	16	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	11	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	5	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	3	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	3	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	3	Insecta	Ephemeroptera	Heptageniidae	Heptagenia		4			X					
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Coleoptera	Dryopidae	Helichus		5								X
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Coleoptera	Dytiscidae	Hydroporus		7					X			
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Diptera	Anthomyiidae	Limnophora		6					X			
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Diptera	Simuliidae	Simulium		6	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Diptera	Stratiomyidae	Stratiomys		8	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4							X	
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Ephemeroptera	Heptageniidae	Stenonema		4			X					
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Medicine Lodge River - 007	CCA12-007	50105	5/21/2012	S	1	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X			X	
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	39	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	36	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	25	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	5	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	5	Insecta	Ephemeroptera	Heptageniidae	Stenonema		4			X					
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	2	Insecta	Coleoptera	Hydrophilidae	Berosus		7					X	X		

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	2	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	2	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyalella		8	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	1	Crustacea	Decapoda	Palaemonidae	Palaemonetes		6	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	1	Insecta	Ephemeroptera	Heptageniidae	Heptagenia		4		X						
CGP	Woody	North Canadian River - 042	CCA12-042	50114	5/21/2012	S	1	Insecta	Ephemeroptera	Isonychiidae	Isonychia		7	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	27	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	20	Insecta	Ephemeroptera	Baetidae	Callibaetis		4	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	19	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	15	Insecta	Hemiptera	Corixidae			8				X				
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	5	Oligochaeta	Haplotaxida	Naididae	Ophidonais		8	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	3	Insecta	Coleoptera	Hydrophilidae	Tropisternus		7				X				
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	3	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	2	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	2	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Gastropoda	Basommatophora	Planorbidae	Helisoma		6							X	
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Insecta	Diptera	Chironomidae	Pseudochironomini		6	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Insecta	Diptera	Tipulidae	Geranomyia		3								X
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Insecta	Megaloptera	Corydalidae	Chauliodes		4								
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Insecta	Odonata	Aeshnidae	Anax		3				X				
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Insecta	Odonata	Coenagrionidae	Ischnura		9				X				
CGP	Woody	North Canadian River - 062	CCA12-062	50134	5/29/2012	S	1	Oligochaeta	Haplotaxida	Naididae	Dero		10	X							
CGP	Woody	Pond Creek - 059	CCA12-059	50254	6/18/2012	S	72	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X							
CGP	Woody	Pond Creek - 059	CCA12-059	50254	6/18/2012	S	32	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Pond Creek - 059	CCA12-059	50254	6/18/2012	S	10	Insecta	Ephemeroptera	Heptageniidae	Leucrocuta		4	X						X	
CGP	Woody	Pond Creek - 059	CCA12-059	50254	6/18/2012	S	4	Insecta	Coleoptera	Elmidae	Stenelmis		4			X					
CGP	Woody	Pond Creek - 059	CCA12-059	50254	6/18/2012	S	3	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Pond Creek - 059	CCA12-059	50254	6/18/2012	S	2	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Pond Creek - 059	CCA12-059	50254	6/18/2012	S	1	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Pond Creek - 059	CCA12-059	50254	6/18/2012	S	1	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	34	Insecta	Ephemeroptera	Baetidae	Fallceon		4	X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	23	Insecta	Diptera	Chironomidae	Chironomini		8	X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	12	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4	X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	8	Insecta	Diptera	Chironomidae	Tanytarsini		6	X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	8	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4				X			X	
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	6	Insecta	Trichoptera	Leptoceridae	Nectopsyche		4			X					
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	5	Insecta	Odonata	Gomphidae			1				X				
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	4	Insecta	Diptera	Chironomidae	Tanypodinae		6	X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	4	Insecta	Ephemeroptera	Caenidae	Caenis		7	X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	3	Insecta	Odonata	Coenagrionidae	Argia		9				X				
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	2	Gastropoda	Basommatophora	Physidae	Physella		8							X	
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	2	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6	X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	2	Insecta	Ephemeroptera	Heptageniidae	Stenonema		4			X					

Ecoregion	Habitat	Site Name	WBID	SAMPLEID	Date	Season	Number	Class	Order	Family	Genus	Not used for EPT	HBI score	Filtering collector	Gathering collector	Omnivore	Parasite	Predator	Piercer	Scraper	Shredder	
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Insecta	Ephemeroptera	Baetidae	Labiobaetis		4		X							
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X	
CGP	Woody	Salt Fork Arkansas River - 076	CCA12-076	50257	6/19/2012	S	1	Insecta	Hemiptera	Corixidae			8					X				
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	76	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	25	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes		4		X							
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	15	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	11	Insecta	Diptera	Chironomidae	Orthoclaadiinae		6		X							
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	5	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	2	Insecta	Trichoptera	Hydropsychidae	Hydropsyche		4	X								
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	2	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X			X	
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Crustacea	Amphipoda	Talitridae	Hyaella		8		X							
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Insecta	Diptera	Ceratopogonidae	Atrichopogon		6		X			X				
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Insecta	Ephemeroptera	Baetidae	Paracloeodes		4								X	
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Insecta	Odonata	Calopterygidae	Hetaerina		5					X				
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Oligochaeta	Haplotaxida	Naididae	Nais		8		X							
CGP	Woody	Skeleton Creek - 004	CCA12-004	50106	5/21/2012	S	1	Turbellaria	Tricladida	Planariidae	Dugesia		4			X						
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	22	Insecta	Ephemeroptera	Baetidae	Fallceon		4		X							
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	3	Insecta	Ephemeroptera	Caenidae	Caenis		7		X							
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Diptera	Tabanidae	Chrysops		6		X			X				
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	3	Insecta	Odonata	Calopterygidae	Hetaerina		5					X				
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	34	Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche	^	4	X								
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Gastropoda	Basommatophora	Physidae	Physella		8								X	
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Coleoptera	Elmidae	Dubiraphia		4		X						X	
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Trichoptera	Hydroptilidae	Hydroptila		4					X			X	
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	2	Insecta	Coleoptera	Elmidae	Microcyloepus		4		X							
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Coleoptera	Elmidae	Stenelmis		4			X						
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	11	Crustacea	Amphipoda	Talitridae	Hyaella		8		X							
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	7	Insecta	Diptera	Chironomidae	Tanytarsini		6		X							
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	3	Insecta	Coleoptera	Haliplidae	Peltodytes		2									X
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Coleoptera	Hydrophilidae	Enochrus		7		X							
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	1	Insecta	Coleoptera	Scirtidae	Scirtes		8									X
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	2	Insecta	Diptera	Ceratopogonidae	Atrichopogon		6		X			X				
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	15	Insecta	Diptera	Chironomidae	Chironomini		8		X							
CGP	Woody	Unnamed Trib. of Trail Creek - 064	CCA12-064	50136	5/29/2012	S	5	Insecta	Diptera	Chironomidae	Tanypodinae		6		X							

Site Name	WBID	303(d) List														TMDL			
		Size	Unit	Benthic-Macro	Chloride	Enterococcus	E. coli	Fishes Bio	Lead	DO	Sedimentation	Selenium	Sulfates	TDS	Turbidity	E. coli	Enterococcus	Turbidity	TMDL Date
Beaver Creek (Logan)	OK620900-03-0230C														X	X		09/20/2012	42502
Beaver Creek (Osage)	OK621210-00-0050L														X	X		09/30/2011	41090
Bent Creek	OK720500-01-0070D	18.13	MILES			X	X					X							
Bitter Creek	OK621100-00-0100G	23.33	MILES		X							X	X						
Black Bear Creek - 015	CCA12-015																		
Black Bear Creek - 074	CCA12-074	68.02	MILES						X						X	X		09/30/2011	41131
																	X	09/22/2010	39182
Black Bear Creek: Upper	OK621200-03-0260B																		
Bois d'Arc Creek	OK621000-03-0010C														X	X	X	09/30/2011	41129
Bois d'Arc Creek - 031	CCA12-031														X	X	X	09/30/2011	41129
Buffalo Creek: Lower	OK620920-05-0010G														X	X		08/26/2011	40612
Bug Creek - 052	CCA12-052																		
Camp Creek - 058	CCA12-058																		
Camp Creek - 068	CCA12-068	23.09	MILES					X											
Canyon View Creek - 044	CCA12-044																		
Chilocco Creek - 011	CCA12-011														X	X	X	09/30/2011	41089
Chilocco Creek - 039	CCA12-039														X	X	X	09/30/2011	41089
Cimarron River - 013	CCA12-013	26.58	MILES						X							X	X	09/20/2012	42499
Cimarron River - 016	CCA12-016	17.84	MILES		X						X	X	X		X	X	X	08/26/2011	40623
Cimarron River - 018	CCA12-018	24.35	MILES	X	X					X			X		X	X		08/26/2011	40609
Cimarron River - 046	CCA12-046														X	X	X	08/26/2011	40624
Cimarron River - 050	CCA12-050	8.33	MILES					X											
Cimarron River - 056	CCA12-056	4673	ACRES											X					
Cimarron River - 065	CCA12-065	42.09	MILES						X							X	X	09/20/2012	42492
Clear Creek - 009	CCA12-009	29.74	MILES	X											X	X		09/28/2010	39227
Clear Creek (Beaver)	OK720500-02-0300F															X		09/28/2010	39226
Clear Creek (Harper)	OK720500-02-0070G														X	X		09/28/2010	39227
Cooper Creek	OK620910-02-0040C	40.27	MILES									X			X	X		09/29/2009	37387
																	X	05/28/2010	38650
Cottonwood Creek	OK620910-04-0010E	22.01	MILES			X	X												
Council Creek	OK620900-02-0050H														X	X	X	09/20/2012	42511
Council Creek - 079	CCA12-079														X	X	X	09/20/2012	42511
Crooked Creek (Beaver)	OK620930-00-0100G	6.38	MILES	X												X		08/16/2011	40588
Crooked Creek (Grant)	OK621000-06-0010C	32.88	MILES					X								X	X	09/30/2011	41116
Dead Indian Creek	OK620910-05-0080A	24.23	MILES									X			X	X		09/29/2009	37414
																	X	05/28/2010	38656
Deep Creek	OK620910-02-0250C	25.42	MILES									X			X	X		09/29/2009	37396
Deer Creek	OK621000-04-0010D	40.81	MILES	X											X	X	X	09/30/2011	41084
Deer Creek - 063	CCA12-063	40.81	MILES	X											X	X	X	09/30/2011	41084
Deer Creek - 070	CCA12-070	40.81	MILES	X											X	X	X	09/30/2011	41084
Doe Creek - 026	CCA12-026																		
Doga Creek	OK621200-02-0020C														X	X		09/15/2009	37063
																	X	05/10/2010	38647
Driftwood Creek	OK621010-03-0030C														X	X	X	09/30/2011	41117
Dry Creek - 022	CCA12-022																		
Duck Pond Creek	OK720500-02-0250F														X	X		09/28/2010	39229
Eagle Chief Creek: Lower	OK620920-04-0010C														X	X	X	08/26/2011	40625
Eagle Chief Creek: Upper	OK620920-04-0010G														X	X	X	08/26/2011	40625
Euchee Creek	OK620900-01-0290D														X	X	X	09/20/2012	42509
Griever Creek	OK620920-01-0130G	20.28	MILES	X				X								X		08/26/2011	40621
Indian Creek	OK620910-02-0310C														X	X		09/29/2009	37399
Kingfisher Creek	OK620910-05-0010J	47.37	MILES									X			X	X		09/29/2009	37410
																	X	05/28/2010	38655
Kingfisher Creek - 060	CCA12-060	47.37	MILES									X			X	X		09/29/2009	37410
																	X	05/28/2010	38655
Kiowa Creek: Harper Co.	OK720500-02-0130C	34.54	MILES					X								X		09/28/2010	39233
Lagoon Creek	OK620900-01-0180J														X	X		09/20/2012	42501
Lariat Creek - 078	CCA12-078	10.71	MILES						X										
Little Turkey Creek - 072	CCA12-072															X	X	09/29/2006	30706
Long Creek	OK620920-02-0080D														X	X		08/26/2011	40616
Main Creek	OK620920-01-0180F	19.1	MILES						X			X			X	X	X	08/26/2011	40617
Medicine Lodge River	OK621010-03-0010D														X	X	X	09/30/2011	41119
Medicine Lodge River - 007	CCA12-007														X	X	X	09/30/2011	41119
Nash Creek - 084	CCA12-084																		
North Canadian River - 042	CCA12-042	37.36	MILES			X													
North Canadian River - 062	CCA12-062	37.36	MILES			X													
North Canadian River - 080	CCA12-080																		
Otter Creek	OK620910-03-0040C														X	X		09/20/2012	42583
Palo Duro Creek - 057	CCA12-057	4.4	MILES					X		X					X			09/28/2010	39235

Site Name	WBID	303(d) List														TMDL				
		Size	Unit	Benthic-Macro	Chloride	Enterococcus	E. coli	Fishes Bio	Lead	DO	Sedimentation	Selenium	Sulfates	TDS	Turbidity	E. coli	Enterococcus	Turbidity	TMDL Date	TMDL ID
Persimmon Creek	OK720500-01-0150G	13.45	MILES			X	X													
Pond Creek	OK621000-05-0010D														X	X	X	09/30/2011	41115	
Pond Creek - 059	CCA12-059														X	X	X	09/30/2011	41115	
Red Rock Creek - 047	CCA12-047														X	X	X	09/30/2011	41108	
Red Rock Creek: Lower	OK621200-05-0010K														X	X	X	09/30/2011	41108	
Red Rock Creek: Upper	OK621200-05-0160G	46.89	MILES			X						X			X		X	09/30/2011	41113	
Salt Creek - 024	CCA12-024																X	09/15/2009	37061	
																	X	05/10/2010	38645	
Salt Creek - 040	CCA12-040														X	X		09/15/2009	37059	
Salt Creek (Kingfisher)	OK620910-02-0100D	4.43	MILES		X							X	X							
Salt Creek (Payne)	OK620900-02-0020D														X	X		09/20/2012	42512	
Salt Creek: Lower	OK621200-04-0010F															X		09/15/2009	37061	
																	X	05/10/2010	38645	
Salt Creek: Middle	OK621200-04-0010K														X	X		09/15/2009	37059	
Salt Fork Arkansas River - 076	CCA12-076	14.96	MILES							X		X			X	X	X	09/30/2011	41122	
Sand Creek - 035	CCA12-035																			
Sandy Creek	OK621010-02-0010D														X	X		09/30/2011	41124	
Skeleton Creek - 004	CCA12-004																			
Skeleton Creek - 020	CCA12-020																			
Skeleton Creek - 034	CCA12-034	32.84	MILES									X			X	X		09/29/2009	37402	
																	X	05/28/2010	38652	
Skeleton Creek: Upper	OK620910-03-0010S	32.84	MILES									X			X	X		09/29/2009	37402	
																	X	05/28/2010	38652	
Sleeping Bear Creek - 030	CCA12-030																			
Spring Creek - 023	CCA12-023																			
Spring Creek - 081	CCA12-081																			
Stillwater Creek - 073	CCA12-073																			
Stillwater Creek: Upper	OK620900-04-0070T	16.43	MILES							X										
Traders Creek - 077	CCA12-077	22.09	MILES			X														
Turkey Creek - 003	CCA12-003	82.59	MILES				X									X	X	09/29/2006	30704	
Turkey Creek - 014	CCA12-014																			
Turkey Creek - 036	CCA12-036																			
Turkey Creek - 082	CCA12-082																			
Turkey Creek @ Wheat Capital Rd.	OK620910-06-0010R	82.59	MILES				X								X	X		09/29/2006	30704	
Turkey Creek: Lower	OK620910-06-0010B	82.59	MILES				X									X	X	09/29/2006	30704	
Turkey Creek: Upper	OK620910-06-0010T	82.59	MILES				X									X	X	09/29/2006	30704	
Uncle John's Creek	OK620910-05-0030C														X	X		09/29/2009	37413	
Unnamed Creek - 064	CCA12-064																			
Unnamed Trib of Cimarron River - 006	CCA12-006																			
Unnamed Trib of Salt Fork of Arkansas - 043	CCA12-043																			
West Clay Creek	OK621010-01-0130R	22.92	MILES		X	X	X					X	X							
Wildhorse Creek	OK621000-02-0040F	24.66	MILES		X															
Yellowstone Creek	OK621010-01-0270C	21.82	MILES									X	X			X		09/30/2011	41123	